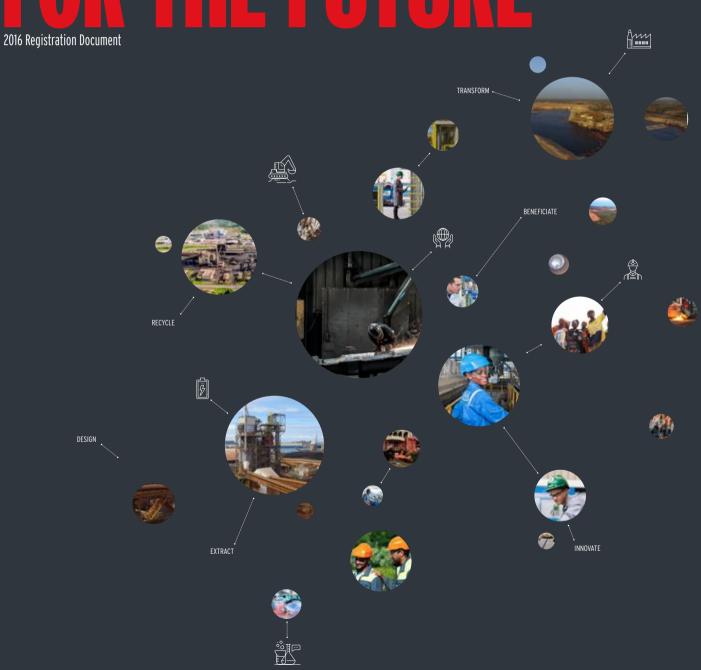


# PREPARING FOR THE FUTURE



This registration document was filed with the Autorité des marchés financiers (AMF) on 24 March 2017 in accordance with article 212-13 of its general regulations. It may be used in support of a financial transaction if it is supplemented by a briefing note approved by the AMF. This document was prepared by the issuer and is the responsibility of its signatories.

Public limited company with capital of €80,978,851.15

Registered office: Tour Maine-Montparnasse - 33 avenue du Maine - 75755 Paris Cedex 15

Paris Trade and Companies Register no. 632 045 381

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## 1.1 GROUP PROFILE

The ERAMET group is a French mining and metallurgical group with leading global positions in each of its businesses. The Group, which employed almost 14,000 people in 2016 in some 20 countries, generated sales of €3 billion during the year.

The ERAMET group holds leading global positions in each of its businesses:

- The ERAMET Nickel division owns nickel mines in New Caledonia and processes most of the ore itself.
   The Group is the world's eighth largest nickel producer, the largest ferronickel producer, one of the only three global producers of high-grade nickel, and the global leader in nickel chloride.
- The ERAMET Alloys division is the world's second largest producer of closed die-forged parts for aeronautics and energy generation. It designs and develops a range of parts and products: high-performance steels, superalloys (nickel-based), aluminium and titanium, a metal showing rapid development. It is also the world leader in gas-atomised powder metallurgy.
- The ERAMET Manganese division is the world's second largest producer of high-grade manganese ore at its mine in Moanda (Gabon), the world's second largest producer of manganese alloys and the largest producer of higher value-added alloys or "refined" alloys.

 The Group also has a business producing titanium dioxide and zircon, TiZir, in a 50/50 joint venture with the Australian company Mineral Deposits Limited. The division's primary site is the TiZir mine in Senegal (mineral sands), where operations began in the first half of 2014. Beneficiation (enrichment of titanium ore) is then performed by pyrometallurgy at the TiZir plant in Norway.

## 1.1.1 COMMODITIES ARE ESSENTIAL COMPONENTS OF TODAY'S WORLD AND ALSO TOMORROW'S

Consumption of commodities is driven by growing urbanisation (manganese, titanium dioxide, zircon), rising average living standards (stainless steel, nickel alloys, cobalt), energy production and transmission (superalloys, high-performance alloys), and new technologies linked to connectivity (lithium, for example).

After solid growth in past decades, in 2016 the commodity market plunged to its lowest levels in 15 years. This was due to a slowdown in industrial production in China and the persistence of sluggish world growth. China, which has grown steadily since the noughties, became the world's largest consumer of metals, feeding demand for more than half of worldwide volumes of nickel and manganese.

A new supply/demand model is emerging, especially in China, where consumption has now reached the post-urbanisation phase, with substantial overcapacity with respect to demand.

## 1.1.2 SPECIFIC POSITIONING OF THE ERAMET GROUP

Beyond the current crisis in the metal market, largely caused by developments of the Chinese economy, the ERAMET group has substantial competitive edge:

world-class deposits;

- leading positions in each area of our business, from mining to metallurgy;
- specific know-how, often produced by our own R&D, with solid social and environmental criteria.

## 1.1.3 THE ERAMET GROUP STRATEGY TO ADDRESS THE CRISIS

Given the current panorama of markets and the worldwide economic situation, the Group strategy focuses primarily on generating cash, as follows:

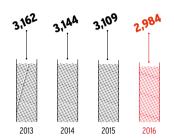
- Firstly, focusing on its core businesses, moving ahead with the development and restructuring required for its major activities.
- Secondly, gaining competitive edge to boost its positions. This will be brought about by plans to cut costs and boost both ongoing and planned productivity.
- In the longer run, the ERAMET group will focus on targeted projects selected on the criterion of value creation, especially those arising from the Group's internal R&D.

The aim of this strategy is to improve the ERAMET group's risk profile in the long term and strengthen its resilience in times of crisis.

## 1.2 KEY FIGURES/ COMMENTS ON THE FINANCIAL YEAR

#### 1.2.1 KEY BUSINESS FIGURES(1)

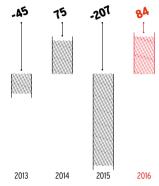
#### SALES (€ MILLION)



Sales down 4% to reach €2,984 million.

#### **CURRENT OPERATING PROFIT/(LOSS)**

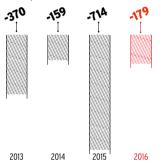
(€ MILLION)



Current operating profit/(loss) strong growth compared with 2016.

#### **NET LOSS, GROUP SHARE**

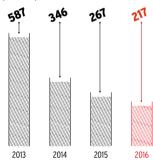
(€ MILLION)



Net loss, Group share divided by 4 compared to 2015.

#### INDUSTRIAL INVESTMENTS

(€ MILLION)



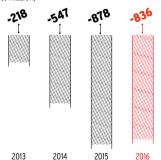
Industrial investments limited to €217 million, down 19% compared to 2015.

## €1,7 BILLION in financial liquidity at 31 December 2016

## Roughly €310 MILLIONS in cumulative savings since 2014 in annual impact

#### NET DEBT

(€ MILLION)



Level of net debt stands at €836 million, at 31 December 2016.

### BREAKDOWN OF CURRENT OPERATING PROFIT BY DIVISION

(€ MILLION)

2016	2015
(119)	(261)
27	27
219	58
(43)	(31)
84	(207)
	(119) 27 219 (43)

#### BREAKDOWN OF INDUSTRIAL INVESTMENTS BY DIVISION

(€ MILLION)

TOTAL	217	267
Holding	2	3
Manganese	104	164
Alloys	55	44
Nickel	56	56
	2016	2015
C MILLION)		

(1) The consolidated data presented in this registration document concerning the Group and the Divisions, with the exception of chapter 6, is adjusted data resulting from the Group's reporting, which integrates joint ventures on a proportional basis. See reconciliation of consolidated financial statements published under IFRS, paragraph 1.2.2.

#### 1.2.2 SUMMARY OF CONSOLIDATED FINANCIAL STATEMENTS

KEY BUSINESS FIGURES FOR THE ERAMET GROUP (€ MILLION)	2016	2015
Sales	2,984	3,109
EBITDA	375	92
Current operating profit/(loss)	84	(207)
Operating profit/(loss)	(95)	(813)
Net profit/(loss) Group share before impairment of assets and deferred tax assets	(43)	(166)
Impairment of assets and deferred tax assets	(167)	(668)
Group share	(136)	(548)
Net profit/(loss)	(237)	(912)
Net profit/(loss) Group share	(179)	(714)
Net cash generated by operating activities	121	(7)
Capital employed	2,838	3,060
Industrial investments	217	267
Net debt	(836)	(878)
Ratio of net debt to equity	47%	49%

#### 1.2.2.1 GENERAL COMMENTS

2016 was a very mixed year for metals. The first half of 2016 saw the continuation of trends from 2015 with prices at their lowest in 15 years-particularly for nickel and manganese-marking a crisis in the sector that has not been seen for decades. On the other hand, nickel prices rose slightly during the second half of 2016 and manganese prices increased sharply at the end of the year.

Against this backdrop, the ERAMET group's sales increased by 17% in the second half of 2016 compared to the first half of the year. Sales amounted to €2,984 million in 2016 (-4% compared to 2015).

EBITDA rose sharply in 2016 (€375 million vs. €92 million in 2015), reflecting the impact of the cost reduction and productivity improvement plan throughout the Group. The Group's current operating profit rose sharply in the second half of 2016 to €175 million compared to a loss of €91 million in the first half of 2016. Current operating profit for 2016 thus improved significantly to €84 million.

The Group share of net profit before impairments amounted to -€43 million, a sharp improvement compared to 2015. The Group share of net profit after impairments stood at -€179 million (-€714 in 2015) including impairment of assets and deferred tax assets for €136 million compared to €548 million in 2015.

Industrial investment stood at €217 million, down by 19% against 2015, and by 37% against 2014. This reflects the decision made in 2015 to limit investments primarily to safety and maintenance of industrial equipment.

Free cash flow<sup>(1)</sup> from the second half of 2016 returned to positive territory, reaching €226 million. Net debt amounted to €836 million at 31 December 2016, a sharp decline of €327 million (-28%) compared with 30 June 2016 (€1,163 million) and down €42 million compared to 31 December 2015. The net debt-to-equity ratio was 47%, down from the end of 2015. The net debt/EBITDA ratio improved significantly to 2.2 compared to 9.5 at 31 December 2015.

In late September, ERAMET strengthened its capital by €100 million by issuing net share settled undated bonds convertible into new shares (ODIRNAN).

The asset disposal programme carried out in 2016 had a favourable impact of €142 million on the Group's net debt. It involved Erachem (manganese chemistry), Somivab (logging in Gabon) and Bear Metallurgical (vanadium and molybdenum metallurgy in the United States). The sale of Eurotungstène (cobalt and alloy powder) is expected to take place in the first half of 2017 following an agreement signed in 2016.

The financial liquidity of the ERAMET group remains at a high level of €1.7 billion at 31 December 2016, including €981 million in syndicated loans drawn in early January 2016. On 17 January 2017, ERAMET announced the 2-year extension of the term of its syndicated loan.

#### THE LITHIUM PROJECT

Studies continue.

<sup>(1)</sup> The sum of the cash flows generated by the activity and linked to investment and disposal operations.

#### 1.2.2.2 PROFIT AND LOSS ACCOUNT(1)

(€ MILLION)	FY 2016	FY 2015
Sales	2,984	3,109
EBITDA	375	92
Amortisation and depreciation of non-current assets	(268)	(307)
Provisions for liabilities and charges	(23)	8
Current operating profit/(loss)	84	(207)
Impairment of assets	(110)	(474)
Other operating income and expenses	(69)	(132)
Operating profit/(loss)	(95)	(813)
Net financial income	(79)	(90)
Share of income from associates	(2)	(1)
Income tax	(61)	(8)
Profit/(Loss) for the period	(237)	(912)
attributable to non-controlling interests	(58)	(198)
• attributable to the Group	(179)	(714)
Basic/Diluted earnings per share (€)	(6.79)	(27.11)

#### SALES

Against this backdrop, the ERAMET group's sales declined 4% to  $\{2,984 \text{ million compared to 2015}.$ 

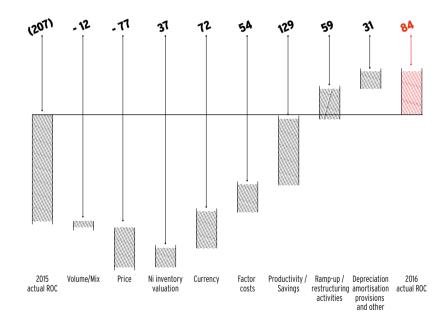
Sales by ERAMET Manganese, at €1,439 million, remained stable in 2016 compared to the previous year, while sales by ERAMET Nickel were down (-13%) at €595 million due to a decrease in the price of nickel, and sales by ERAMET Alloys were down by 4% at €949 million compared to 2015.

#### CURRENT OPERATING PROFIT/(LOSS)

The ERAMET group's current operating profit/loss, at €84 million, was up sharply compared to 2015 (+€291 million) with a strong positive contribution by ERAMET Manganese of €219 million (+€161 million) and a significant improvement in the results of ERAMET Nickel with a current operating loss of €119 million (+€142 million between 2015 and 2016).

This was primarily due to improved selling prices for ore and manganese alloys, and cost reduction and productivity improvement plans throughout the Group; LME nickel prices were down 19% on average between 2015 and 2016.

Changes in current operating profit/(loss) between 2015 and 2016 were as follows:



<sup>(1)</sup> Profit and loss account (Note 3 to the consolidated accounts)

#### OPERATING PROFIT/(LOSS)

The operating loss of €95 million showed a marked improvement following the loss of €813 million in 2015. Other operating income and expenses (excluding impairment of assets) decreased from €132 million in 2015 to €69 million in 2016, including in particular survey costs on major projects.

Operating results in 2016 were pulled down €110 million by asset impairment, mainly by ERAMET Manganese.

#### NET PROFIT/(LOSS)

The net loss in 2016 was €237 million compared to €912 million in 2015, due to:

- a net financial loss of €79 million, compared to €90 million in 2015, composed of:
  - the €69 million net borrowing cost, the result of an average net cash investment for the period of €1,338 million at an interest rate of around 1.68% and average gross debt of €2,498 million at an interest rate of 3.48%,
  - other financial income and expenses, leading to net expenses of €10 million;

• an income tax expense of €61 million, compared to a theoretical tax revenue of €60 million (net income before tax of -€174 x 34.43%); this difference is primarily due to the impact of asset impairment of -€11 million and the unrecognised or limited deferred tax assets at certain loss-making companies within the scope of consolidation of -€152 million, including -€57 million in New Caledonia, partially offset by the positive effects of permanent differences, such as the Provision for Reconstituting Mining Reserves (PRG) in Gabon and tax credits in France.

#### NET PROFIT/(LOSS) GROUP SHARE

Group share of the loss was €179 million compared to €714 million in 2015, net of €58 million attributed to non-controlling interests from net results in 2016.

#### 1.2.2.3 FINANCING(1)

(€ MILLION)	FY 2016	FY 2015
Operating activities		
EBITDA	375	92
Cash impact of items below EBITDA	(228)	(252)
Cash generated from operations	147	(160)
Change in WCR	(26)	153
Net cash flow from operating activities (1)	121	(7)
Investing activities		
Industrial investments	(217)	(267)
Other investment flows	30	(16)
Net cash used in investing activities (2)	(187)	(283)
Financing		
Bond issue (ODIRNAN)	100	-
Net cash used in financing activities	100	-
Effect of exchange rate changes	8	(41)
(Increase)/Decrease in net financial debt	42	(331)
Opening (net financial debt)	(878)	(547)
Closing (net financial debt)	(836)	(878)
Free cash flow (1) + (2)	(66)	(290)

<sup>(1)</sup> Table of debt flows (Note 3 to the consolidated financial statements).

The Group's net<sup>(2)</sup> borrowings stood at €836 million at 31 December 2016, as against €878 million at 31 December 2015. This change was the result of the following:

- €121 million in net cash flows from operating activities (-€7 million in 2015):
  - €147 million in cash generated from operations compared to -€160 million in 2015, due to a large increase in earnings in 2016 against 2015 (current operating profit/loss increase of €291 million),
  - -€26 million change in WCR;
- -€187 million in net cash used in investing activities, primarily consisting of:
  - -€217 million in industrial investment, down by 19% against 2015, and by 37% against 2014,
  - -€97 million paid to Mitsubishi and Pamco for the acquisition of a 33.4% stake in Strand Minerals Pte. Ltd..
  - +€142 million of favourable impact on the Group's net debt as a result of the asset disposal programme, in particular Erachem for +€124 million;
- €100 million net cash used in financing activities related to the issue of ODIRNAN;
- an impact of €8 million from currency fluctuations.

The ratio of net debt to equity (gearing) was 47% at 31 December 2016, slightly lower compared to 31 December 2015 (49%).

#### 1.2.2.4 ECONOMIC BALANCE SHEET(1)

(€ MILLION)	31/12/2016	31/12/2015
Non-current assets	2,818	3,003
Inventories	933	974
Trade receivables	333	293
Trade payables	(390)	(430)
Simplified WCR	876	837
Other items of WCR	(156)	(136)
Total WCR	720	701
Total	3,538	3,704

(€ MILLION)	31/12/2016	31/12/2015
Shareholders' equity, Group share	1,515	1,466
Shareholders' equity, non-controlling interest	261	313
Shareholders' equity	1,776	1,779
Cash and cash equivalents and current financial assets	(1,698)	(630)
Borrowings	2,534	1,508
Net financial debt	836	878
Ratio of net financial debt to shareholders' equity (gearing)	47%	49%
•		
Employee-related liabilities and provisions	740	812
Employee-related liabilities and provisions Net deferred tax	740 142	812 123

The total economic presentation of the Group's balance sheet at 31 December 2016 was  $\epsilon$ 3,538 million compared to  $\epsilon$ 3,704 million at 31 December 2015.

This decrease of €166 million was primarily due to:

- a €185 million decrease in non-current assets, mainly due to the depreciation and impairment of assets above industrial investments partially offset by an increase in total WCR of €19 million;
- a decrease in provisions (-€72 million mainly due to the cancellation of the option to sell Strand to Mitsubishi for -€106 million), derivatives (-€68 mil-

lion due to the lower volume of currency hedges and a hedged rate close to the closing rate) and net financial debt (-€42 million, see section on Financing), shareholders' equity remained stable between 2015 and 2016 at €1,776 million (-€3 million).

Contingent liabilities in connection with legal disputes are explained in Note 12 to the consolidated financial statements.

Policy and objectives for management of financial risks, including the Group's hedging policy and the exposure to price, credit, liquidity and cash-flow risks are set out in Note 7 to the consolidated financial statements, Financial instruments and risk management.

<sup>(1)</sup> Economic balance sheet (Note 3 to the consolidated financial statements).

<sup>(2)</sup> Net borrowings are comprised of short and long-term borrowings less cash and cash equivalents and current financial assets.

#### RECONCILIATION OF GROUP REPORTING AND PUBLISHED FINANCIAL STATEMENTS

(€ MILLION)	FY 2016 Published <sup>(1)</sup>	CONTRIBUTION OF JOINT VENTURES	FY 2016 Adjusted <sup>(2)</sup>	FY 2015 Published <sup>(1)</sup>	CONTRIBUTION OF JOINT VENTURES	FY 2015 Adjusted <sup>(2)</sup>
Sales	2,897	87	2,984	3,015	94	3,109
EBITDA	366	9	375	92	-	92
Current operating profit/(loss)	91	(7)	84	(191)	(16)	(207)
Operating profit/(loss)	(47)	(48)	(95)	(744)	(69)	(813)
Consolidated net profit, Group share	(179)	-	(179)	(714)	-	(714)
Net cash generated by operating activities	98	23	121	(13)	6	(7)
Industrial investments	206	11	217	242	25	267
(Net financial debt)	(675)	(161)	(836)	(716)	(162)	(878)
Shareholders' equity	1,791	(15)	1,776	1,788	(9)	1,779
Shareholders' equity, Group share	1,515	-	1,515	1,466	-	1,466

<sup>(1)</sup> Published data with joint ventures consolidated using the equity method, as per current regulations.

#### 1.2.3 INVESTMENTS

#### 1.2.3.1 GOALS

The ultimate aim is to improve competitiveness and boost the business of the three Divisions (Nickel, Manganese and Alloys). The capital expenditure policy is based on product differentiation with a focus on markets with structural medium and long-term growth. Following on from 2015, and in view of the prevailing economic conditions for the ERAMET group in 2016, investment authorisations have been limited to projects entailing security and strict maintenance.

#### 1.2.3.2 MAIN INVESTMENTS

#### TOTAL AMOUNT OF INVESTMENT

Investments recognised at Group level totalled €587 million in 2013, €346 million in 2014, €267 million in 2015 and €217 million in 2016.

Each major project may be financed in a different way (own resources, bank borrowings and finance leases). Further information is provided in Note 9 to the consolidated financial statements. Current capital expenditure is generally funded by own resources.

#### BREAKDOWN OF CAPITAL EXPENDITURE BY DIVISIONS AND TYPES OF MAJOR **PROJECTS**

#### **ERAMET Nickel**

(€ MILLION)	2013	2014	2015	2016
Industrial investments	172	97	56	56

#### Improving production equipment

The ERAMET Nickel investment budget for 2016 was maintained at a low level after a substantial reduction in 2015. Strict criteria were used to appraise projects to be undertaken in order to ensure they met the priority needs of safety and environmental protection, improved productivity, or were used to replace obsolete equipment. As part of this systematic search for performance, in a context of a limitation on the sums available to invest, the most important investment projects were given priority.

- For Le Nickel-SLN, investments were dedicated to mines, specifically the maintenance and replacement of mining equipment, and to the Doniambo plant, in particular the installation of rings crushers on the calcination tubes in order to increase the site's energy efficiency.
- At the Sandouville refinery, investments were dedicated to modifying the nickel matte treatment process in order to adapt it to the new matte that will be supplied to Sandouville in 2017.

<sup>(2)</sup> Data from Group Reporting, where joint ventures are consolidated proportionally.

#### Power station for Le Nickel-SLN

The scheme adopted to provide power to the Doniambo facility in New Caledonia is to install a new natural gas-fired electricity plant on the island. The project will be owned by a newly created public structure in New Caledonia. The investment will be guaranteed by the French State under the provisions adopted by the French Parliament in December 2016 and should not affect ERAMET's balance sheet.

#### **Weda Bay Project**

The ERAMET Board approved the terms of the Memorandum Of Understanding signed with the Chinese steel producer group Tsingshan, the leading world steel producer. The Memorandum Of Understanding establishes the conditions for a partnership to develop this asset. The partnership would entail producing a nickel ferroalloy from Weda Bay ore in Indonesia based on a pyrometallurgical process, for a nameplate capacity of 30,000 tonnes of nickel per year. This partnership would be reflected by the entry of Tsingshan group in Strand Minerals Pte. Ltd. ERAMET would hold 43% of the shares and Tsingshan group 57%.

#### **ERAMET Manganese**

(€ MILLION)	2013	2014	2015	2016
Industrial investments	346	199	164	104

Against a backdrop of a much more sluggish market, in 2016 ERAMET Manganese adapted its investment by focusing on strategic items, safety and the environment, and on maintaining industrial equipment.

#### Renovation of the Setrag railway line

The investment package required to make trains safer on the Transgabonese rail network was continued in 2016 with the implementation of a multi-year plan for the refurbishment of the railway line. The aim of the proposed transformation programme of Setrag is to restore the railway's original capacity. Spread out over eight years, the cost of this operation is €316M, of which €93M will be financed by the Gabonese Government. The remainder shall be borne by Comilog, which benefits from international financing obtained via SFI (World Bank) and Proparco (subsidiary of the French Development Agency).

As provided in the amendment to the Concession Agreement signed in October 2015, the Gabonese State and Setrag have funded the remedial investment plan, as follows:

- the Gabonese government, with the signing of a Financing Agreement with the French Development Agency (AFD) in December 2016;
- Setrag, with the signing in June 2016 of the first tranche of a credit of €85 million over a period of 15 years with the International Finance Corporation (IFC-World Bank) and Proparco (*Promotion et Participation pour la Coopération Écono-mique*—a subsidiary of the French Development Agency, AFD) with guarantee and commitment of support from Comilog.

In addition to this project, funds were provided to improve safety, reduce environmental impact and boost the productivity of manufacturing facilities.

A number of capital expenditure were made in connection with the environmental footprint of the manganese ferroalloy production plants (exhaust capture and filtration systems, ultimate waste storage systems).

In the framework of regulatory changes concerning emissions by pyrometallurgical industries present in the US, ERAMET Marietta decided to undertake work for the compliance of one of its two furnaces.

An operational incident took place on 15 August 2016 at the TiZir Titanium & Iron facility in Norway. The furnace was completely renovated to allow for production to be resumed in early 2017.

Finally, construction work on the Mines and Metallurgy School in Moanda in partnership with the Gabonese government was completed this year with the first school year beginning on 12 October 2016.

#### **ERAMET Alloys**

(€ MILLION)	2013	2014	2015	2016
Industrial investments	64	48	44	55

ERAMET Alloys slightly increased its investments in 2016.

ERAMET Alloys continued to structure its activities in titanium for the aerospace industry with the launch of MKAD, a joint venture between Aubert & Duval and Mecachrome, in October 2016. MKAD supplies titanium machined parts, thus completing the titanium aerospace supply chain of ERAMET Alloys. UKAD, a joint venture between Aubert & Duval and UKTMP for the forging of titanium bars, continued its expansion. Finally, EcoTitanium, Europe's leading producer of aerospace grade titanium using recycled scrap from titanium machining operations is expected to start production in the first half of 2017.

In January 2016, with strong support from the Safran Group and the Auvergne-Rhône-Alpes Region, ERAMET Alloys launched the construction at Les Ancizes (Auvergne) of a superalloy powder atomising tower, intended for the aircraft jet-engine parts market, while consolidating its industrial powder production facilities for the production of additives.

#### 1.2.4 RECENT DEVELOPMENTS AND OUTLOOK

#### 1.2.4.1 MAJOR EVENTS AFTER THE REPORTING DATE

#### TWO-YEAR EXTENSION TO REVOLVING CREDIT FACILITY MATURITY

On 16 January 2017, the ERAMET group signed a renegotiation agreement concerning its Revolving Credit Facility (RCF) of €981 million, extending its maturity by two years. The original amortisations of €85 million in January 2017 and €896 million in January 2018, are now €115 million in January 2018, €85 million in January 2019 and €781 million in January 2020.

#### SIGNATURE OF A FRAMEWORK AGREEMENT FOR THE RECOVERY OF THE NICKEL DEPOSITS IN WFDA BAY, INDONESIA

The ERAMET Board approved the terms of the Memorandum Of Understanding signed with the Chinese steel producer group Tsingshan, the leading world steel producer. The Memorandum Of Understanding establishes the conditions for a partnership to develop this asset. The partnership would entail producing a nickel ferroalloy from Weda Bay ore in Indonesia based on a pyrometallurgical process, for a nameplate capacity of 30,000 tonnes of nickel per year. This partnership would be reflected by the entry of Tsingshan group in Strand Minerals Pte. Ltd. ERAMET would hold 43% of the shares and Tsingshan group 57%.

To the Company's knowledge, there were no other events after the reporting date.

#### 1.2.4.2 FORESEEABLE OUTLOOK

As it intensifies its cost reduction and productivity improvement plans throughout the Group, ERAMET is raising its target for recurring savings on current operating income from €360 million to €400 million.(1)

In addition, over and above the cash-cost target of USD 4.5/lb set for end-2017, ERAMET Nickel and SLN are currently examining the potential for achieving a further significant cash-cost reduction target in SLN (by the end of 2020), excluding the impact of the expected major contribution of the new power plant, scheduled to be operational in 2021. SLN's new cashcost objectives by the end of 2020 will be announced in July 2017.

## **HISTORY AND DEVELOPMENT** OF THE **COMPANY**

#### 1880

Société Le Nickel was incorporated in 1880 to operate nickel mines in New Caledonia. Under the majority control of the Rothschild family since the end of the 19th century, in the late 1960s it became the parent company of all the Rothschild group's mining subsidiaries (Le Nickel-Peñarroya-Mokta group).

#### 1974

The nickel business was spun off into a subsidiary under the name Société Métallurgique Le Nickel-SLN: Elf Aguitaine acquired a 50% interest in this new company. The former company Société Le Nickel changed its name to Imétal, thereafter holding the remaining 50% in Société Métallurgique Le Nickel-SLN.

#### 1983

As part of an industrial, shareholding and financial restructuring programme, ERAP, a French state-owned company, acquired a 70% stake in the share capital of Société Métallurgique Le Nickel-SLN. Imétal and Elf Aquitaine's interests were reduced to 15% each.

#### 1985

Société Métallurgique Le Nickel-SLN, owner of the mining assets in New Caledonia, became a wholly-owned subsidiary of a new parent company known as ERAMET-SLN. in which the shareholders continued to be ERAP (70%), Imétal (15%) and Elf Aquitaine (15%).

#### From 1989 onwards.

in order to smooth out the effects of nickel cycles, the Company adopted a strategy of diversifying in complementary business activities.

#### 1989-1991

Acquisition of the French company La Commentryenne and Swedish company Kloster Speedsteel in the highspeed steels sector. These two companies were merged in 1992 to form a new company known as Erasteel.

#### 1991

Long-term commercial and financial partnership with Nisshin Steel. At the end of October 1994, Nisshin Steel held a 10% stake in Société Métallurgique Le Nickel-SLN.

#### 1992

Société Métallurgique Le Nickel-SLN and ERAMET-SLN took on their current names of Société Le Nickel-SLN and ERAMET, respectively.

#### 1994

Acquisition of a 51% stake in Eurotungstène, a cobalt and tungsten powder producer.

A private placement was followed by a listing of 30% of ERAMET's share capital on the Paris Stock Exchange's "Second Marché".

#### 1994

The BRGM group (Bureau de Recherches Géologiques et Minières, a French state-owned company) transferred ownership of its Cofremmi subsidiary, the owner of nickel ore reserves in New Caledonia, in return for shares representing 2.34% of ERAMET's new share capital.

#### 1995-1996

ERAMET acquired a 46% stake in Comilog (Gabon), a producer of manganese ore, ferromanganese and manganese-based chemicals.

(1) On an annual basis at the end of 2017, benchmarked against 2013 under the 2014-2017 plan.

#### 1997

ERAMET acquired an additional 15% in Comilog from Gengabon (Gencor Group).

#### 1998

Agreement to swap Poum/Koniambo mining rights in New Caledonia.

#### 1999

- The Group consolidated SIMA (Duval family), a producer and transformer of high-performance special steels.
- Sale of a 30% stake in Société Le Nickel-SLN to ERAP in exchange for ERAMET shares; ERAP then transferred the stake to a New Caledonian publicly-owned entity, Société Territoriale Calédonienne de Participation Industrielle (STCPI). The French government sold ERAP's remaining interest to COGEMA, which then became part of the AREVA group.
- Acquisition of the manganese business (refined alloys) of the Norwegian group Elkem.

After these operations, the Group's businesses had been organised into three Divisions–Nickel, Manganese and Alloys–and the Group's capital was mostly held by private shareholders (COGEMA/AREVA and SORAME/CEIR–Duval family),, with the French government retaining a non-controlling interest.

#### 2000

- Acquisition of the Mexican company Sulfamex, producing manganese-based agrochemicals.
- Opening of the Moanda industrial complex in Gabon.

#### 2002

Acquisition of the Guilin manganese alloy plant (China).

#### 2003

Acquisition of a 100% stake in the Trappes research centre (France) and 100% of the shares of Eurotungstène.

#### 2005

Acquisition of 100% of the shares of Bear Metallurgical (a subsidiary of Gulf Chemical and Metallurgical Corp.) in the United States. Setrag was granted a 30-year concession to operate the Transgabonese railway. Incorporation of Maboumine, a subsidiary of Comilog in Gabon, whose business purpose is mining exploration at the deposit of Mabounié (niobium, rare earths, uranium, phosphates)

#### 2006

Acquisition of Weda Bay Nickel in Indonesia.

#### 2007

Shares in ERAMET were swapped for those in SLN for STCPI as part of the SLN shareholders' agreement.

#### 2008

- Acquisition of a 58.93% controlling interest in the Norwegian group Tinfos.
- Creation of UKAD for preliminary mining and first transformation of titanium (forging bars).

#### 2009

- Sale of 33.4% of Strand Minerals (Weda Bay project holding company) to Mitsubishi Corporation.
- ERAMET increased its stake in Eralloys (formerly Tinfos, Norway) to 100% after buying up the non-controlling interests. Sale of Nizi, an international trading business acquired in 2008 with Tinfos.
- Acquisition of Valdi (France), engaged in the recycling of non-ferrous metals.

#### 2010

Agreement with the Gabonese Republic for a phased increase (up to 2015) of its stake in the capital of Comilog.

#### 2011

Creation of TiZir, a joint venture in mineral sands with Mineral Deposits Ltd.

#### 2012

Acquisition by Fonds Stratégique d'Investissement (which became Bpifrance) of the ERAMET shares previously held by AREVA.

#### 2013

Appointment, following a joint nomination by BPI and by SORAME and CEIR, of a director to represent Gabon on the ERAMET Board.

#### 2014

Start-up of the Moanda metallurgy complex in Gabon and (via TiZir) of Grande Côte in Senegal (mineral sands)

#### 2015

- Launch of EcoTitanium, Europe's leading producer of aerospace grade titanium producer using recycled materials.
- Creation of MKAD, a new plant machining large titanium parts, a joint venture between Aubert & Duval and Mecachrome. The aim is to use the plant to transform the titanium produced by EcoTitanium.

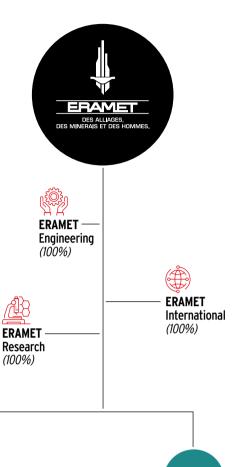
#### 2016

- Sale of Erachem, Somivab and Bear Metallurgical corporation.
- Start of MKAD production.
- Opening of the École des mines in Moanda.





## 2.1 GROUP STRUCTURE



#### ERAMET ALLOYS

- High-performance special steels and superalloys, high-speed steels
- Closed-die and forged parts

A & D (France - 100%)

• UKAD (France - 50%)

Erasteel (France - 100%)

Erasteel HEIML (China - 49%)

#### ERAMET MANGANESE

- Manganese: High-grade ore, alloys
- Catalyst recycling
- Titanium dioxide and high-purity pig iron
- Zircon and ilmenite

#### ERAMET NICKEL

- Ferronickel, high-purity nickel
- Nickel and cobalt chlorides
- Nickel carbonate
- Cobalt and tungsten powders

Çomilog (Gabon) (63.71%)

- Setrag (Gabon) (99.96%)
- [
- Maboumine (Gabon) (76.14%)
- Comilog Dunkerque (France) (99.99%)
- Gulf (USA) (100%)

(80%) Comilog Asia Ltd (China)

ERAMET Norway (100%)

ERAMET Marietta (USA) (100%)

TiZir (Norway, Senegal) (50%)

Société Le Nickel-SLN (56%)

Usine de Sandouville-Le Havre (100%)

Eurotungstène (100%)

Strand Minerals Pte. Ltd. (100%)

PT Weda Bay Nickel (90%)

## 2.2 **ERAMET NICKEL**

#### 2.2.1 THE NICKEL MARKET

#### 2.2.1.1 USES FOR NICKEL

Nickel is primarily used to make many special steels in the broadest sense (stainless steels, steel alloys and superalloys), which together account for roughly 85% of nickel uses. Its rich and varied properties also lend it to smaller-volume uses, such as electroplating, the process of forming a thin coherent metal coating using electrochemistry on valves, automobile parts or rechargeable batteries. It also has catalytic properties. The symbol for nickel on the periodic table of elements is "Ni". In 2016, global primary nickel consumption, estimated at around 2 million tonnes, was divided up as follows:

- Stainless steel: 69%
- Nickel-based alloys: 11%
- Electroplating: 8%
- Casting and alloy steels: 7%
- Other uses (including catalysis and batteries): 6%

Sources: ERAMET estimates.

#### STAINLESS STEEL

The stainless steel industry is by far the largest consumer of nickel. Combining nickel with chromium makes it corrosion-resistant and more ductile, and much more malleable. The primary uses for stainless steel are as follows:

 Food safety and hygiene: household equipment (sinks, cutlery, pots, etc.) electrical appliances (washing machines, microwave ovens, etc.) and also the food industry, with tanks and pipes for milk and wine production, pharmaceutical preparations and surgical equipment.

- Core industries for corrosion resistance: chemicals, petrochemicals, paper, energy production, etc.
- Building and construction industry (aesthetics, durability and low maintenance costs): lifts, ramps, street furniture, building accessories.
- Transport (limitation of corrosion, low maintenance costs): trains, ships, tanker trucks, aeronautics and automotive catalytic converters.

#### NICKEL-BASED ALLOYS

Superalloys used in aeronautics are able to retain their mechanical properties at increasingly high jet-engines operating temperatures. To achieve this level of mechanical performance, superalloys contain more than 45% nickel along with other metals, such as cobalt and chromium.

Nickel-iron alloys are used in the production and transport of industrial gases as well as liquefied natural gas. The very low temperatures used in these processes make the use of certain nickel-iron alloys essential.

Other nickel-based alloys are primarily used for their resistance to corrosion in chemical industries and environmental protection facilities, such as exhausts and gas processing and wastewater treatment.

#### NICKEL RECYCLING

Nickel is infinitely recyclable and its high economic value makes it profitable to collect and recycle. The structure of the nickel recycling industry has been established for many years. Nickel is most commonly recycled in the production of stainless steel.

#### 2.2.1.2 NICKEL SUPPLY

#### NICKEL ORES

There are two main types of nickel ore: sulphide ores and oxide ores, the latter of which is classified into two categories depending on their chemical composition.

#### Sulphide ores

Sulphide ore mines are mostly underground. They are generally located to the North (Canada and Siberia) or to the South (South Africa and Australia). In these ores, nickel is combined with several other metals: copper, cobalt, gold, silver and often platinoids. The ore can be physically concentrated by varying the density between the sulphides of the metals recovered and the oxide-based minerals. The concentrate is treated by a pyrometallurgical process at very high temperatures to create an intermediate product: a mixture of metal-enriched metal sulphides known as matte. The mattes obtained are then refined to separate the various metals and obtain, among others, extremely pure metal salts from the nickel metal.

### Oxide ores: limonites and garnierites or saprolites

Nickel oxide ores are mined in open pits. These deposits, where nickel is concentrated by weathering associated with certain terrain configurations, are located in tropical climate zones such as New Caledonia, Indonesia, the Philippines and Cuba.

They are divided into limonites and garnierites or saprolites. Garnierites or saprolites are located below the limonites but are the ores with the highest nickel content: between 1.3% and 2.5%. For a long time, only garnierites were mined. Over the long term, limonites constitute the primary nickel resource despite their lower nickel content: between around 1% and 1.4%.

Garniertic ore is treated using a pyrometallurgical route in an electrical furnace, which generally produces a finished product–ferronickel–which is used directly to make stainless steel or, less commonly, as an intermediate product, matte, which is refined to produce nickel metal.

In the early 1990s, the increasing scarcity of sulphide ores and rich garnierites or saprolites led to the development of specific processes for recovering limonites. Limonite can thus be recovered in hydrometallurgical plants in which ores are dissolved using sulphuric acid, after which the nickel and cobalt are extracted and separated. An alternative method for recovering limonites is to smelt them in small furnaces to produce nickel pig iron (NPI). The latter process is mainly used in China to compensate for the lack of locally available recycled scrap iron.

#### 2.2.2 COMPETITIVE ENVIRONMENT

#### 2.2.2.1 RECENT TRENDS IN NICKEL PRICES

Premiums or discounts are applied to this base price according to the quality of the products, their degree of transformation, their destination, and according to the equilibrium of the physical market at the time.

Recent years have been characterised by strong growth in global demand for nickel, including in developed countries. Given the complexity and capital-intensive nature of investments in the nickel

industry, this strong growth resulted in a major peak in the price of nickel in 2006/2007.

In response, the Chinese metallurgical industry successfully adapted former steel sites and subsequently developed specific means of production for melting imported nickel ores and satisfying the growing needs of Chinese stainless steel producers, who were themselves experiencing very strong growth.

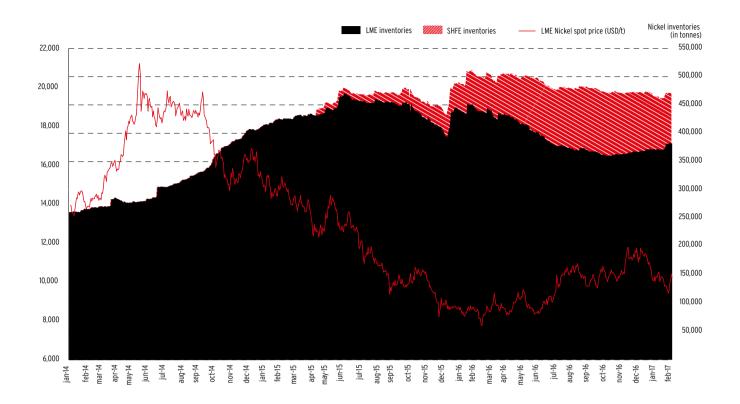
The production by these new players in the nickel industry are generally of substandard grade and quality for the industry and are generally referred to as "nickel pig iron".

China has very few nickel deposits of its own and as a result has relied heavily on imports of oxide ores from two countries, Indonesia and the Philippines, where it has stimulated a very rapid development of mining production.

Between 2011 and 2014, nickel pig iron (NPI) accounted for approximately half of the Chinese market, or about a quarter of the global market. It should be noted that this rapid growth has not been without significant environmental impacts, both in the form of emissions in China and at the mining sites, compared to standard industry practices.

However, this growth significantly outpaced demand and the global market saw a rapid rise in nickel inventories throughout the sector, causing nickel prices to slump to levels below production cost for a large number of global producers.

The slowdown in growth experienced in China in 2015 and the large size of nickel inventories continued to weigh heavily on prices, which were extremely low at the beginning of 2016. The average price was \$3.86/lb in the first guarter of 2016, its lowest level since the first quarter of 2003, which was \$3.79/lb. At these price levels, industry experts predicted losses for 70% to 80% of nickel producers. The second half of 2016 saw a strong rebound in the production of Chinese stainless steel. This rebound stimulated the consumption of primary nickel. In addition to this increase in demand, the price of Nickel on the LME also benefited from a general rise in confidence in commodities investment funds. In November, the price of nickel reached \$5.3/ Ib on the LME. The end of 2016 and the beginning of 2017 saw another erosion in prices following the announcement of the easing of the Indonesian ban on ore exports combined with a fall in inventories on the LME and the SHFE (the Chinese equivalent of the LME). As a result, the LME price of nickel fluctuated between \$4.3/lb and \$4.5/lb between December 2016 and January 2017.



#### 2.2.2.2 TOP NICKEL PRODUCING COUNTRIES

#### PRODUCTION OF ORE (IN THOUSANDS OF TONNES OF NICKEL CONTENT)

	2011	2012	2013	2014	2015	2015	2016
Philippines	319.4	322.4	315.6	443.9	465.0	439.7	340.4
Canada	219.6	204.5	223.3	235.0	234.9	210.7	215.4
Russia	270.0	270.0	264.0	264.0	261.0	239.0	205.0
New Caledonia	131.1	131.7	163.9	178.1	186.1	172.2	195.0
Australia	215.0	243.6	234.2	244.7	222.3	204.1	182.5
Indonesia	564.4	648.4	834.2	177.1	129.6	118.8	157.5
China	94.5	103.7	107.2	100.0	93.0	85.3	82.5
Brazil	91.0	109.0	108.0	102.0	94.8	86.9	79.2
Cuba	72.5	68.0	55.6	51.6	56.4	51.7	48.0
South Africa	39.8	45.9	51.2	55.0	56.7	51.3	47.5
Colombia	57.1	77.9	74.4	62.2	55.5	50.9	44.0
Madagascar	0.0	8.4	29.2	40.3	49.0	44.8	38.6
Guatemala	0.0	2.4	10.2	46.8	56.4	51.7	32.0
Myanmar	0.0	0.0	6.1	21.0	26.4	24.2	24.2
United States	0.0	0.0	0.0	4.1	27.2	24.8	22.9
Finland	19.3	20.2	19.4	18.7	9.7	8.8	19.2
Papua New Guinea	0.0	5.3	11.4	21.0	25.6	22.8	17.1
Botswana	32.4	32.4	30.0	29.1	23.8	22.3	16.5
Others	73.1	64.5	57.5	69.3	73.6	67.8	54.8
World	2,199.1	2,358.2	2,595.5	2,163.7	2,146.9	1,977.7	1,822.3

Source: INSG (International Nickel Study Group).

#### PRODUCTION OF FINISHED PRODUCTS (IN THOUSANDS OF TONNES OF NICKEL CONTENT)

	2011	2012	2013	2014	2015	2015	2016
China	435.2	519.2	693.5	690.5	600.0	559.7	521.8
Russia	263.0	254.0	242.0	239.4	231.9	211.5	177.1
Japan	157.3	169.5	178.0	177.6	193.8	177.1	175.7
Canada	142.4	152.0	153.1	150.0	159.3	146.1	144.6
Australia	110.2	128.8	141.5	138.7	132.5	121.7	103.2
Norway	92.4	91.7	91.0	90.5	91.2	83.5	84.4
Brazil	30.8	53.5	57.5	79.6	77.7	70.1	73.0
New Caledonia	40.0	45.4	48.4	62.0	77.5	70.1	86.9
Madagascar	0.0	5.7	25.1	37.1	47.3	42.9	37.1
Finland	48.5	45.5	44.3	42.6	43.5	38.9	48.9
Colombia	37.8	51.6	49.3	41.2	36.7	33.8	33.3
Korea	19.0	20.9	25.4	22.8	39.0	35.8	39.6
South Africa	34.0	32.9	31.3	33.3	41.9	38.0	39.1
United Kingdom	37.4	39.4	42.4	39.1	39.1	35.6	39.5
Indonesia	19.7	18.4	21.0	21.8	38.3	34.6	89.8
Myanmar	0.0	0.0	3.1	19.0	23.0	21.1	16.5
Ukraine	14.6	20.6	21.2	18.6	18.0	16.5	15.8
Macedonia	17.3	19.2	20.0	18.1	17.7	16.2	19.1
Greece	18.5	18.6	16.8	18.5	17.1	15.5	15.8
Cuba	29.2	25.7	16.6	13.3	14.4	13.2	13.2
France	13.7	13.2	12.1	8.4	6.5	5.9	4.4
Others	40.5	33.8	22.0	25.4	26.5	24.8	15.2
World	1,601.8	1,759.7	1,955.7	1,987.3	1,973.0	1,812.5	1,794.1

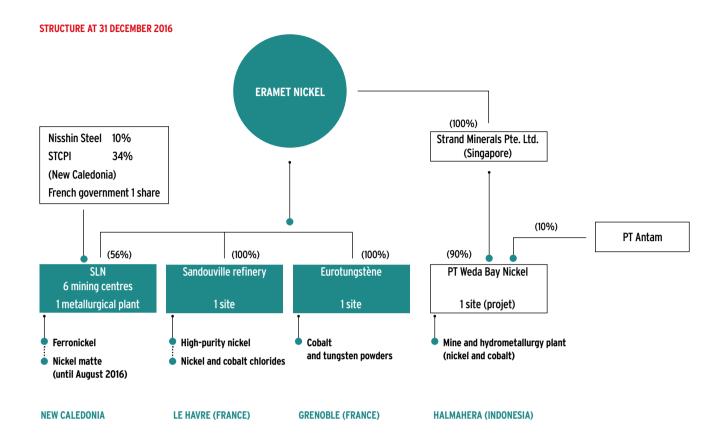
Source: INSG (International Nickel Study Group).

#### 2.2.3 STRUCTURE OF ERAMET NICKEL

ERAMET Nickel pursues a strategy of developing ores locally and positioning itself in products with high added value, with reliance on the ERAMET group's internal R&D. ERAMET Nickel comprises four main entities:

 Société Le Nickel-SLN in New Caledonia, a 56% owned subsidiary and the main mining and metallurgy operation, produces ferronickel at the Doniambo site, which comprises 80% to 90% of its output, with the remainder being nickel matte, an intermediary product supplied to the Sandouville refinery. It should be noted that SLN is moving towards specialisation in ferronickel production, having produced its last batch of matte in August 2016;

- the Havre Sandouville nickel refinery, specialising in high value-added products, is supplied with nickel matte by SLN and will be supplied by a new source of European matte starting in mid-2017;
- Eurotungstène in Grenoble, where cobalt is recovered in powder form;
- the Weda Bay project in Indonesia, based on world class deposits.



#### 2.2.3.1 SOCIÉTÉ LE NICKEL

ERAMET has a longstanding presence (since 1880) in New Caledonia through Société Le Nickel (SLN), its 56%-owned subsidiary. The other shareholders as at 31 December 2016 were:

- STCPI with 34%, a structure representing the interests of New Caledonia's three provinces;
- Nisshin Steel with 10%, an important client producer of stainless steel in Japan;
- the French government, which holds one share in SLN.

ERAMET Nickel operates high-quality mines due to their nickel content and their identified reserves. As is the case for the entire mining industry, their operating conditions have evolved over the last few years, primarily due to the recovery of larger volumes of tailings, which impacts production costs. However, the Group's research centre has enabled the Group to adapt its metallurgical process to these changes while continuing to enhance the operating efficiency of its mines and to invest in scaled-up mining equipment.

All of ERAMET's metallurgical products are made using ore from its own mines. The Doniambo plant in New Caledonia primarily produces ferronickel; 10% to 15% of its output is matte, an intermediate product transformed into pure products at the Havre Sandouville refinery. Starting in 2017, SLN will focus its production on ferronickel, having produced its last batch of matte in August 2016.

ERAMET markets all Société Le Nickel (SLN) products including low-grade nickel ores. ERAMET also provides technical support to Société Le Nickel (SLN) in a number of areas, particularly in procurement management, research, engineering, and legal and financial requirements.

Société Le Nickel (SLN) sells the all its Doniambo metallurgical production to ERAMET:

- The sales price of the ferronickel sold to ERAMET depends on the average price at which ERAMET sells to its customers, minus marketing costs and a sales margin for ERAMET.
- A special contract covers the sale price of matte to the Sandouville plant, with the aim of mutually securing this arrangement over the long term.

SLN's governance system closely involves the stakeholders of New Caledonia.

#### NICKEL MINES

ERAMET Nickel's mines in New Caledonia benefit from:

 sizeable tonnages of saprolite resources for pyrometallurgy;

- high nickel contents of roughly 2.452.5% with cutoff grades of 1.7% to 2.0%Ni;
- sizeable reserves with decades of potential use (see the section on Resources and Reserves).

Le Nickel-SLN's garnierite and saprolite oxide deposits are mined in open pits. They are generally located at altitudes of 500 to 1,000 metres. Le Nickel-SLN has extensive experience in mining deposits in New Caledonia. These deposits are defined by geological, geochemical and geophysical surveys and their geological structures are modelled. Deposits are extracted using hydraulic excavators based on mine planning geology. The ore is then transported by trucks with payloads of 50 to 100 tonnes, depending on the model.

ERAMET's internationally recognised mining techniques are designed to preserve the environment: storage of tailings in stabilised heaps, control of water run-off and revegetation, etc.

#### NÉPOUI AND TIÉBAGHI BENEFICIATION PLANTS

In Népoui, ore is hydraulically sent to the enrichment plant using a seven-kilometre tube. That plant was opened in 1994 and uses an (at the time) innovative technology based on sorting by particle size and density to increase ore content. This allows a larger proportion of the deposit to be exploited (including lower-grade ores), thus extending the lifespan of the reserves. A similar process has been adapted to process ore from the Tiébaghi mine. The Tiébaghi beneficiation plant was opened in 2008.

#### TRANSPORT OF ORE

The mine's output is mostly sent to the Doniambo plant. The first stage of ore transport is from the mine to the coastal storage areas either by truck, or at Kouaoua by an 11 kilometre conveyor, or at Népoui and Tiébaghi in the form of slurry. At the port, the ore is stored and standardised before being loaded onto ships for transfer to the Doniambo plant.

#### DONIAMBO METALLURGY PLANT

The Doniambo metallurgy plant produces directly marketable ferronickel–roughly 80-85% of its production–and nickel matte, all of which is used by the Sandouville plant. The ore mined is standardised and then dried before being calcined in five rotary furnaces. The ore is then melted in three Demag electric furnaces. The resulting product is transformed into marketable ferronickel (SLN 25) by ladle refining followed by shot blasting, or into nickel matte by adding sulphur and refining in a Bessemer converter.

The Doniambo plant is one of the two largest ferronickel production sites in the world. Its location close to the port of Nouméa allows direct access to ore carriers and cargo ships.

The production equipment at Doniambo has undergone a major modernisation programme. Four of the five rotary furnaces and two of the three electric furnaces have been replaced in recent years. Ore drying facilities have also been modernised. Significant investments have also been made to protect the environment

#### 2.2.3.2 SANDOUVILLE REFINERY

The Le Havre-Sandouville refinery uses a high-performance hydrometallurgical process specially developed by ERAMET Research teams. The 70% nickel matte used is entirely sourced from Le Nickel-SLN's metallurgical plant in Doniambo, New Caledonia. Beginning in mid-2017, the Le Havre-Sandouville plant will process a new raw material (SLN having ended its matte production).

The matte provided by SLN is crushed and then dissolved by an iron chloride solution. Several successive extraction stages in mixer-settlers separate out iron and cobalt as chlorides. The various remaining impurities are then removed. The resulting pure nickel chloride solution can be fed into a series of electrolysis tanks, resulting in a very pure nickel cathode. The refinery produces high purity nickel (over 99.97% nickel content) in the form of nickel metal (electrolytic nickel), nickel chloride, nickel carbonate, cobalt chloride and iron chloride.

#### 2.2.3.3 ERAMET SALES NETWORK

The Group maintains long-term partnerships with its customers. It has its own global sales network, ERAMET International. The Group provides significant technical and sales support to its customers in order to help them derive maximum benefit from its products in their own production processes.

- The Group's entire ferronickel production ("SLN 25")
  is sold to stainless steel producers, for which the
  Group supplies both nickel (20 to 25% of the gross
  weight) and iron of excellent quality. The Group
  generally operates under medium- or long-term
  contracts, providing for volume commitments of
  volume in accordance with periodically negotiated
  prices. These contracts ensure relatively regular
  shipments for ERAMET.
- Nickel metal or nickel HP is produced in the form
  of high-purity nickel cathodes that meet the most
  stringent requirements and are mainly sold to
  nickel alloys manufacturers (superalloys for aerospace and nuclear power) and nickel electroplating
  workshops (nickel plating).
- Nickel chloride, or SELNIC, of which ERAMET is the world's leading producer, is used in nickel plating and in the chemical industry (catalysts). A portion of the nickel chloride is converted into anhydrous nickel for the electronics industries.
- Nickel carbonate ("Nickel ONE") is primarily used in the refining industry to manufacture catalysts and in the ceramics industry as a pigment.
- Cobalt chloride is used in the tire industry, in the chemical industry as catalysts and also in powder metallurgy.

#### 2.2.3.4 EUROTUNGSTÈNE

Located in Grenoble, Eurotungstène specialises in the production of extra-fine cobalt powders, tungsten powders and pre-alloy powders. These powders are mainly used to manufacture cemented carbides, which are used in metal machining and diamond tools, used for cutting stone and building materials.

As part of its asset disposal programme, ERAMET announced the signing of an agreement for the sale of Eurotungstène to Umicore on 9 December 2016. Closing the deal requires obtaining certain regulatory approvals. Subject to this condition, the sale should take place in the first half of 2017.

## 2.2.3.5 WEDA BAY NICKEL (PROJECT IN INDONESIA)

The Weda Bay deposit is one of the largest nickel deposits in the world. Its measured, indicated and inferred resources are estimated at more than 9.3 million tonnes of nickel content, an increase of more than 5 million tonnes compared to estimations made at the time of ERAMET's acquisition of Weda Bay in May 2006.

Following a decision to review its portfolio of mining assets, on 21 April 2016 Mitsubishi Corporation exercised its option to sell to ERAMET the stake it owned with Pacific Metals Co. Ltd (Pamco) in Strand Minerals Pte. Ltd., which controls 90% of the Indonesian project and exploration company, Pt Weda Bay Nickel. ERAMET is now the sole shareholder of Strand Minerals Pte. Ltd., which owns 90% of Pt Weda Bay Nickel.

ERAMET signed a Memorandum of Understanding with the Chinese steel group Tsingshan with a view to determining the conditions for partnership to develop this asset. Tsingshan is the world's largest producer of stainless steel. This partnership would entail producing a nickel ferroalloy from Weda Bay ore in Indonesia based on a pyrometallurgical process for a nameplate capacity of 30,000 tonnes of nickel content per year, from the ore mined from the Weda Bay deposit in Indonesia. The entry of Tsingshan group in Strand Minerals Pte. Ltd. would therefore result in a change in its shareholding. ERAMET would hold a 43% interest and the Tsingshan Group 57%.

On 23 February 2017, ERAMET's Board of Directors approved the terms of the Memorandum of Understanding signed by both parties.

#### **2.2.4 MAJOR EVENTS**

Through SLN in New Caledonia, ERAMET Nickel is the world's eight largest producer of nickel, with output that has stabilised over the last few years at between 50,000 and 55,000 tonnes.

In 2016, ERAMET Nickel produced 55,227 tonnes, consolidating its position as the world's leading producer of ferronickel for the stainless steel market.

An operational incident took place on 31 October 2016 involving one of SLN's three electric furnaces. Thanks to the speed and efficiency of the staff, there were no injuries, negative impacts were limited, and nominal production was able to resume two months after the incident.

## METALLURGICAL PRODUCTION (FERRONICKEL + MATTE) FROM THE DONIAMBO PLANT (IN TONNES OF NICKEL CONTENT)

2008	51,131
2009	52,131
2010	53,719
2011	54,360
2012	56,447
2013	53,015
2014	55,012
2015	53,369
2016	55,227

The Sandouville plant was kept at a technical minimum in 2016 and work focused on higher value-added products.

#### 2.2.5 SPECIFIC ACTIVITIES

### 2.2.5.1 INDUSTRIAL ORGANISATION OF ERAMET NICKFI

SLN ended its production of nickel matte in August 2016. SLN's Bessemer workshop produced its final batch on 10 August 2016. Since then, the Doniambo plant has specialised in the production of ferronickel SLN® 25, solidifying its position as the world's leading producer. ERAMET Sandouville will be supplied with nickel matte from an external producer in Europe starting in the summer of 2017. The proposed sale of Eurotungstène completes this total restructuring of the division.

#### 2.2.5.2 ELECTRICITY SUPPLY TO SOCIÉTÉ

#### LE NICKE

Electricity at Doniambo is currently supplied by an old oil-fired power plant which will be replaced in the coming years in order to reduce the energy costs for the plant. The scheme adopted in the second half of 2016 is to install a new natural gas-fired electricity plant on the island. The project will be owned by a newly created public structure in New Caledonia. The investment will be guaranteed by the French State under the provisions adopted by the French Parliament in December 2016 up to an amount of €320 million and should not affect ERAMET's balance sheet.

A sustainability programme for the plant has been initiated. This plan totalling €21 million, includes investments to replace the critical parts of the current plant over five years.

#### 2.2.6 ERAMET NICKEL IN 2016

2016	2015
595	686
(24)	(156)
(119)	(261)
(137)	(60)
700	652
56	56
	595 (24) (119) (137) 700

#### 2.2.6.1 OPERATIONAL INDICATORS

(TONNES)	FY 2016	FY 2015
Nickel production <sup>(1)</sup>	55,227	53,369
Nickel sales <sup>(2)</sup>	56,121	54,590

(1) Ferronickel and matte.

(2) Finished products.

At €595 million, ERAMET Nickel's sales dropped by 13% in 2016 compared to 2015. Current operating profit/ (loss) increased significantly to -€119 million from -€261 million in 2015, as a result of the implementation of the plan to reduce SLN's cash-cost despite the fact that the average price of nickel in 2016 was \$4.35/lb, compared to \$5.37/lb in 2015.

World stainless steel output - the main market for nickel - staged a very strong rebound in 2016 relative to 2015, with growth of approximately 9%.

A number of contradictory supply signals continued to weigh on the nickel market:

- New production capacities came on stream in Indonesia, as a result of significant investments in the past few years by several NPI (nickel pig iron) producers following the Indonesian ban prohibiting exports of locally unprocessed ore.
- In the second half of 2016, the Philippines launched an environmental audit of mines which could lead to the suspension of operations at approximately 20 mining sites, which together account for a significant amount of the country's annual production. The implementation of these measures merits very close monitoring in the coming quarters.
- With the relaxation of the Indonesian ban in January 2017, allowing some operators to resume exports, to China in particular, in a strict system.

Against this backdrop and despite robust global demand, very high nickel inventories were maintained with stocks edging down only slightly in 2016 and remaining at high levels. Stocks at the LME (London Metal Exchange) and the SHFE (Shanghai Futures Exchange) totalled 466,000 tonnes at the end of December, down only 24,000 tonnes from their 2015 level.

Average LME nickel prices were at an historically low level of USD 3.93/lb in H1 2016. Average prices in H2 2016 were up 22% compared with the first half to USD 4.78/lb. For the full year, average nickel prices were down 19% from 2015 level (USD 4.35/lb vs. USD 5.37/lb).

In this environment, ERAMET Nickel took determined measures in response to this unprecedented crisis. As announced early in 2016: SLN implemented a specific plan to lower costs and improve operating performance. The target under the plan is to cut its cash-cost to USD 4.5/Ib by the end of 2017, a reduction of 25% relative to the average in 2015, on an annual basis and under the economic conditions at the start of 2016. In line with this target, SLN's average cash-cost in 2016 was USD 5.06/Ib, 16% lower than the average in 2015, under identical economic conditions. At the end of 2016, ERAMET Nickel 2014-2017 cost reduction and productivity improvement plan delivered a cumulated impact on current operating income of €142 million.

ERAMET provided €325 million in financial support in order for SLN to implement the plan as well as to ensure continuity of operations, while the French government contributed €200 million. Both contributions took the form of 8-year loans.

The plan selected for the supply of electricity to the Doniambo plant in New Caledonia is a new plant on the island powered by natural gas. The investment project will be operated by the newly created Caledonian Energy Agency and will have no impact on ERAMET's

balance sheet. Most of the bank financing will be guaranteed by the French government according to the measures approved in the French parliament in December 2016, in accordance with European regulations.

Nickel metallurgical production at the Doniambo plant (New Caledonia) increased to 55,227 tonnes of Ni, up 1.858 tonnes relative to 2015.

As part of its plan to cut its cash-cost, SLN halted production of nickel matte in August 2016 to be exclusively specialised in the production of high value-added SLN25 ferronickel, a product much in demand by the stainless steel industry.

At the same time, ERAMET has begun the process of reconfiguring the Sandouville nickel refinery (in Seine-Maritime, France), which had been refining SLN nickel matte into nickel salts and nickel metal. Once the stocks of Caledonian matte have been depleted, feedstock for the refinery will be from a new European nickel matte source starting from the second half of 2017

Finally, on 9 December 2016, ERAMET announced the signature of an agreement for the sale of Eurotungstene (specialised in developing, manufacturing and marketing metal and pre-alloyed powders) to Umicore as part of its asset disposals programme. Closing of the transaction is subject to certain regulatory approvals and, provided these approvals are obtained, is expected to occur in the first half of 2017.

#### 2.2.6.2 RETURN ON CAPITAL EMPLOYED FOR ERAMET NICKEL

ROCE: Current operating profit/(loss)/capital employed at 31 December of year N-1 (equity, net financial debt, provisions for restoration of sites, provisions for restructuring and other social risks, less non-current financial assets, excluding capital employed at Weda Bay).

(%)	2011	2012	2013	2014	2015	2016
Nickel	23.8	(5.1)	(28.5)	(6.3)	(27.0)	(18.3)

## 2.3 ERAMET ALLOYS

#### **KEY FACTS**

Key elements concerning ERAMET Alloys are as follows:

- global leadership position: the world's second largest producer of high power closed die-forged parts for the aerospace industry (Aubert & Duval), a major producer of gas-atomised metal powder, a major player in aerospace titanium and a leader in premium high-speed steels;
- a strategy based on technological expertise and niche markets;
- four strategic investments started in 2011/2012: a new titanium-forging press (UKAD, a 50/50 joint

venture), a new powder atomising tower (Erasteel), a new VIM furnace for vacuum alloy production and an aluminium press (Aubert & Duval);

- new partnerships in India;
- the structuring of a European aerospace titanium supply chain with the inauguration in 2016 of MKAD and the planned start-up of EcoTitanium in 2017.

## 2.3.1 CORE BUSINESSES OF ERAMET ALLOYS: A HIGH-END METALLURGY PLAYER UPSTREAM OF STRATEGIC INDUSTRIES, SPECIFICALLY AEROSPACE

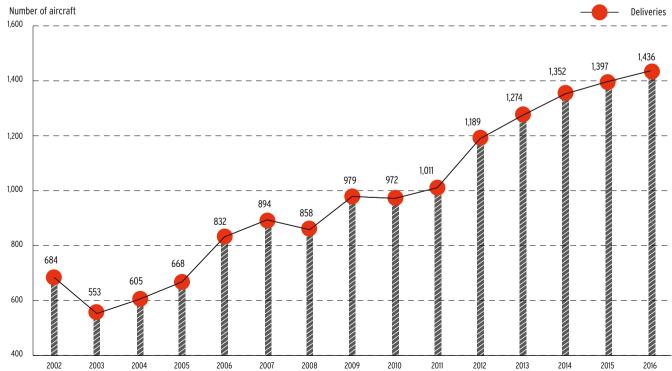
ERAMET Alloys operates through two main subsidiaries: Aubert & Duval and Erasteel, both of which are positioned at the high end of the metallurgical industry.

Aubert & Duval is one of the world's leading suppliers of high performance metallurgical alloys, of critical importance to strategic industries.

Aubert & Duval's prime expertise is first and foremost in aerospace, but also in defence, energy production (specifically nuclear power and gas turbines). The company is known for the high quality of its products and its ability to offer metallurgical solutions to meet the most demanding challenges.

The aerospace industry, Aubert & Duval's main industrial sector, is experiencing sound long-term growth with an average increase of 5% per year for aircraft deliveries, outpacing cyclical variations of this sector.

#### CONTINUED GROWTH IN THE AERONAUTICAL SECTOR: TRENDS IN THE NUMBER OF AIRCRAFT DELIVERED BY AIRBUS AND BOEING—SOURCE AIRBUS/BOEING



Aubert & Duval is very well represented in the production of new high-capacity aircraft (A350, A380, B787, etc.). It is a global leader in high-end metallurgy.

Aubert & Duval is both a producer of high performance steels and alloys (upstream) and a closed die-forger (downstream, in contact with industrial customers), for special productions and with very specific tools.

- A producer of parts for "high power closed die-forging" for the aerospace and energy sectors (ranking between first and third worldwide according to materials). Closed die-forging consists of shaping hot parts with a press or ram, using specific tools. In this field, Aubert & Duval processes four key materials: high performance steels, super alloys (nickel based), aluminium and titanium. High power is defined as power exceeding 30,000 tonnes and up to 80,000 tonnes (see below).
- A producer of high performance steels and nickel alloys; Aubert & Duval has positioned itself at the top of the "steel pyramid" (see below). It has also reinforced its position in the area of titanium at multiple stages of the value chain by participating in the strong growth of this metal in the aerospace industry, specifically because of its compatibility with composites. It also produces limited quantities of tool steels for specific niche applications. These are formed by forging or rolling.

Erasteel is the historical leader in high-speed steels and remains the leader in the high-end segment of these steels, which are used for high performance machining, drilling and cutting tools, etc.

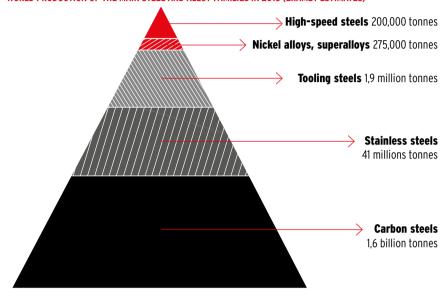
These steels are very hard and have a high alloy metal content. They are used to make high performance tools and tools that operate at very fast speeds in demanding upstream industries, such as automobile production.

Erasteel is the world leader in powder metallurgy, a method for obtaining high-alloy steels while preserving very high metallurgical properties. Using this strong skill, Erasteel has begun developing other products produced using powder metallurgy, areas experiencing strong growth.

#### 2.3.2 HIGH END POSITIONING OF ERAMET ALLOYS

The materials and products produced by ERAMET Alloys are in a much higher price range than carbon steel or even stainless steel supplied in unprocessed form. The markets for its products are also much more limited in terms of volumes.

#### WORLD PRODUCTION OF THE MAIN STEEL AND ALLOY FAMILIES IN 2016 (ERAMET ESTIMATES)



Moving up the pyramid, we find in the following order (non-exhaustive):

## 2.3.2.1 TOOL STEELS (APPROXIMATELY 1.9 MILLION TONNES)

Tool steels are alloy steels with around 5% to 15% alloy content, primarily nickel, chromium, molybdenum, vanadium, tungsten and cobalt.

Tool steels are used to make tools for shaping metals, plastics and glass (for stamping, extrusion, injection, moulding, etc.) upstream of the automotive industry, household appliances, electronics, etc.

## 2.3.2.2 HIGH-GRADE ALLOYS AND NICKEL-BASED ALLOYS (APPROXIMATELY 275.000 TONNES)

There are several types of nickel alloy which can be grouped by type of properties required:

 Alloys with high mechanical resistance at high temperatures (superalloys):

Superalloys contain 40% to 75% nickel. This is alloyed with chromium (15-30%) and, depending on the required grade, cobalt, molybdenum, titanium, aluminium and niobium. Their primary outlet is the aerospace industry (jet-engines) and the gas turbine sector. The third area of expansion is the automotive industry.

Demand for superalloys is primarily driven by the aerospace industry, whose average long-term growth is generally estimated at 5% annually. The industry, however, is strongly cyclical in nature. The new jet-engine business is complemented by activities related to the maintenance of existing jet-engines;

- Alloys for electronics industries and electrical resistors:
- Alloys for transporting liquefied natural gas;
- Corrosion-resistant alloys (chemicals industry, food industry, offshore platforms, nuclear power and environment).

In China, however, there is strong growth in demand for tools containing high-speed steels of higher quality due to economic and industrial development in this area, which now is the world leader in the number of car registrations.

Total global production of high-speed steels is estimated at approximately 200,000 tonnes.

elements that react with oxygen and nitrogen). This process is carried out in Vacuum Induction Melting (VIM) furnaces.

 Remelting is required for critical parts for the aerospace, power generation and tooling sectors.

The remelting process is carried out using electro slag remelting (ESR) or vacuum arc remelting (VAR). Both processes are employed successively for certain types of alloys for the aerospace industry.

## 2.3.2.3 HIGH-SPEED STEELS (APPROXIMATELY 200.000 TONNES)

High-speed steels have a high carbon content and also contain tungsten, molybdenum, vanadium, chromium and sometimes cobalt. They do not contain nickel. After heat treatment, these steels are extremely heat resistant. Long products account for the largest share of the total market and are used to manufacture drills, taps, burrs, reamers, etc. Flat products are used to manufacture saw blades, cutting discs and industrial cutters.

These markets require distribution channels to meet the specific demands of each customer.

Consumption of high-speed steels in the West has been affected by competition from tungsten carbide. At the same time, China has captured a large share of the market for low-end tools and the production of high-speed steels of similar quality. Competitors producing high volumes of low-cost high-speed steels of inferior quality than those produced by Western producers have expanded to meet this demand.

As a result, the Western market for high-speed steel is increasingly focused on more sophisticated tools based on powder metallurgy, or on specific products (bimetal, which allows for the targeted use of high-speed steel on blades, etc.).

## 2.3.3 SPECIAL PRODUCTION PROCESSES FOR THE PRODUCTION OF HIGH-GRADE STEELS AND SUPERALLOYS

ERAMET Alloys has in-house processes for its steels to guarantee the highest levels of process control and performance.

## 2.3.3.1 PRODUCTION OF HIGH-GRADE STEELS AND SUPERALLOYS (UPSTREAM)

The production of high-grade steels and superalloys entails melting scrap or recycled alloys and primary metals in an electric furnace to create an alloy with a perfectly controlled composition.

Several types of processes are used depending on the characteristics required:

- Air metallurgy, which takes place in an arc furnace followed by a metallurgical processing phase to add alloying metals in order to reach the desired purity and chemical analysis.
- Vacuum metallurgy, used to produce alloys that withstand higher stresses (containing alloy

#### POWDER METALLURGY

This process consists of atomising a stream of molten metal in the form of fine droplets which, upon cooling, form a powder which is then compacted into a perfectly dense material using hot isostatic compaction. This process is particularly suitable for highly alloyed, high grade products. It is also used in powder form for applications such as recharging, metal injection moulding (MIM) and additive manufacturing (3D printing).

#### 2.3.3.2 ALLOY SHAPING (DOWNSTREAM)

After production, various techniques are used to mechanically form the material, generally by applying heat and optimising the material's mechanical characteristics.

- Closed Die-forging: see above.
- Forging involves the shaping of metal into simple bars or blanks. This process is carried out using a hot press, a forging machine or even a ram, with a series of pressing runs between tools.
- Rolling consists of running the material between rollers to shape it into sheets, bars (typically 20-200 mm in diameter) or wire (5-20 mm in diameter).

#### 2.3.4 COMPETITORS OF ERAMET ALLOYS

The table below lists the main producers in the areas where ERAMET Alloys is active; it highlights the distinct advantages that ERAMET Alloys possesses by being present in all of the high value-added segments.

	METALS PRODUCED			PROI	PRODUCTION METHOD			HIGH-POWER CLOSED DIE-FORGING			
COMPANY	HIGH- Speed Steels	HIGH-PER- FORMANCE SPECIAL STEELS	SUPERAL- LOYS	AIR	VACUUM	POWDER	HIGH-PER- FORMANCE SPECIAL STEELS	SUPERAL- LOYS	ALUMINIUM	TITANIUM	
Arconic (USA & Russia) + Firth Rixson (USA & UK)											
ATI-Ladish (USA)											
Böhler + Buderus (Austria/Germany) VoestAlpine											
BGH (Germany)											
Carpenter-Latrobe (USA)											
Cogne Acciai (Italy)											
ERAMET Alloys											
Erzong (China)											
Gloria (Taiwan)											
HeYe (China)											
Hitachi Metals (Japan)								*			
Kobe Steel (Japan)										*	
Nachi Fujikoshi (Japan)											
Otto Fuchs (Germany)/Weber (USA)											
PCC (Wyman Gordon & SMC & TIMET & Shultz Steel)											
Schmolz & Bickenbach (Germany, USA)											
Tata Steel Europe (UK)											
Tiangong (China)											
Valbruna (Italy)											
VSMPO-Avisma (Russia)											

<sup>\*</sup> J-Aeroforge.

The unique advantages of ERAMET Alloys are:

- its expertise in closed die-forging across four main families of materials: aluminium, titanium, high-performance steels and superalloys;
- upstream integration (production) in steels and superalloys.

The profession is specifically characterised by the following trends:

 "three-dimensional" consolidation, both vertically (from alloy melting to closed die-forging, machining and even recycling) and horizontally (closed die-forging, casting, etc.) as well as multi-materials (titanium) in the United States;

- the emergence of new competitors determined to penetrate their domestic markets and reduce their dependence: Japan, China, even India, etc.;
- the growing importance of titanium in all new and future aircraft models, which is the subject of industrial investments and strategic moves.

ERAMET Alloys has established several strategic partnerships over the last five years:

- UKAD in titanium forging, based on the upstream activity of UKTMP (Kazakhstan);
- SQUAD in India in the field of closed die-forging for the aerospace industry;

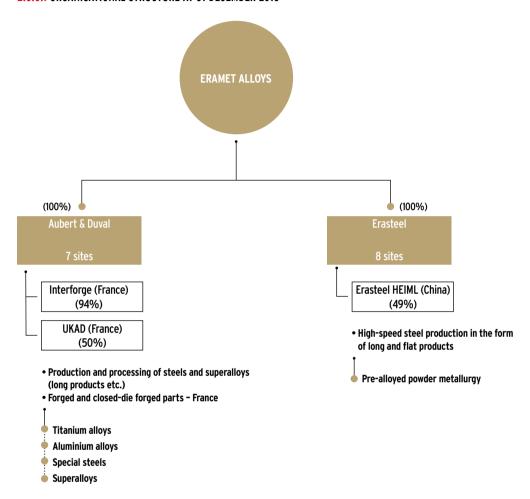
- the creation of MKAD, a partnership between Aubert & Duval and Mecachrome for the supply of titanium machined parts;
- EcoTitanium with ADEME and Crédit Agricole France, dedicated to the production of aerospace-quality titanium bars made from recycled titanium.

ERAMET Alloys has developed several new materials upstream (vacuum furnaces for superalloys and other nickel-based alloys), powders (Sweden) forging and closed die-forging (aluminium-lithium, etc.).

Moreover, Brown Europe, a 100% subsidiary of ERAMET Alliages doing business in the wire-drawing industry for high-performance steels and aerospace-quality titanium, completed the implementation of a new production line, based in Brive-la-Gaillarde, which will provide support for the development of its customers' businesses in this growing market.

#### 2.3.5 STRUCTURE OF ERAMET ALLOYS

#### 2.3.5.1 ORGANISATIONAL STRUCTURE AT 31 DECEMBER 2016



#### 2.3.5.2 ERAMET ALLOYS-PRODUCTION

#### **ERASTEEL**

#### Erasteel's production

- Erasteel's specialisation gives it great control over the quality of its production and enables it to optimise its processes.
- Erasteel is one of the only producers with a presence on all of the world's markets.
- Erasteel is a global leader in gas-atomised alloyed metal powders and doubled its capacity with the 2011 opening of a new power atomising tower.

#### Erasteel's industrial organisation

Erasteel's industrial activity is currently organised around nine production sites in France, Sweden, the United Kingdom, the United States, China and Spain.

#### **AUBERT & DUVAL**

Aubert & Duval has always pursued a strategy of products with a high level of technicality, aimed at customers seeking high reproducibility and reliability in terms of quality. As part of its strategy of specialisation in high value-added products, Aubert & Duval has comprehensive production facilities enabling it to meet demanding and very diverse needs.

#### Aubert & Duval's closed die-forging activities

Aubert & Duval is the world's second-largest closed die-forger specialising in large parts and high-power closed die-forging.

It is one of the only producers that uses die-forging processes for all four types of materials: steels, superalloys, aluminium and titanium. Steels and some superalloys are produced internally. Aluminium and titanium alloys are purchased from external suppliers.

Closed die-forging is carried out at the Issoire (aluminium) and Pamiers (steel, titanium and superalloys) sites.

#### Industrial closed die-forging facilities

These facilities include the following tools:

- 4.5 kt to 65 kt closed die-forging presses;
- 1-16 tonne rams;
- various finishing facilities (grinding), heat treatment, non-destructive testing and machining (lathes, milling machines).

#### The Interforge press

Since the mid-1970s, the Interforge's activities have centred on a 65,000 tonne closed die-forging press, the most powerful in the western world. The company subcontracts closed die-forging exclusively for its shareholders in proportion to their shareholding (94% for Aubert & Duval and 6% for Safran Aeroengines).

This press represents a strategic asset of the first order, as it places Aubert & Duval in a favourable situation in the face of global competition and American competition in particular:

- its capacity enables it to produce parts that are difficult to make with its competitors' presses, which are limited to 40,000-50,000 tonnes. Very few western producers other than Aubert & Duval have facilities with a capacity of more than 30,000 tonnes:
- there are two 75,000 tonne presses in Russia (aluminium producer Rusal and titanium producers VSMPO and AVISMA).

#### The Pamiers press

The Pamiers plant, organised around a fully integrated 40,000 tonne press, is designed for the closed die-forging of parts for aircraft engines, particularly large format parts.

#### Closed die-forging markets

The principle markets for the large parts segment (closed die-forging power of greater than 12,000 tonnes) are as follows:

- the aerospace industry: this market is in turn divided into two segments: engine parts (customers include General Electric, Safran Aeroengines, Pratt & Whitney, Rolls Royce, etc.) and frames, landing gear and equipment parts (customers include Airbus, Boeing, Dassault Aviation, Safran, etc.);
- the gas turbine industry: customers include turbine producers General Electric (Power Systems) and Siemens.

### Positioning in the closed die-forging sector based on R&D

Aubert & Duval uses CAD software combined with simulation software to optimise the characteristics and costs of parts in direct coordination with the customer. This significantly reduces the research, development and production cycles.

In recent years, Aubert & Duval has solidified its strategic position in the closed die-forging segment with:

- an innovative product R&D policy: new steel and superalloy grades, expertise with large parts due to the increasing size of equipment (large-capacity aircraft, high-power gas turbines, etc.);
- an innovative research and development policy for its processes: closed die-forging to near-final dimensions in order to optimise material use, highspeed machining;
- optimisation of industrial performance in terms of production costs, product quality and service reliability (specialisation of production units, implementation of lean manufacturing).

Aubert & Duval has also established its positioning along the value chain by capitalising on its upstream integration capacity (development and closed die-for-qing) and developing downstream in machining.

#### Aubert & Duval's other business segments

Industrial facilities for these other segments include:

 arc furnaces of up to 60 tonnes associated with ladle metallurgy tools (ladle, AOD or VOD furnaces);

- VIM furnaces up to 20 tonnes for vacuum production;
- powder metallurgy production units;
- vacuum and slag remelting furnaces with up to 30 tonnes capacity;
- rolling mills for manufacturing long products;
- forging presses and machines with forces up to 4,500 tonnes;
- machining equipment (milling, turning, boring or drilling);
- heat treatment equipment including for parts up to 50 tonnes or up to 20 metres in length;
- non-destructive testing equipment (liquid penetrant testing, ultrasound, X-rays, magnetic particle inspection, etc.).

All these tools have computerised management and supervision systems and are certified to meet the requirements of hi-tech markets (aerospace, energy, weaponry, automotive, medical etc.).

#### Long products

These are high-grade products, generally in the form of bars, which will be transformed or machined. Aubert & Duval targets critical applications: aerospace, medical, automotive (valves. etc.).

There are a limited number of customers. Sales are characterised by ongoing contracts and a large number of marketed grades, often in small quantities.

#### **Tooling**

Products in this area are large forged blocks, possibly pre-machined, and long products, generally with large cross-sections. The target markets are the traditional tool steel markets: hot working, cold working and injection moulds. The market is fragmented (large number of customers) and regional. As a result, distribution plays an important role. Aubert & Duval has specifically positioned itself at the high end, providing strong technical consulting content.

#### Individual forged parts and speciality parts

This area combines several activities associated with specific skill sets:

- individual forged parts: these parts are made in short runs for the defence, oil drilling and shipbuilding sectors;
- remelting alloys;
- powder metallurgy: semi-finished products for die-forging turbine discs, surfacing powders.

#### 2.3.5.3 MARKETING POLICY AND PRODUCTS

#### ERASTEEL'S MARKETING POLICY AND PRODUCTS

Erasteel works in close, long-term partnerships with its customers. Erasteel has its own commercial subsidiaries in the main steel consumer countries in the West. In some countries, Erasteel is a part of ERAMET International's sales network.

In other countries, sales are made through local agents. To support this sales network, market leaders ensure the technical and commercial promotion of the entire range of products for which it is responsible. Erasteel offers a complete range of products to respond to the needs of its markets.

## AUBERT & DUVAL'S MARKETING POLICY: CLOSE RELATIONS WITH CONTRACTING PARTIES

Multi-year contracts (typically three to ten years) with buyers in the aerospace industry typically specify the share of the market attributed to Aubert & Duval. Shipments are linked to the rate of aircraft production and thus to the situation of the aerospace market. Changes in the purchasing price of raw materials (cobalt, nickel, chromium, molybdenum, scrap iron, etc.) are reflected in the sales price.

The tools specific to a part (in the case of closed die-forging) are generally financed by the customers. This situation constitutes a barrier to entry for new competitors once the initial contract has been awarded.

A high degree of integration between the part design process and the purchasers' research and design units is essential in this profession: the technical and commercial engineers at Aubert & Duval cooperate closely with these research and design units.

#### 2.3.6 ERAMET ALLOYS IN 2016

(€ MILLION)	2016	2015
Sales	949	991
EBITDA	74	78
Current operating profit/(loss)	27	27
Net cash generated by operating activities	22	27
Capital employed	790	800
Industrial investments	55	44

ERAMET Alloys' sales in 2016 were down 4% to €949 million.

Current operating profit/(loss) remained stable at €27 million over the past two financial periods and can be broken down in the following way between the activities of Aubert & Duval and Erasteel between 2015 and 2016:

- Aubert & Duval: €48 million in 2016 against €50 million in 2015;
- Erasteel: -€21 million in 2016 against -€23 million in 2015.

The aerospace sector continues to benefit from steady growth and accounted for close to 65% of ERAMET Alloys sales. ERAMET Alloys is a strong player for new aircraft manufacturer programmes that require high value-added parts for structures and engines.

Taken as a whole, the productivity improvement and cost reduction plans implemented by ERAMET Alloys have had a €75 million cumulative annual impact on current operating income since 2014.

In the fourth quarter of 2016, Aubert & Duval announced a project to close the steel mill in Firminy (Loire, France) and consolidate its high-performance steel processing at Ancizes (Puy de Dôme, France). According to this project, the Firminy site will specialise in forging, heat treatment and machining.

Erasteel's Commentry (Allier, France) plant began operating spent catalysts and batteries recycling facilities in early 2017, in synergy with the existing steel mill, opening up a new market segment that will be gradually ramped up in the course of 2017.

ERAMET Alloys is very actively developing new products for its customers in the aerospace and energy sectors, with the emergence of new grades of special steels. In high-speed steels sectors, developments focus on improving the value in use of products for customers in the cutting tools industry.

ERAMET Alloys continues to structure its activities in aerospace grade titanium and started the MKAD plant, the partnership between Aubert & Duval and Mecachrome, in October 2016. Supplying machined titanium parts, MKAD completes ERAMET Alloys aerospace grade titanium supply chain. UKAD, the joint venture between Aubert & Duval and UKTMP, continued to grow. The

joint venture specialises in forging aerospace titanium ingots. EcoTitanium, the first aerospace grade titanium recycling operation in Europe, started its plasma furnace on 3 February 2017.

ERAMET Alloys is also continuing to expand into the powder metallurgy market with the certification of its

Spanish plant and the start of the construction of a new atomising tower in Les Ancizes (Auvergne, France), which will increase deliveries of alloys powders for the Rafale fighter jet programme and will strengthen its positioning in the emerging additive manufacturing segment.

#### RETURN ON CAPITAL EMPLOYED FOR ERAMET ALLOYS

ROCE: Current operating profit/(loss)/capital employed at 31 December of year N-1 (equity, net financial debt, provisions for restoration of sites, provisions for restructuring and other social risks, less non-current financial assets).

#### **ALLOYS ROCE (BEFORE TAXES)**

(%)	2011	2012	2013	2014	2015	2016
Alloys	2.5	(0.7)	0.5	3.0	3.4	3.4

## 2.4 ERAMET MANGANESE

#### 2.4.1 THE MANGANESE MARKET

#### 2.4.1.1 DEMAND FOR MANGANESE

#### MAIN APPLICATIONS

#### Steel

Over 90% of the world's manganese is used in the production of steel. All steel producers use manganese in their production processes—an average of 6-7 kg per tonne of steel. Manganese is used in steel in the form of an alloy (ferromanganese or silicomanganese) with an average content of 70% manganese: 1.8 tonnes of ore with roughly 40% manganese content are required to produce one tonne of alloy.

Manganese is used mostly in manganese alloys and accounts for a very small portion of the cost of steel production. It is mainly used as an alloying element to improve hardness, abrasion resistance, elasticity

and surface condition for rolling. It is also used for deoxidation and desulphurisation during production.

#### Other applications

- batteries: mainly alkaline batteries. A less significant application is in saline batteries, which have an inferior performance. Manganese derivatives are also used in rechargeable lithium batteries;
- ferrites: used in electronic circuits;
- agriculture: fertilizer and animal feed;
- various chemicals: pigments, fine chemicals;
- other metallurgical uses: mainly as a hardening agent for aluminium (beverage cans).

#### CARBON STEEL: MAIN MARKET

Demand for manganese largely depends on changes in the global production of carbon steel. China has experienced rapid urbanization with growing demands on its infrastructure, which have contributed significantly to the strong period of growth in steel production and demand for manganese over the last decade.

This situation has led to a surplus of crude steel due to development that is greater than the needs of downstream industries, and has resulted in a sharp increase in exports of Chinese finished products in the last few years.

In 2015, the slowdown in global steel production combined with record Chinese exports affected the profitability of producers outside of China. 2016 saw a recovery in steel production with an estimated growth of 0.8% compared to 2015, largely thanks to stronger than expected Chinese demand combined with government stimulus plans, particularly in the infrastructure sector. As a result, although they sustained a constant level, Chinese exports slowed down compared to 2015, particularly in the fourth quarter, due to more attractive domestic prices and the introduction of barriers to export in Europe and the United States. The order of magnitude of net Chinese exports is 90 million tonnes, roughly the size of production of India, the world's third largest producer of steel.

Even though this situation represents an improvement on 2015, it continues to negatively impact the economic performance of steelmakers who view a restructuring/consolidation of the sector as essential, particularly in Europe. The Chinese government also intends to restructure the landscape of the steel industry by closing obsolete production facilities and consolidating the industry.

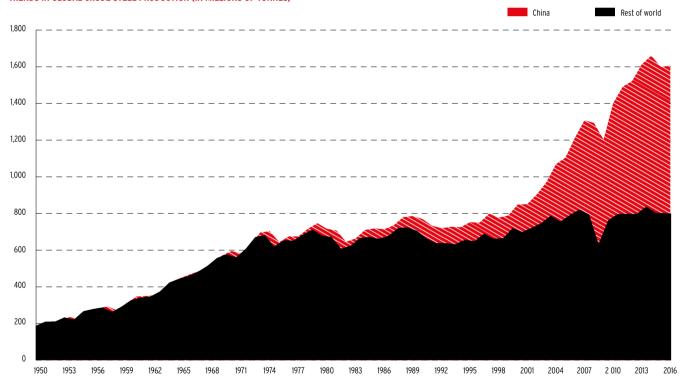
The medium and long-term outlook remains positive. Demand for steel will continue to be driven by developing countries, particularly India.

#### **BREAKDOWN OF GLOBAL CRUDE STEEL PRODUCTION**

	[ V	VOLUMES (IN MILLIONS OF TONNES)			% ANNUAL GROWTH			
GLOBAL PRODUCTION OF RAW STEEL	2013	2014	2015	2016	2013	2014	2015	2016
European Union	166.3	169.3	166.0	162.3	-1.4%	1.8%	-1.9%	-2.2%
Other Europe (incl. Turkey)	38.0	37.4	35.5	37.4	-4.9%	-1.6%	-5.1%	5.4%
CIS	108.3	105.8	101.6	102.3	-2.4%	-2.3%	-4.0%	0.7%
North America	119.0	121.4	110.9	111.0	-2.1%	2.0%	-8.6%	0.1%
South America	45.8	45.1	43.9	39.2	-1.2%	-1.6%	-2.7%	-10.7%
Africa	15.9	16.5	13.2	12.5	3.7%	3.8%	-20.0%	-5.3%
Middle East	26.5	28.6	27.4	29.2	7.4%	7.9%	-4.2%	6.6%
China	815.4	822.7	795.1	806.7	11.5%	0.9%	-3.4%	1.5%
India	81.3	87.3	89.0	95.6	5.2%	7.4%	2.0%	7.4%
Other Asia & Oceania	204.5	211.0	201.9	200.9	-8.5%	3.2%	-4.3%	-0.5%
65 countries	1,621.0	1,645.1	1,584.5	1,597.1	4.0%	1.5%	-3.7%	0.8%

Source: World Steel Association.

#### TRENDS IN GLOBAL CRUDE STEEL PRODUCTION (IN MILLIONS OF TONNES)



Source: World Steel Association, ERAMET.

#### 2.4.1.2 MANGANESE SUPPLY

#### MANGANESE ORE

The supply of manganese ore is made up of several types of ore of varying quality. A distinction is general-

ly made between the supply of medium to high grade ore (30-48% manganese content), which is profitable to transport and export, and low grade ore, which is consumed locally. Even though these two types of ore are used in combination by alloy producers, the value

in use of high grade ore is far greater than that of lower grade ore.

Global ore production in 2016 was estimated at 15 million tonnes of manganese content.

#### MANGANESE ORE PRODUCTION (IN MILLIONS OF TONNES CONTENT)

	2013	2014	2015	2016
South Africa	4.4	5.3	4.7	4.4
Australia	3.2	3.2	3.0	2.2
China	3.6	4.2	2.3	2.7
Gabon	1.5	1.4	1.6	1.4
Brazil	1.0	1.0	1.0	1.0
India	0.9	0.8	0.7	0.7
Kazakhstan	1.0	0.9	0.6	0.5
Ghana	0.5	0.4	0.4	0.6
Ukraine	0.4	0.4	0.3	0.5
Malaysia	0.3	0.3	0.2	0.3
Other	0.9	1.1	0.6	0.7
World	17.7	18.9	15.4	15.0

Source: Producer reports, ERAMET estimates.

#### MANGANESE ALLOYS

Manganese alloys are produced by reducing manganese ore at a temperature of roughly 1,600°C. This process is carried out by adding coke to furnaces which can be:

- electric furnaces: outside of China, almost all manganese alloys are produced in this manner.
- blast furnaces: most of the producers who use this process are based in China due to the availability

of coke. Outside of China, blast furnaces are only located in Japan and Eastern Europe.

There are four families of manganese alloys:

- high carbon ferromanganese (HCFeMn) contains 65-79% manganese and 6-8% carbon. It can be produced using an electric furnace or a blast furnace;
- silicomanganese (SiMn) contains 60-77% manganese. It can only be produced by an electric furnace using ore, possibly supplemented by an addition of FeMn slag;
- refined ferromanganese (MCFeMn and LCFeMn) is a higher value-added product containing less carbon.
   It is mainly produced by transferring molten HCFeMn alloy to an oxygen converter which reduces the carbon content to the desired level. A distinction is made between medium carbon ferromanganese (1.5% carbon: MCFeMn) and low carbon ferromanganese (0.5% carbon: LCFeMn), mainly used in the production of flat steels and special steels;
- refined silicomanganese (low carbon, LCSiMn) is primarily used to produce stainless steel, one of the ERAMET group's main markets.

#### ERAMET Manganese is the world's leading producer of refined alloys.

#### MANGANESE ALLOY PRODUCTION (IN MILLIONS OF TONNES CONTENT)

	2013	2014	2015	2016
China	10.3	11.2	8.7	8.6
India	2.4	2.3	2.2	2.0
Ukraine	0.6	1.0	0.8	0.9
South Korea	0.7	0.8	0.7	0.6
South Africa	0.8	0.9	0.6	0.4
Norway	0.6	0.6	0.6	0.9
Japan	0.5	0.5	0.5	0.5
Russia	0.3	0.4	0.4	0.4
Australia	0.3	0.3	0.3	0.2
Spain	0.3	0.3	0.2	0.2
Mexico	0.2	0.2	0.2	0.2
Georgia	0.2	0.2	0.2	0.2
France	0.2	0.2	0.2	0.2
United States	0.2	0.2	0.2	0.2
Kazakhstan	0.2	0.2	0.2	0.1
Brazil	0.2	0.2	0.1	0.2
Other	0.4	0.5	0.3	0.3
World	18.4	19.8	16.5	16.1

#### BREAKDOWN OF WORLDWIDE MANGANESE ALLOY PRODUCTION

	2013	2014	2015	2016
Silicomanganese	65%	65%	63%	64%
High-carbon ferromanganese	25%	25%	26%	26%
Refined ferromanganese	10%	10%	11%	9%

Source: International Manganese Institute, produce reports and ERAMET estimates.

Silicomanganese has experienced the strongest growth of all the standard alloys. The availability in China (as well as in India and Ukraine) of local low-grade resources, which can easily be used to produce silicomanganese, has favoured its development. Low-grade ores are nonetheless always mixed with rich imported ores in an ongoing attempt to achieve a price/performance balance.

The Chinese market is characterised by a large number of alloy producers that are very dependent on high-grade imported ores, accounting for more than 60% of global ore imports. As a result of the introduction of export taxes in 2008, China is not a significant player in the international alloy market, unlike India, which is a major exporter of commodities (SiMn and HCFeMn).

#### METALLIC MANGANESE

Metallic manganese is produced using a hydrometallurgical process during electrolysis (electrolytic manganese metal or EMM). It is an extremely pure manganese product (over 99%Mn content) generally produced in the form of flakes. Since the hydrometallurgical process is adapted to the treatment of low-grade ores, EMM production is concentrated in China, which is the main exporter of metal with a very fragmented industry. The only other countries producing metallic manganese outside of China are South Africa and Gabon, where ERAMET Comilog Manganese is currently ramping up the Complexe Métallurgique de Moanda (CMM).

The main markets for metallic manganese are carbon steel, stainless steel and aluminium production. Global metallic manganese production varies between 1.1 and 1.5 million tonnes annually, depending on the year.

#### 2.4.1.3 RECENT MARKET AND PRICE TRENDS

## FORMATION AND MONITORING OF MANGANESE ORE PRICES

The sale price of manganese ore is the result of direct negotiations between buyers and sellers. It is conventionally expressed in USD/dmtu (dry metric tonne unit). One dmtu corresponds to 10 kg of manganese content. The dmtu price is higher for high-grade ores and also depends on particle size and the possible presence of impurities.

While the price of high grade ore was previously set for one year, the validity term of contract prices has shortened since 2009, increasing the volatility of manganese ore prices. This trend has accelerated since 2010: prices have gone from being evaluated every quarter to being evaluated every month or even every week.

#### MONTHLY PRICE OF MANGANESE ORE 44% CIF CHINA (IN USD/DMTU)



## FORMATION AND MONITORING OF MANGANESE ALLOY PRICES

There is no market as such for manganese alloys. Prices are negotiated directly between producers and customers. As far as scheduled sales are concerned, alloy prices are often negotiated on a quarterly basis. Non-scheduled sales are often negotiated on the basis of spot prices.

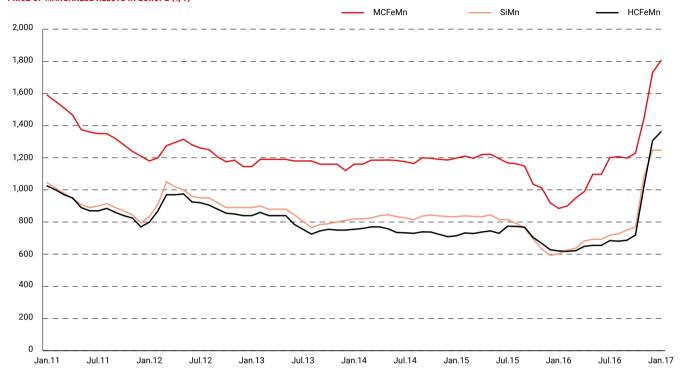
The manganese alloys market is above all a highly competitive global market. However, the movement of alloys between large areas is relatively limited due to shipment costs. Prices may vary between major geographic areas (Europe, North America and Asia) due to changes in exchange rates or lags in economic cycles.

There are also discrepancies between the different alloy families due to differences in value in use. Refined alloys in particular have a much higher sale price than standard alloys.

Outside Europe, manganese alloy prices are mainly denominated in US dollars (USD). In Europe, they are usually negotiated in Euros (EUR). Prices are determined per gross tonne of alloy. However, product quality, and specifically its manganese content, are taken into account during negotiations.

There are several publications specialising in metals that track trends in manganese alloy prices using monthly spot price surveys. The graph below is based on data published in CRU (London).

#### PRICE OF MANGANESE ALLOYS IN EUROPE (€/T)



Generally speaking, fluctuations in the price of manganese alloys follow those of ore. However, producers' ability to preserve their margins largely depends on regional balances and supply and demand for each type of alloy.

#### RECENT MARKET AND PRICE TRENDS

Global steel production reached 1,597 million tonnes in 2016, an increase of 0.8% compared to 2015, which saw a slowdown.

For manganese ore, 2016 was characterised by strong fluctuations in market balance. Adjustments for a decline in production which began in the third quarter of 2015 resulted in a sharp drop in Chinese supplies in January-February and contributed to a deficit in March-April 2016. At the beginning of the second half of

the year, a strengthening of demand and a reduction in the supply of Australian oxide ore increased tensions which impacted market balance and fuelled a rise in prices through the end of the year. A reversal of the trend can be observed starting in January 2017 in connection with weaker Chinese demand leading up to the Chinese New Year and a supply of exported ore which remained high, particularly from South Africa.

The prices of CIF China 44% manganese ore (source CRU) were very volatile in 2016. After reaching a histo-

rical low at the beginning of the year, the price of ore began to climb again through December, registering a sharp increase between the beginning and the end of 2016. The price of ore has been following a downward trend since the beginning of 2017.

The price of alloys remained historically low through November 2016 before rising sharply due to the impact of commodity prices and reductions in supply: between the beginning and the end of 2016, for example, silicomanganese increased by more than 100%.

## 2.4.2 OVERVIEW OF ERAMET MANGANESE

#### **2.4.2.1 KEY FACTS**

#### MANGANESE ORE AND ALLOYS (80% OF ERAMET MANGANESE'S SALES IN 2016): A GLOBAL LEADER IN MANGANESE ORE ACROSS THE ENTIRE VALUE CHAIN

The main business activity is the Manganese division, which includes the extraction of ore in Gabon by Comilog, its transport by rail (including other transport activities related to the Transgabonese railway concession) and its loading at the port, as well as ore recovery activities, either in the form of manganese alloys for the steel industry or in the form of chemical derivatives targeting various customers in the chemical industry). ERAMET Manganese is a leading global player in the manganese industry, both in mining and ore processing: through its majority stake in Comilog along with the Republic of Gabon and through several plants located close to consumption zones, it is:

- the world's second largest producer of high-grade manganese ore;
- the world's second largest producer of manganese alloys;
- the world's largest producer of refined alloys;
- the world's largest producer of chemical derivatives of manganese.

## CHEMICALS: 11% OF ERAMET MANGANESE'S SALES IN 2016

As part of its asset disposal programme, ERAMET Manganese's activities relating to the chemical industry were effectively ended on 30 December 2016. In the context of this disposal, Comilog remains a leading supplier of ore to this business.

## RECYCLING: 4% OF ERAMET MANGANESE'S SALFS IN 2016

On 14 June 2016, GCMC, a wholly-owned subsidiary of Comilog specialising in the recycling of oil catalysts in the United States, and its wholly owned subsidiary BMC, filed a voluntary petition before the competent court in Pennsylvania for protection under chapter 11 of the US Bankruptcy code. Chapter 11 allows companies to continue operating for the duration of the proceedings and may facilitate the search for a buyer.

GCMC has not found a buyer for all of its activities and has commenced the winding up of its operations in 2017. The Comilog group has drawn all the necessary conclusions regarding the accounting impact in its consolidated financial statements on the basis of this assumption.

BMC has found a buyer for its operations. The liquidation of its legal structure is under way as at 31 December 2016.

# TITANIUM DIOXIDE/ZIRCON: 5% OF SALES IN 2016 (ACCRUING TO ERAMET'S 50% HOLDING IN TIZIR).

Since the acquisition of the Norwegian group Tinfos in 2008, the Group has pyrometallurgical industrial facilities in Norway which can process titanium ore (ilmenite) in order to supply an upgraded product enriched in titanium dioxide (slag) to customers who produce white pigments.

In 2011, ERAMET formed a 50/50 partnership, bringing together this leading downstream metallurgical asset and an upstream source of ore on the verge of being developed: the Grande Côte mineral sands project in Senegal, owned by the Australian group Mineral Deposits Limited. Grande Côte began production in 2014. This combination resulted in the creation of the TiZir entity.

With the launch of the Grande Côte project in Senegal in the first half of 2014, TiZir aims to become one of

the world's leading players in zircon and titaniferous raw materials.

#### MABOUMINE PROJECT: NIOBIUM/RARE EARTH MFTALS PROJECT IN GABON

Through Maboumine, a subsidiary of Comilog (76%), ERAMET has deployed significant resources to develop a mining project at the Mabounié site in the province of Moyen-Ogooué, Gabon.

The project, in development through the beginning of 2015, focused on extracting the Mabounié deposits of niobium, rare-earth metals and uranium using an innovative hydrometallurgical process. The complexity of the ore and the objective of recovering all of the valuable elements excluded the use of pyrometallurgy.

The Group conducted extensive research in both the laboratory and at pilot plants to develop the process, adapted to the specific characteristics of ores: this work resulted in five patents being filed.

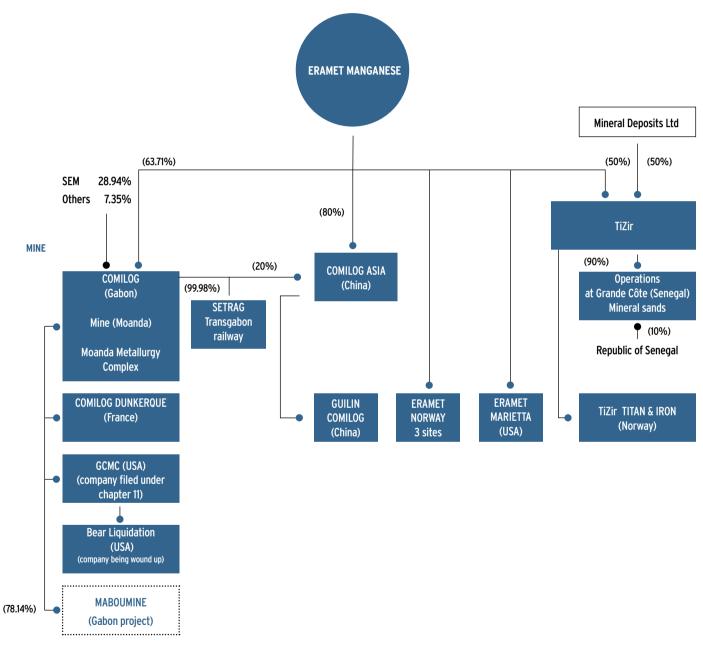
In addition to R&D activities, a scoping study was conducted in 2014-2015 in order to draw up an initial business plan. The outlook was revealed to be unfavourable given the challenges in terms of profitability and the uncertainties affecting the markets for the products in question, particularly those for rare earth metals.

A benchmark with comparable projects showed the deposit to be favourably positioned in terms of mining resources, but the audit of the business plan conducted by a respected international firm recommended reviewing the definition of the project and seeking out partnerships in order to reduce the level of technical risks and improve economic profitability of the operation based on a new industrial project. The conclusions of the audit were shared with the directors of Maboumine and the responsible minister, who decided to seek partnerships. A committee was set up with representatives from the Gabonese government and contacts were made with various companies in Europe and China.

#### 2.4.2.2 STRUCTURE

#### ORGANISATION AT 31 DECEMBER 2016

ERAMET Manganese is currently organised according to the diagram pictured below:



**NIOBIUM / RARE-EARTH METALS** 

100% owned unless otherwise stated

Comilog is a company operating under Gabonese law and ERAMET owns 63.71% of its shares. Its activities include:

- operation of the manganese mine and sinter plant in Moanda (Gabon):
- operation of Setrag (concession holder of the Transgabonese railway);
- production of manganese alloys in Dunkerque (France):
- recycling of metals contained in GCMC's (United States) petroleum catalysts. The company filed for protection under chapter 11 in 2016;
- the Maboumine niobium/rare earth metals project in Gabon.
- Comilog Asia is responsible for the manganese chemical and manganese alloy production activities carried out in China. The chemicals business (the manganese electrolytic dioxide plant for batteries located in Chongzuo) was sold as part of the asset disposal programme. In addition, the production of manganese alloys in China was suspended due to non-competitive market conditions and electricity prices.
- ERAMET Norway has three Norwegian alloy plants in Porsgrunn, Sauda and Kvinesdal (Norway);
- ERAMET Marietta (United States) produces manganese alloys;
- TiZir is a 50/50 joint venture with the Australian Group, Mineral Deposits Limited which extracts mineral sands (titaniferous minerals and zircon) at Grande Côte, Senegal, and processes ilmenite into titanium dioxide and high-purity pig iron in Tyssedal, Norway.

#### 2.4.2.3 ERAMET MANGANESE'S ACTIVITIES

#### MINING OPERATIONS AND PROCESSING OF MANGANESE (MANGANESE ALLOYS AND CHEMICALS)

## The mine, sinter plant and metallurgical complex at Moanda (C2M)

The Moanda mine is one of the richest manganese ore deposits in the world. The ore's manganese content averages at around 46%. Mining reserves are discussed in Section 2.7.

Mining operations are carried out in open pits. The layer of overburden covering the ore is a few metres thick. The run-of-mine ore is extracted using excavators and loaded onto 100-tonne trucks. The ore is processed at the Moanda beneficiation plant. The resulting enriched ore is shipped by conveyor to the Moanda train station.

The Moanda industrial complex processes the fine by-products of metallurgical beneficiation as well as manganiferous sediments extracted from the bed of the Moulili river. The fine products are enriched by dense medium or by high-intensity magnetic separation so as to increase their manganese content from 35% to 50%. Part of the concentrates produced by this process are sold directly, while the rest are mixed with coke and sintered at a temperature of 1,300 degrees Celsius to achieve a product with approximately 56% manganese content. This product is then shipped by conveyor and loaded onto wagons at the Moanda train station. The sinter plant has a production capacity of 600,000 tonnes per year.

The Moanda Metallurgy Complex (C2M) began production in late 2014. It's target production is 60,000 tonnes of silicomanganese and 20,000 tonnes of metallic manganese.

The Transgabonese railway transports Comilog's manganese ore, as well as wood, various cargo and passengers, between Franceville and Libreville, a distance of more than six hundred kilometres. Comilog owns and operates its own locomotives and wagons.

As of November 2005, Comilog obtained the concession for the Transgabonese railway for a duration of thirty years. This allows it to secure its connections and ensure the shipment of sharply growing quantities of ore.

Through its subsidiary, Port Minéralier d'Owendo, Comilog is a concession holder for its ore carrier port, the port of Owendo, with a storage capacity equal to roughly one and a half months of production. The port can accommodate 60,000 tonne ships and load them in three days.

#### Manganese alloy production

The Group is the world's second largest producer of manganese alloys and the world's largest producer of refined alloys, products with high added value. The Group currently has six plants spread across the main areas of consumption, enabling it to provide better service to its customers while resisting market and currency fluctuations.

The Group produces a wide range of alloys: high-carbon ferromanganese, silicomanganese, low and medium-carbon ferromanganese, low-carbon silicomanganese. ERAMET Manganese has been gradually increasing the proportion of refined alloys it produces. In 2014, the Moanda Metallurgy Complex in Gabon (CMM) added metallic manganese to its range of products.

#### **ERAMET MANGANESE'S PRODUCTION OF MANGANESE ALLOYS**

(IN THOUSANDS OF TONNES)	2016	2015	2014	2013	2012	2011	2010
High-carbon ferromanganese	76	62	68	118	144	227	256
Standard silicomanganese	268	219	237	267	236	199	196
Refined alloys	354	422	389	366	350	358	327
Total	698	703	694	750	730	784	779

#### MANGANESE ALLOY PRODUCTION SITES

SITES	COUNTRY	PRODUCTION CAPACITY	TYPE OF FURNACE	PRODUCTS
Dunkerque	France	70 kt	Electric furnace	SiMn
Sauda	Norway	210 kt	Electric furnace	HC, MC, LC FeMn, SiMn
Porsgrunn	Norway	165 kt	Electric furnace	HC, MC, LC FeMn, SiMn, LC SiMn
Kvinesdal	Norway	165 kt	Electric furnace	SiMn, LCSiMn
Marietta	United States	120 kt	Electric furnace	HC, MC, LC FeMn, SiMn
Guilin	China	165 kt	Electric furnace	HC, MC, SiMn
Moanda	Gabon	65 kt	Electric furnace	SiMn
Moanda	Gabon	20 kt	Hydro + electrolysis	Metal manganese

In Europe, three alloy plants are located in Norway. The fourth plant is located in France (Dunkerque).

Despite the streamlining of the system in China between 2010 and 2012, market conditions and cost factors there have made it necessary to suspend production operations at the Guilin site.

In the United States, ERAMET Marietta is the primary of two local manganese alloy producers.

#### **ERAMET MANGANESE MARKETING POLICY**

Thanks to its industrial presence, ERAMET Manganese can offer a complete range of products and a flexible response to the various manganese-related needs of its customers.

The Group maintains partnerships with its customers, providing significant technical and sales support in order to help them derive maximum benefit from

its products in their own production processes. The marketing policy is managed by ERAMET Comilog Manganese, which uses the ERAMET group's international sales network, ERAMET International, which is responsible for marketing ERAMET Manganese's products. The Group is represented by agents in the countries where ERAMET International does not have a presence.

#### MANGANESE CHEMICALS BUSINESS

Manganese chemicals activities, consolidated under Erachem Comilog, take place at five plants:

LOCATION	PRODUCTS
Tertre (Belgium)	Manganese salts and oxides
Baltimore (United States)	Manganese salts and oxides
New Johnsonville (United States)	EMD (electrolytic manganese dioxide)
Tampico (Mexico)	Manganese oxide and sulphate
Chongzuo (Guangxi Province, China)	EMD (electrolytic manganese dioxide)

As part of its asset disposal programme, ERAMET Manganese's activities relating to the chemical industry were effectively ended on 30 December 2016. In the context of this disposal, Comilog remains a leading supplier of ore to this business.

#### RECYCLING ACTIVITIES

Recycling activities currently take place at the following sites:

Tertre (Belgium)	Copper solution recycling
Freeport (United States)	Recycling of oil catalysts and recovery of metal content (vanadium, molybdenum, nickel, cobalt, etc.)
Butler (United States)	Production of ferromolybdenum and ferrovanadium

On 14 June 2016, GCMC, a wholly-owned subsidiary of Comilog specialising in the recycling of oil catalysts in the United States, and its wholly owned subsidiary BMC, filed a voluntary petition before the competent court in Pennsylvania for protection under chapter 11 of the US Bankruptcy code. Chapter 11 allows companies to continue operating for the duration of the proceedings and may facilitate the search for a buyer.

GCMC has not found a buyer for all of its activities and has commenced the winding up of its operations in 2017. The Comilog group has drawn all the necessary conclusions regarding the accounting impact in its consolidated financial statements on the basis of this assumption.

BMC has found a buyer for its operations. The liquidation of its legal structure is under way as at 31 December 2016.

# 2.4.2.4 TIZIR 50% ERAMET: AN IMPORTANT PLAYER IN THE EMERGING TITANIUM DIOXIDE AND ZIRCON MARKETS

TiZir was formed in 2011 by ERAMET and Australian company Mineral Deposits Limited. ERAMET owns 50% of the company, which has two sites:

- Grande Côte, a mineral sands deposit in Senegal;
- the Tyssedal plant, which producers titanium dioxide slag primarily for the pigments industry and high-purity pig iron from ore (ilmenite) purchased from several suppliers.

Together, these two assets represent a vertically integrated entity and a major player in the mineral sand industry. The Tyssedal plant benefits from the security of its supply of high-quality ilmenite – a titaniferous ore – from Grande Côte, which in turn is able to guarantee the long-term sale of a significant portion of its ilmenite production.

SITES	COUNTRY	PRODUCTS
Grande Côte	Senegal	Mineral sands: titaniferous ore (ilmenite, rutile, leucoxene) and zircon
Tyssedal	Norway	Titanium dioxide slag (pigment industry) High-purity pig iron (foundry)

#### OPERATIONS AT GRANDE CÔTE

The mineral sands mine at Grande Côte is located along the Senegalese coast. The concession begins about 50km north of Dakar and stretches north for more than 100km.

Construction of the project began in the second quarter of 2011. Industrial production began in April 2014 and has been growing steadily ever since.

Facilities include a dredge and a floating concentration unit used to recover the main heavy minerals; a mineral separation plant and a power plant were also constructed. Because logistics is a crucial factor for the success of a mining operation, a railway line,

storage facilities and port infrastructure in Dakar were also built.

## THE TYSSEDAL PLANT (TTI: TIZIR TITANIUM & IRON)

The TTI plant in Tyssedal, Norway, produces titanium dioxide slag primarily used for the production of pigments using a chloride process with an annual capacity of 230 kt. It also produces a high-purity pig iron with a annual capacity of 100 kt, which is sold to foundries for diverse applications, including the production of wind turbine parts.

The site also benefits from privileged access to hydroelectric power as it is located close to important sources of water exploited for this purpose. The particularly complex technology used for processing ilmenite, the flexible nature of the TTI process and its unique access to a competitive source of energy make TTI a major asset in the titanium industry.

The furnace was completely overhauled in 2015, with a 3-month production shutdown to install and upgrade equipment to improve its environmental characteristics and performance. Following the incident which took place in August 2016 during ramp-up, the refractory lining had to be changed and operations resumed on 7 January 2017.

#### TIZIR'S PRODUCTION

		2016	2015	2014
Mine				
Sand extracted	(kt)	39,203	34,760	14,102
Heavy mineral concentrate	(kt)	613.7	632.9	184.0
Finished products				
Ilmenite	(kt)	416.2	427.7	100.6
Zircon	(kt)	52.6	45.2	9.0
Rutile and leucoxene	(kt)	9.7	5.3	0.7
Titanium dioxide slag	(kt)	103.6	106.8	183.7
High-purity pig iron	(kt)	42.6	59.2	103.0

## MINERAL SANDS, SOURCE OF ZIRCON AND TITANIUM DIOXIDE

Mineral sands are mineral raw materials which contain heavy minerals concentrated over time in an alluvial (rivers, coasts and lakes) or windy (dunes) environment. Deposits of mineral sands are thus ancient beaches, ancient dunes or ancient river beds. The main products extracted from these sands are titaniferous ore, mainly found in the form of ilmenite (FeTiO<sub>3</sub>), rutile (TiO<sub>2</sub>) and to a lesser extent leucoxene (ilmenite partially altered into rutile), and zircon (ZrSiO<sub>2</sub>).

The levels of these minerals in the sands vary between deposits but are typically in the order of a few percent. The most economical methosd of extraction entails using a floating dredge in a constructed dredge pond; however, this is most effective if the sands contain very few clay particles, which is the case at Grande Côte. Otherwise, more conventional mining methods (hydraulic excavators and dumpers) are used; for rocky titaniferous ore, for example.

At Grande Côte, sands are mined using a dredge (advancing by around 20 metres a day) to produce a gravity sorted heavy mineral concentrate on a floating unit and then returning any non-mineralised sands back to the dunal system. A mineral separation plant, on land, magnetically and electrostatically separates the different minerals in the heavy mineral concentrate in order to produce various commercial products.

The largest mineral sand deposits currently being mined are mostly located in Australia, South Africa and China, which together account for roughly 50% of the titanium ore supply and more than two thirds of the zircon supply.

# THE TITANIUM DIOXIDE MARKET: STRONG POTENTIAL FOR GROWTH DRIVEN BY DEVELOPING COUNTRIES

While titanium metal is well known for its applications in the aerospace industry, as is the case at ERAMET Alloys, 90% of TiO<sub>2</sub> units are consumed in the white pigment industry.

White pigment producers require raw material rich in  ${\rm TiO_2}$ ,  ${\rm TiO_2}$  has two exceptional properties which make it attractive for use in pigment production; opacity and pure white. It is used in paints, plastics, textiles and papers.

#### Use of TiO<sub>3</sub>-based white pigment

- Paint 56%
- Plastic 25%
- Paper 9%
- Other 10%

This paint market is experiencing global growth of around 3% a year.

The main producers of  ${\rm TiO_2}$ -based raw materials are:

- Rio Tinto;
- Tronox (also a producer of pigments);
- Kenmare;

- Iluka, which bought Sierra Rutile (Sierra Leone) in 2016:
- Cristal (also a producer of pigments);
- Base:
- TiZir;
- Kronos (also a producer of pigments);
- and Chinese, Indian and Ukrainian producers.

#### MARKET AND PRICE TRENDS

After a long phase of stability, the titanium dioxide market saw an initial increase in demand in 2008 followed by a surge in its prices across the value chain in 2011, with spot prices tripling during a peak in 2012.

The product's strong profitability, combined with strong growth forecasts in China, generated further investments in the mineral sands industry, ultimately resulting in overcapacity. As a result, prices fell sharply starting in mid-2012 through the first months of 2016, a scenario common to most resource commodities.

With prices across the entire value chain causing a decline in supply, the market found again its balance, starting with  ${\rm TiO}_2$  and ilmenite. These two commodities saw a significant rise in their selling price in 2016 but not a return to their 2013 prices. While the outlook for other products (chloride ilmenite, titanium slag, rutile and synthetic rutile) have improved markedly, prices remained stable due to persistent overcapacity in the industry. However, most analysts forecast higher prices for these products to return over the course of 2017.

#### THE ZIRCON MARKET

One of zircon's main applications is as an opacifying agent in ceramics, giving them a glossy appearance and smooth surface. Ceramic tiles and bathroom sinks contain zircon: zircon sand is finely ground and then added directly to the ceramic preparation.

Zircon also has important refractory properties and is thus used in certain industrial segments as a mould component in high-precision foundries. The chemical derivatives of zircon are used in a number of applications such as abrasives, wear resistant materials and certain catalysts. Finally, zirconium metal is used in the nuclear sector for the protective sheath for fuel rods (highly heat resistant and permeable to neutrons).

Uses for Zircon:

Ceramics 52%
Chemical derivatives 18%
Refractories 16%
Foundries 12%
Other 2%

The main producers of Zircon are:

- Iluka;
- Tronox;
- Rio Tinto;
- Kenmare:
- Cristal;
- TiZir;
- Sibelco.

As with titanium dioxide, the zircon market experienced a period of very high prices and tension on the physical market at the beginning of the decade. This was accentuated by stockpiling throughout the industrial chain.

In 2013, the trend reversed. A phase of destocking and a significant drop in prices characterised the market for most of the year, while production capacity continued to increase and certain consumers adapted their consumption patterns to technically optimise their use of zircon (partial substitution).

The price of zircon remained relatively stable in 2014 and 2015 before dropping again at the beginning of 2016 following a new decrease in demand for the production of ceramic tiles in China. Since then, prices have risen slightly.

#### 2.4.3 ERAMET MANGANESE IN 2016

(€ MILLION)	2016	2015
Sales	1,439	1,430
EBITDA	358	196
Current operating profit/ (loss)	219	58
Net cash generated by operating activities	243	106
Capital employed	1,339	1,587
Industrial investments	104	164

#### 2.4.3.1 OPERATIONAL INDICATORS

(TONNES)	FY 2016	FY 2015
Manganese ore and sinter production	3,413,000	3,868,000
Manganese alloy production	702,000	709,900
Manganese alloy sales	725,000	713,000

ERAMET Manganese's sales have remained stable at €1,439 million and current operating profit/(loss) has risen sharply to €219 million thanks to the competitiveness of the Moanda deposit and the Group's manganese alloy plants, as well as a strong rise in the price of manganese ore in the second half of 2016.

World production of carbon steel, which is the main market for manganese, edged up in the year by approximately 0.8% from 2015 level helped by a loosening of credit in China, which in turn led to a resumption of major construction programmes and a lowering of steel stocks at producers. China alone accounted for 50% of global carbon steel production in 2016.

As a result, CIF China 44% manganese ore prices (source: CRU) also fluctuated sharply during 2016:

- Prices hit a record low in H1 2016 (USD 1.83/dmtu in February 2016). At these prices, all manganese ore producers were operating at a loss. Therefore many producers cut output or even suspended operations.
- At the end of summer 2016, the recovery in carbon steel production in China and the tightening of production by manganese ore producers quickly led to a recovery in manganese ore prices. In December 2016, CRU CIF China 44% manganese ore prices rose to USD 8.83/dmtu.

2016 prices averaged at USD 4.30/dmtu, from an average of USD 3.11/dmtu in 2015. Since summer 2016, Manganese alloy prices have also trended upwards.

Against this background, ERAMET Manganese halted production for one month in the first quarter of 2016. With this adjustment, annual production was 3.4 million tonnes transported in 2016. ERAMET Manganese ore production rose to a record 3.9 million tonnes transported in 2015.

The final terms and conditions of the financing plan for the renovation of Setrag (the Transgabonese railway concession operator) were agreed by both the Gabonese government and Comilog. 2017 will see the beginning of the first step of the multi-year works programme.

The cost reduction and productivity improvement plans implemented by ERAMET Manganese delivered a cumulative annual impact of €81 million on current operating income since 2014, relative to 2013. These gains were amplified by additional plans implemented in Comilog and ERAMET Norway during 2016.

As part of its asset disposals programme, ERAMET disposed Erachem (manganese chemicals), Somivab (forestry operation in Gabon) and Bear Metallurgical (vanadium and molybdenum metallurgy in the USA). The impact of the disposals on the Group's net debt comes out at €142 million.

## TIZIR (50/50 JOINT VENTURE WITH MINERAL DEPOSITS LIMITED)

Low prices at the start of 2016 caused supply to contract across the titanium dioxide value chain with a resulting rebalancing in the titanium dioxide pigment markets. Finished product prices recovered strongly in 2016, but did not rise back up to 2013 levels.

Further up this value chain, the outlook continues to be positive for the products produced by TiZir (ilmenite and titanium dioxide slag for chloride processes), although excess capacity in the chloride slag sector may limit the price increase potential for this product in the short term.

Regarding zircon, after a decrease in prices in the first half of 2016, prices remained stable until the end of 2016. Some producers announced a slight increase in prices at the end of the year, demonstrating market stabilisation.

Production of heavy mineral concentrate (HMC) in Senegal came out at 614,000 tonnes in full-year 2016, with record production of 194,000 tonnes in 04. The mine's operational efficiency met expectations.

An agreement was reached with the insurance company to pay USD 35 million in total compensation, following a fire in the furnace of the TiZir plant in Norway on 15 August 2016. The refractory relining was successfully completed at the end of 2016 and the facility came back on stream on 7 January 2017.

TiZir posted positive €16 million in EBITDA in 2016, demonstrating its capacity to generate value, despite overall stable prices for mineral sands and the furnace incident in Norway.

## 2.4.3.2 RETURN ON CAPITAL EMPLOYED FOR ERAMET MANGANESE

ROCE: Current operating profit/(loss)/capital employed at 31 December of year N-1 (equity, net financial debt, provisions for restoration of sites, provisions for restructuring and other social risks, less non-current financial assets, excluding investment in the Moanda metallurgy complex at 31 December 2010 and 2013 for the 2011 to 2014 ROCE).

#### **MANGANESE ROCE (BEFORE TAXES)**

(%)	2011	2012	2013	2014	2015	2016
Manganese	36.3	20.6	15.6	9.7	3.5	13.8

## 2.5 ORGANISATION OF ERAMET/ ERAMET HOLDING

The parent company ERAMET S.A. operationally combines two primary functions:

- a pure holding company, ERAMET Holding, which brings together the various support services including General Management, the Administrative and Financial Department, the Human Resources Department, the Communications and Sustainable Development Department, the Strategy and Investor relations Department, the Legal Department and the Information Systems Department;
- part of ERAMET Nickel (General Management, Sales and Industrial Management).

The costs of the holding company are re-invoiced to the three divisions through management fee contracts. Other operating costs relating to ERAMET Nickel's activities are directly allocated at the Nickel Division.

ERAMET also has direct subsidiaries which act on behalf of the various entities or of the parent company. These include:

- ERAMET Research: ERAMET's research centre, responsible for research and development;
- ERAMET Engineering: a project and technology company;
- ERAMET International: a company that brings together ERAMET's sales network for certain activities of the three divisions. ERAMET International has
- subsidiaries and branches throughout the world. ERAMET International's business activities are generally commissionned under agency commission contracts:
- ERAMET Services: a shared service centre combining certain human resources, IT and accounting activities:
- Metal Securities: the Group's treasury management company which centralises cash surpluses and short-term requirements for the entire Group;
- Metal Currencies: the Group's foreign exchange management company, which carries out all of the foreign exchange hedging transactions for the entire Group;
- ERAS: reinsurance company

At the consolidation level, the Holding Division includes the holding role for ERAMET and the consolidated subsidiaries (Metal Securities, Metal Currencies and ERAS.

# 2.6 PLANTS AND EQUIPMENT

The Group mostly owns its sites and their various equipment. Some large items of equipment are financed under finance leases (IV30 and the 40,000 tonne press at ERAMET Alloys, the Tiébaghi beneficiation plant and the mining equipment at ERAMET Nickel) and are restated in the consolidated financial statements.

The breakdown of property, plant and equipment by Division and by unit is shown below. Almost 80% of the value of these non-current assets belong to around ten industrial sites:

(€ MILLION)	GROSS VALUE	%	NET VALUE	%
Société Le Nickel-SLN (New Caledonia)	1,791	29.6%	563	24.3%
Other	161		34	
ERAMET Nickel	1,952	32.2%	597	25.8%
Comilog SA (Gabon)	1,034	17.1%	568	24.5%
TiZir (Norway, Senegal)*	425	7.0%	318	13.7%
ERAMET Norway A/S (Norway)	379	6.3%	130	5.6%
Setrag (Gabon)	284	4.7%	187	8.1%
GCMC (United States)	211	3.5%	0	0.0%
ERAMET Marietta Inc. (United States)	188	3.1%	4	0.2%
Guilin Comilog Ferro Alloys Ltd (China)	105	1.7%	12	0.2%
Other	67		9	
ERAMET Manganese	2,693	44.4%	1,228	53.1%
Aubert & Duval (France)	898	14.8%	377	16.3%
Erasteel SAS (France)	138	2.3%	23	1.0%
Erasteel Kloster AB (Sweden)	132	2.2%	9	0.4%
Other	184		65	2.8%
ERAMET Alloys	1,352	22.3%	474	20.5%
ERAMET Holding (France)	62		15	
Total	6,059		2,314	

<sup>\*</sup> ERAMET share 50%.

# 2.7 RESEARCH AND DEVELOPMENT/ RESERVES AND RESOURCES

# 2.7.1 RESEARCH AND DEVELOPMENT R&D OPERATING ACROSS THE ENTIRE METALS VALUE CHAIN, FROM MINING TO PRODUCTS

#### 2.7.1.1 R&D ACTIVITIES

The ERAMET group conducts its R&D activities across the entire metals value chain, from mining to products, including recycling. This value chain covers exploration, mining, extractive metallurgy, metallurgical processing (initial processing, remelting processes, powder metallurgy), open-die forging and closed-die forging. Metal recycling is integrated into every stage of this value chain. This positioning represents a strategic opportunity for the ERAMET group to obtain a comprehensive understanding of each step of the value creation stages for products and processes.

Specifically, ERAMET is active in R&D for the recovery and processing of the following metals in the periodic table and their mineral derivatives. Listed in by atomic number, they are: aluminium, titanium, vanadium, manganese, iron, cobalt, nickel, copper, zirconium, molybdenum, tungsten and rhenium. The Group's projects and those of ERAMET Research's clients outside the Group also lead the Group to conduct research on a wide range of additional metals, including the following (listed by atomic number): lithium, zinc, germanium, yttrium, lead, niobium, indium, the lanthanide series, including rare-earth metals such as lanthanum, cerium, praseodymium, neodymium, samarium, europium, dysprosium, and finally uranium.

ERAMET also conducts a number of R&D projects in the fields of superalloys, high-performance steels,

aluminium alloys and titanium alloys, as well as powder metallurgy.

This expertise in multiple metals and alloys along the entire value chain contributes to the unique positioning of ERAMET R&D.

#### 2.7.1.2 AREAS OF EXPERTISE

The ERAMET group's first area of expertise is focused upstream around the main disciplines of **extractive metallurgy**, such as mineralogy, mineral processing, hydrometallurgy and pyrometallurgy.

The ERAMET group's second area of expertise is **metal-lurgical processing**, covering innovation in new alloy grades and all processes associated with metallurgical processing. Powder metallurgy plays an increasingly important role in this field, with new developments occurring in the area of aerospace, particularly in the expanding field of additive manufacturing.

The ERAMET group's third area of expertise is the thermomechanical transformation of alloys by forging and **closed die-forging**, producing parts with dimensions close to finished products, particularly for the aerospace, energy, nuclear and defence markets.

Finally, the fourth area of expertise is manganese chemistry and its associated recycling activities.

Numerical modelling, applied to areas such as thermodynamics, fluid mechanics, dynamic reactor simulation, chemical engineering and physical metallurgy, provides an essential complement to the developments and optimisation of processes and products. Microscopic characterisation and the chemical analysis of treated materials and products are also part of the areas of expertise where innovation and proficiency are an additional asset in the development of projects for the ERAMET group.

#### 2.7.1.3 ORGANISATION OF THE GROUP'S R&D

The Group's R&D organisation is managed operationally for each of the areas of expertise.

For extractive metallurgy, ERAMET Research, a dedicated research centre (a wholly owned subsidiary of ERAMET since 2003) based in Trappes (Yvelines), which employs roughly 100 people, including 80 researchers, engineers and technicians. The activities of this centre on the Group's own account reached €7 million in 2016. This centre has high-performance observational tools, including the first microscope in France with QEMSCAN mineralogy software, advanced laboratory tools and pilot facilities, sometimes on a semi-industrial scale (rotary furnaces, high and low impedance electric furnaces of approximately 1 MW), which can be used continuously for several weeks.

Société Le Nickel-SLN's Technical Studies and Investigations Department (DETI) in New Caledonia is also very active in this field, and has around thirty employees.

An important competence centre for metallurgical processing (air milling, secondary metallurgy, vacuum production, remelting) is located in Les Ancizes (Puy-de-Dôme) and an R&D team in the area of closed die-forging is based in Pamiers (Ariège), together totalling about 30 employees.

In powder metallurgy, a competence centre for the production of steel powder by gas atomisation is located in Sweden and comprises about a dozen people: PEARL (Powder Expertise Analysis and Research Laboratory). Other areas of expertise are also represented at the Alloy Divisions sites at Irun, Imphy and Les Ancizes for the production of superalloy powders for additive manufacturing.

The ERAMET group employs a total of roughly 200 people who are completely dedicated to R&D, not counting the industrialisation and process monitoring teams present at all of the industrial sites. Within the Divisions, these teams coordinate testing and essential phases of industrialisation for the Group's research projects. A total of approximately 1% of Division sales is dedicated to R&D, or around €30 million in 2016.

In order to increase the efficiency and effectiveness of its R&D activities, ERAMET has combined Research, Innovation and Engineering a single management authority. This combined grouping is attached to the Strategy Department.

#### 2.7.1.4 MAIN ACHIEVEMENTS IN 2016

ERAMET targets its research and development to meet the demands of its industrial clients, improve its competitiveness, offer new services and create new development opportunities. The environment is a constant focus during the development of new processes, with the aim of reducing the environmental footprint.

Research efficiency is a decisive asset in the Group's activities, from mining to products. In order to meet and even exceed customer expectations, research and development programmes allow the Group to strengthen its positions, even in the most competitive markets

These programmes are conducted within the Divisions or at the ERAMET Research centre. To ensure the results are wholly relevant, the ERAMET Research teams work in close collaboration with ERAMET Engineering and the teams in charge of development in the various units, who are in direct contact with the operational staff. This generates considerable efficiency gains, from defining programmes to implementing innovations, whether involving products or the processes themselves, including improving productivity.

The main research topics for 2016 are described in the following paragraphs.

#### FRAMFT NICKFI

ERAMET Nickel's R&D activities for 2016 were focused on three areas.

The first area entailed the optimisation of technical and economic performance of the New Caledonian subsidiary by helping it to adapt its pyrometallurgical process to the chemical developments in nickel ores, both current and future. New tools were developed to improve process control. Industrial tests were carried out on ore calcination in order to improve the stability of operations in electric furnaces. Finally, a pilot campaign was carried out to study the changes to be made to the nickel ore melting/reduction process.

The second area of research focused on improving environmental performance by developing a new ferronickel refining process for producing inert slag, and studying methods for recovering by-products from the Doniambo plant in New Caledonia, both internally and externally.

The third area focused on diversifying the supply of nickel matte from the high-purity nickel production plant at Sandouville. This project made it possible to tackle, first on a pilot scale and then on an industrial scale, other raw materials for the refinery, while maintaining the purity of nickel cathode products and nickel salts destined for the high value-added markets.

All of this was made possible thanks to close cooperation between the teams from ERAMET Research, DETI, the Sandouville plant and ERAMET Nickel's Industrial Department.

#### **ERAMET MANGANESE**

ERAMET Research's primary mission was to support a production increase at the C2M Moanda Metallurgy Complex in Gabon. The aim was to provide technical support to the process and production teams for metallic manganese and silicomanganese, particularly by participating in the analysis of causes and the resolution of traditional problems when beginning production at this type of facility.

At the same time, the mission's scope of action includes optimising and finalising workshop documentation, training teams and proposing improvements. This assistance to operational teams will continue into 2017, until the plant has reached normal operating conditions

In addition, various actions have been taken concerning tools for the beneficiation of manganese ore, including a pilot programme at ERAMET Research in anticipation of changes in the quality of processed

With regard to manganese alloys, ERAMET Research's work has focused on improving plant performance, particularly increasing refining capacity, lowering production costs, improving furnace stability, decreasing costs for energy and developing new alloy grades. Work on manganese metallurgy is carried out in close cooperation with the ERAMET Norway R&D team, based in Trondheim.

#### FRAMFT ALLOYS

R&D activities are carried out in close cooperation with Division business units in order to develop new products with our customers and to improve the performance and competitiveness of existing products. These activities cover both the development of new alloy grades (superalloys, steels) and work on alloy processing and thermomechanical transformation (forging, closed die-forging, heat treatments) processes. Powder metallurgy represents an important part of these activities.

The major studies, mostly conducted in partnership with our customers, covered the following subjects:

- industrialisation of the production of new superalloy products for new commercial engine programmes (e.g. LEAP, GE9X and TXWB);
- industrialisation of turbine shafts in new high strength steel ML340™;
- development and optimisation of titanium parts for aerospace structures by optimising the various stages of forging and closed die-forging in order to take advantage of the integration of the Alloys Division;
- development of the new Aubert & Duval AD730™ superalloy (resistant to higher temperatures, specifically for aircraft engines and land turbines);
- development of high strength stainless steels for aerospace structures and landing gear (MLX17™ MLX19™);
- joint R&D programmes in the area of powder metallurgy for the emerging sector of additive manufacturing;
- optimisation of industrial process performance, particularly in the area of furnace energy consumption and the reduction of environmental impacts;
- support of industrial projects, specifically in the field of titanium production.

ERAMET Research's resources, primarily in the area of process modelling and precise characterisation of metallurgical structures, were integrated into these various projects.

#### **GROUP PROJECTS**

The focus of work for the Group's project was the ongoing development of the process of direct extraction of lithium from the lithium deposits in Argentina. In 2016, the work was mainly devoted to monitoring the industrialisation and synthesis of active material allowing for the selective recovery of lithium as opposed to the other elements contained in the lithium brine. The properties of this material, as well as the entire lithium production process, have been continuously tested using pilot-sized equipment with real brines from Argentina. High-purity lithium carbonate batches were produced for qualification with our future customers.

#### RECYCLING

Finally, R&D plays a key role in the recycling strategy. Several research and technical support activities were carried out for by ERAMET Research for ERAMET's various subsidiaries in 2016, in particular for the titanium materials recycling subsidiary, EcoTitanium.

The challenges faced by the recycling activity also include increases in recovery yields and a decrease in the energy consumption of associated processes. In 2016, efforts were also made to improve the performance of refractory bricks and cooling systems, optimise the energy performance of furnaces and improve the quality of product output.

#### 2.7.1.5 COLLABORATIONS AND PARTNERSHIPS

ERAMET group's R&D is enriched by its ongoing collaboration with the academic world and its partnerships with research institutes and other large industrial companies.

In France, and in the field of extractive metallurgy, ERAMET has ongoing partnerships with Chimie ParisTech, Mines ParisTech, École centrale Paris, École nationale supérieure de géologie de Nancy, École nationale supérieure des mines de Nancy and Université

Paul-Sabatier in Toulouse. For many years, the BRGM (Bureau de Recherches Géologiques et Minières) has conducted several studies for ERAMET in a variety of areas (geology, resource audits, research projects).

ERAMET maintains a partnership with IFP Energies Nouvelles aimed at developing innovative processes for lithium extraction.

The Group has entered into several partnerships in pyrometallurgy research, notably with the University of Trondheim in Norway, KTH (Royal Institute of Technology) in Sweden, and the Swedish semi-public research centre, MEFOS.

In the field of alloys in France, ERAMET maintains a close partnership with academic research centres providing specific expertise on metallic materials (characterisation of micro-structures and properties, production processes, thermomechanical treatments), and is associated with the following engineering schools: Mines Paris Tech, École nationale supérieure des mines de Nancy, École nationale supérieure des mines de Saint-Etienne, École des mines d'Albi, SIGMA (Clermont-Ferrand), ENSMA (Poitiers), These partnerships mainly take the form of doctoral thesis work allowing for the development and exchange of expertise and innovative techniques in metallurgy, mechanics and process modelling. ERAMET is also involved in projects to develop new alloys and their resulting products, initiated in the competitiveness clusters (ViaMéca, Aerospace Valley, Pôle nucléaire de Bourgogne) and in partnership with M2P (Metz, Besançon, Troyes) and Saint-Exupéry (Toulouse) technological research institutes.

Of equal note are the projects undertaken with MetaFensch, a metallurgy research centre in Florange, with two projects aimed at developing titanium production and recycling processes and titanium alloy powders for additive manufacturing processes.

Outside France, in the field of alloys, the Group continues to maintain its partnership with the University of Strathclyde in Scotland, with an active and permanent presence at the centre for research and development on forging parts for the aerospace industry (AFRC).

Since for several years now, the European Union has placed a focus on innovation and raw materials, ERAMET is currently part of several consortia currently being established at European level as part of the EIPRM (European Innovation Partnership) programme headed by DG Entreprises, now DG Growth. ERAMET is involved in these collaborative projects as a part of European consortia, either as a coordinator or as a partner, in fields as varied as optimisation of mining surveys with online mineralogical analysis, refractory metals, processing of co-products, and the optimisation of nickel metal production. ERAMET has teamed up with more than 100 industrial partners, academic partners and European research centres as a "core member" of "KIC" Raw Materials, an innovative scheme aimed at strengthening ties between the worlds of research and education within an industrial framework, to encourage innovation, skills and employment in the area of raw materials.

Collaborative projects also continued at the national level with projects like SOFIA, aimed at optimising the linkage between the quality of metallic powders and 3D printing technology.

ERAMET Engineering, a wholly owned subsidiary of ERAMET, is regularly involved in the industrial implementation phases of the processes developed by ERAMET Research, by conducting engineering scoping studies, preliminary feasibility studies (PFS), bankable feasibility studies (BFS), or by overseeing new investments.

#### 2.7.1.6 CONCLUSION

ERAMET group's R&D is used across the value chain of its activities, from mining to products. R&D organisation and governance are focused on value creation for the Group. The Group's R&D is therefore an essential link in the long-term deployment of its strategy, and also in meeting short-term operational challenges.

#### 2.7.2 RESERVES AND MINERAL RESOURCES

#### **2.7.2.1 OVERVIEW**

#### **DFFINITIONS**

#### Definitions of mineral resources

A Mineral Resource is a concentration or occurrence of commercially valuable material in or on the Earth's crust in such grade and quantity as to give reasonable likelihood that mining will be economically feasible. The location, quantity, quality, continuity of the deposit and the geological characteristics of its resources are known, estimated or interpreted on the basis of specific geological evidence and expertise. Mineral resources are ranked in order of increasing of geological confidence, as "inferred", "indicated", and "measured".

An Inferred Mineral Resource is the part of a Mineral Resource for which quantity and quality can be estimated on the basis of geological evidence, but with a low level of confidence. Geological and grade continuity are inferred but not verified. The estimate is based on information that is limited or of uncertain quality and reliability, gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

An Indicated Mineral Resource is the part of a Mineral Resource for which the quantity, grade or quality, densities, shape and physical characteristics can be estimated with a reasonable level of confidence. The estimate is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too far apart from one another or spaced in a way that makes them inadequate to confirm the geological and grade continuity and/or its quality, but spaced closely enough for geological and grade continuity to be reasonably assumed.

A Measured Mineral Resource is the part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a high level of confidence. The estimate is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough for geological and grade continuity and/or quality to be reasonably assumed.

#### Definition of drainable resources

A **Drainable Resource** is defined as the availability of a given envelope of confidence of brines with a certain lithium content in a medium with sufficient effective porosity to enable extraction. A cut-off grade can be assigned. In ERAMET's case, drainable resource estimates are made in envelopes with a concentration greater than 200mg/L Li. The level of classification is based on survey patterns which assess the lateral and vertical continuity of the lithology, brine concentrations in lithium and the hydraulic parameters.

An Inferred Drainable Resource is the part of the drainable resource for which only geophysical measurements and potentially some boreholes are available. Hydraulic continuity is not verified. The estimated lithium content is based on information that is limited or whose quality and reliability are uncertain.

An Indicated Drainable Resource is the part of a drainable resource for which lateral continuity is proven at less than 6 km of the aquifer's hydraulic parameters and the brine's lithium content and vertical continuity between two measuring points in a single shaft.

A Measured Drainable Resource is the part of the drainable resource for which the sampling quality, hydraulic parameters and grades can be estimated with a high level of confidence and meet quality criteria (QA/ QC). The number of lithium measurements above the cut-off grade in a particular lithological horizon must he more than 3

The brine's lithium content and the hydrodynamic parameters of the aquifer are determined by pumping tests carried out in the volume being considered, including at least one long-duration test (t>30 days). The reliability and consistency of the results for content and hydrodynamic parameters are analysed using a conceptional model of brine distribution and a numerical model.

#### Definition of extractable resources

An Extractable Resource is defined as an available volume of brine with a certain lithium content that can be extracted through one or several pump wells over a given period to meet economic feasibility requirements. The reliability and consistency of the hydrodynamic parameters are analysed and simulated using a conceptional model of brine distribution and a numerical model.

An Inferred Extractable Resource is a modelled volume of brine with a lithium content higher than the cut-off grade extracted by a pumping system from areas where inferred drainable resources have been identified. An initial estimate using numerical modelling of volumes and contents of recovered brine and insufficient level of confidence in geological and hydrological data prevent these resources from being converted into reserves. These resources are excluded from feasibility studies.

An Indicated Extractable Resource is a modelled volume of brine with a lithium content higher than the cut-off grade that can be extracted through one or several pump wells from areas where indicated drainable resources have been identified. Variations in estimates of geological and hydrological parameters can affect the economic feasibility of the pumping field. The volumes and lithium contents of the extracted brines have an accuracy of +/-25%.

An Measured Extractable Resource is a modelled volume of brine with a lithium content higher than the cut-off grade that can be extracted through one or several pump wells from areas where measured drainable resources have been identified. The geological and hydrological parameters are estimated with a sufficient level of confidence such that any variations will not affect the economic feasibility of the pumping field. The volumes and lithium contents of the extracted brines have an accuracy of +/-15%.

#### Definitions of reserves

A **Reserve** is the economically exploitable part of the "measured" or "indicated" resources of a deposit. Reserves are estimated based on a preliminary or actual feasibility study (a mining project in the broader sense), which takes account of any technical (pit design, mining dilutions and losses depending on operating methods used, facility performance), economic, commercial, legal, environmental, social and governmental constraints, both existing and foreseeable at the time of estimation. The preliminary or actual feasibility study demonstrates at the time of reporting that extraction is viable. Mineral reserves are categorised in ascending order of confidence as "probable" and "proven" mineral reserves.

A **Probable Reserve** is the economically exploitable part of an "indicated" resource, and in certain circumstances a "measured" resource, while a **Proven Reserve** is the economically exploitable part of a "measured" resource.

#### **Exploration results**

**Exploration Results** care the same commercially valuable materials as are assessed for resources and reserves. Exploration indicates that a potential mineralised zone may be found but available recognition information is very tenuous.

#### LOCATION

Through its subsidiaries, Le Nickel-SLN in New Caledonia and Comilog S.A. in Gabon, the Group operates nickel and manganese deposits respectively. In addition, with development of the Weda Bay Nickel project in Indonesia, ERAMET has created opportunities for further developments.

In New Caledonia, Le Nickel-SLN mines opencast nickel oxide deposits formed by superficial weathering of ultrabasic rocks. Mining and processing now focus on the saprolitic portion of the weathering profile.

In Gabon, Comilog S.A. operates a rich tabular opencast manganese deposit, located under thin caprock and formed by superficial weathering of volcanic-sedimentary rocks.

In Gabon, La Minière de la Mabounié (Maboumine) carried out exploratory work for a processing project for niobium, rare earths, tantalum and uranium. In view of the current market outlook for raw materials, the search for ore enriching technology enabling average returns for the associated elements of value should guide the search for a partner in a joint initiative between the Republic of Gabon and ERAMET.

In Indonesia, ERAMET's Board of Directors approved the terms of the framework agreement signed with the Chinese steel group Tsingshan, the world's largest producer of stainless steel, with the goal of determining the conditions of a partnership for the valuation of this asset. This partnership would

use a pyrometallurgical process to produce nickel ferroalloy, with a volume of about 30,000 tonnes of nickel content, from the ore mined from the Weda Bay deposit in Indonesia. This partnership would thus entail the Tsingshan group joining Strand Minerals Pte. Ltd. ERAMET would hold a 43% interest and the Tsingshan Group 57%.

In Senegal, the Grande Côte Opérations company (GCO), part of the joint venture TiZir mentioned above, operates a heavy-mineral sand deposit. The Grande Côte deposit, a few dozen kilometres north of Dakar, is a coastal-dune heavy-mineral placer containing large quantities of titanium-bearing minerals (ilmenite, rutile) and zircons. These deposits can be mined by dredging. Production started in 2014.

In Argentina, Eramine Sud America, a wholly-owned subsidiary of Eramine SAS (wholly owned in turn by ERAMET S.A.), carried out exploratory work on several salt flats before focussing on the Centenario-Ratonès flat northwest of Salta in the Andes cordillera. Exploratory work showed that resources were available in the lithium found in natural brines.

#### LEGAL CLAIMS

Mining-claim instruments assure the Group's long-term rights over the reserves and resources. These rights mainly consist of perpetual concessions foreshortened to the expiry date of 31 December 2048 (Article 7 of the New-Caledonian "Loi de pays" Act of 16 April 2009) and of rights conceded for a period of 75 years renewable in successive 25-year periods in New Caledonia, a 75-year concession in Gabon expiring on 31 December 2032 renewable for successive 10-year terms, and a Contract of Work for a renewable 30-year period in Indonesia.

The mineral deposits at the Grande Côte project in Senegal are located in a mining concession assigned to GCO since July 2008, and originally granted to MDL by the Senegalese government in November 2007 for a renewable 25-year term.

Maboumine has a mining exploration permit, renewed on 14 November 2014 for a three year period, in which mineral deposits are located.

Eramine SA had 55 consolidated mining claims on the Centenario-Ratonès salt flat at year-end 2015, issued on a perpetual basis (subject to presentation of mandatory impact surveys, payment of annual mining fees and meeting the deadlines of a development schedule).

The carrying amount of reserves is recognised at historical cost for purchased claims, with no measurement of granted concessions. The balance sheet amount does not necessarily reflect market value.

#### **FSTIMATES**

The resource and reserve estimates were drawn up for Le Nickel SLN, Weda Bay Nickel and Comilog S.A. by professionals who are full-time employees of the Group, using conventional or geostatistical methods.

In the case of TiZir and Eramine SA, they were drawn up by qualified persons outside the Group.

Geological reconnaissance, resource and reserve estimation, exploitation planning and mining are supplemented by over 40 years' industrial experience. The methods used evolve constantly to take advantage of technical progress in these areas.

#### Basis of estimates

Estimates are based on sampling that can never be fully representative of the entire deposit. As deposits are explored and/or exploited, estimates may increase or decrease in line with improvements in knowledge of the mineralized mass.

#### Estimate methodology

In due consideration of the Group's presence in New Caledonia, estimates of the Group's reserves and mineral resources as presented here were drawn up pursuant to the 2012 edition of the JORC Code (Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves) for all aspects relating to estimation methods and classification levels.

The published figures are internally validated by a board of referees and by "Competent Persons" as defined by the JORC code.

The resource and reserve estimates for the mineral sands project were made by Competent Persons at AMC Consultant, a company unrelated to MDL and ERAMET.

Estimates of lithium project drainable and extractable resources are drawn up by an independent firm, Montgomery and Associated, acting as "Qualified Persons" in the area of lithium-bearing deposits extracted from brine. An audit of resources was also drawn up in February 2015 by Mr. King, an independent specialist consultant.

For Pt Weda Bay Nickel-SLN (limonites and saprolites), the Nickel-SLN (saprolites for the Doniambo plant) and Comilog S.A. (manganese ore), external audits conducted in 2009, 2013 and 2014 respectively have certified that the resources and reserves have hereto been evaluated in a satisfactory manner and in compliance with the JORC code recommendations.

#### Mineral resources

Resources are calculated with the same cut-off grades as reserves (except where expressly specified otherwise), but with not guarantee that these recoverable resources will be wholly converted into reserves following additional technical-economic and marketing studies.

A drilling and/or intercept is considered positive if:

- it contains at least two metres of ore at a grade equal or higher than the cut-off grade;
- it is not isolated.

The mineralized mass defined by the drilling intercepts selected on this basis is included in mineral resources if its positioning and geometric and chemical characteristics are such that it is reasonably likely to be economically feasible.

#### Drainable resources

Drainable resources are established within a 200mg/L Li envelope representing the cut-off grade.

The deposit is surveyed by drilling in a pattern that will verify the vertical and lateral continuity of the aquifer's lithological, geochemical and hydraulic parameters with a lithium content in excess of the cut-off grade.

#### Recoverable mineral resources

Recoverable resources are mineral resources where mining recovery and ore dressing factors have been applied on the basis of experience acquired on those sites.

The nickel or manganese tonnages given correspond to the quantity of metal present in the ores at the outlet point to the mining units when shipped to a metallurgical or chemical processing plant. The mining allowances for mining dilution and losses, and those relating to ore dressing, are established on the basis of mining summaries which compare production to estimates of volumes already extracted.

Recoverable resources are included in mineral resources

#### **Exploration results**

Exploration results follow the same estimation process as resources.

#### Reserves

Reserve estimates are based on medium/long-term economic conditions (prices of fuel oil, coal, coke, electricity, metal prices and exchange rates etc.), commercial constraints (quality, customers etc.), environmental constraints (permits, mining constraints etc.) and constraints on current and foreseeable technical mining and treatment processes.

Reserves are estimated on the basis of a complete mining project. No assurances can be given as to the total recovery of the reserves announced, as market fluctuations and technical developments may make the recovery of certain deposits or parts of deposits economically feasible or otherwise.

Reserves are included in mineral resources.

#### Presentation of estimates

Mineral resource estimates and those for recoverable resources and reserves are given for the mining deposit as a whole. Results may also be compared to production levels, thus providing an indication of the remaining mine life.

#### 2.7.2.2 COMILOG S.A. RESERVES AND RESOURCES

An external audit was carried out in 2014 by Melabar GeoConsulting, which certified that the resources and reserves estimated by Comilog S.A. were evaluated satisfactorily in accordance with the recommendations of the JORC code.

#### MINERAL RESOURCES

The table below shows the figures for Comilog S.A.'s mineral resources, updated to 1 January 2017. The figures are expressed in thousands of tonnes of dry ore (kt), with the associated manganese content (%Mn) and the tonnage of metal content expressed in millions of dry metric tonne units (dmtu.106 where 1 dmtu = 10 kg of manganese, i.e. 1 dmtu.106 = 10,000 tonnes of manganese.

#### MINERAL RESOURCES IN MANGANESE ROCK ORE AND FINES AT 1 JANUARY 2017

CLASS	MEASURED		INDICATED		INFERRED			TOTAL				
CLASS	КТ	%MN	DMTU.106	КТ	%MN	DMTU.10 <sup>6</sup>	кт	%MN	DMTU.10 <sup>6</sup>	КТ	%MN	DMTU.10 <sup>6</sup>
Rock ore > 5 mm												
Bangombé	20,228	44.9	909	39,587	45.5	1,801	1,165	44.7	52	60,980	45.3	2,762
Moulili												
Okouma-Bafoula				102,100	45.7	4,670	27,000	44.0	1,190	129,100	45.4	5,860
Massengo							12,000	40.0	480	12,000	40.0	480
Total rock	20,228	44.9	909	141,687	45.7	6,471	40,165	42.9	1,722	202,080	45.0	9,102
Fine 1-5 mm												
Bangombé	7,772	40.5	315	15,650	42.0	658	392	41.2	16	23,814	41.5	988
Moulili	1,763	44.8	79	2,594	41.3	107	490	34.2	17	4,847	41.8	203
Okouma-Bafoula				32,500	42.4	1,380	9,100	40.8	370	41,600	42.0	1,750
Massengo												
Total fine	9,535	41.3	394	50,744	42.3	2,145	9,982	40.3	403	70,261	41.9	2,941
Total rock + fine	29,763	43.8	1,303	192,431	44.8	8,616	50,147	42.4	2,125	272,341	44.2	12,043

Except for the Moulili deposit, the grain size cut applied to the survey samples is 5mm, which ultimately corresponds to a beneficiated grain size of 8 mm.

#### Bangombé deposit

For the Bangombé deposit, currently operated, declared resources at 1 January 2017 correspond to the findings of the estimate made over the course of 2016 outside of the zones mined through 31 December 2016. The result is a decrease in mineral resources corresponding to ore production in 2016.

Resources are calculated in two granulometric fractions: "Rock" ore (+5 mm,  $9\%H_20$ ) and "Fines" (1-5 mm,  $12\%H_20$ ). The mineral resources consist of ores with a manganese content in the "Rock" fraction greater than or equal to 30%.

#### Okouma-Bafoula deposit

The Okouma and Bafoula deposits were the subject of a new geological study conducted in 2016, combining historical surveys and surveys conducted in recent years. The two masses, which are part of the same geological unit, have been grouped into a single deposit—Okouma-Bafoula. The mineral resources are estimated and expressed in the same way as those of Bangombé, distinguishing between "Rock" ore and "Fine" ore.

The evolution of mineral resources at Okouma-Bafoula represents an increase of +20% in manganese content, resulting in the periphery of the Okouma plateau being recognised as a mineralised section adjoining Okouma and Bafoula. Given the uncertainties regarding historical survey data, the measured mineral resources have been downgraded to indicated resources, while work is being undertaken to resolve these uncertainties.

#### Massengo deposit

For the unexploited deposit of Massengo, declared mineral resources at 01 January 2017 are identical to those published at 01 January 2016, according to the same criteria of granulometry (+5 mm, 1-5 mm fractions), humidity (9%, 12%) and selection (30%Mn) as for the Bangombé ores.

#### Moulili deposit

The Moulili river bed was filled with a manganese ore deposit of which only the fine 1-10 mm fraction has been evaluated to date. Working from upstream to downstream, the deposit was divided into four sections, of which two, MT1 and MT3, are being exploited.

The mineral resources at 1 January 2017 correspond to those published at 1 January 2016, for which production for 2016 was withdrawn. No cut-off grade is applied. Mineral resources are classified according to the extent of knowledge of the different sections, i.e. resources measured at MT1, indicated at MT2 and MT3 and inferred at MT4.

#### Yéyé deposit

Reconnaissance work carried out on Yéyé indicates the existence of potential ore deposits. However, the quantity and quality of available information is currently insufficient to estimate inferred mineral resources.

#### RECOVERABLE RESOURCES AND RESERVES

The table below shows the figures for Comilog S.A.'s recoverable resources and reserves, updated at 1 January 2017. The figures are expressed in thousands of tonnes of dry ore (kt), with the associated manganese content (%Mn) and the tonnage of metal content expressed in millions of dry metric tonne units (dmtu.10<sup>6</sup> where 1 dmtu = 10 kg of manganese i.e. 1 dmtu.10<sup>6</sup> = 10,000 tonnes of manganese.

#### MANGANESE ORE RECOVERABLE RESOURCES AND RESERVES AT 1 JANUARY 2017 (MILLIONS OF DMTU)

CLACC		MEASURED			INDICATED			TOTAL		
CLASS	KT	%MN	DMTU.106	KT	KT %MN DMTU.106 KT		%MN	DMTU.106		
Rock ore > 8 mm										
Bangombé	14,331	45.5	651	24,360	46.2	1,126	38,691	46.0	1,778	
Moulili										
Okouma-Bafoula				74,000	46.3	3,430	74,000	46.3	3,430	
Total rock	14,331	45.5	651	98,360	46.3	4,556	112,691	46.2	5,208	
Fine 1-8 mm										
Bangombé	6,047	41.5	251	10,529	42.3	451	16,576	42.3	702	
Moulili	1,675	46.6	78	1,681	43.1	72	3,356	44.8	151	
Okouma-Bafoula				25,700	42.9	1100	25,700	42.9	1,100	
Total fine	7,722	42.6	329	37,910	42.8	1,623	45,632	42.8	1,953	
Total rock + fine	22,053	44.4	980	136,270	45.3	6,179	158,323	45.2	7,161	

#### MINERAL RESOURCES IN MANGANESE ROCK ORE AND FINES AT 1 JANUARY 2017

CLACC		PROVEN			PROBABLE			TOTAL		
CLASS	КТ	%MN	DMTU.10 <sup>6</sup>	KT	%MN	DMTU.106	KT	%MN	DMTU.106	
Rock ore > 8 mm										
Bangombé	11,843	44.6	528	9,355	48.6	455	21,198	46.4	983	
Moulili										
Total rock	11,843	44.6	528	9,355	48.6	455	21,198	46.4	983	
Fine 1-8 mm										
Bangombé	4,714	40.4	190	4,739	45.1	214	9,454	42.7	404	
Moulili	1,675	46.6	78	1,681	43.1	72	3,356	44.8	151	
Total fine	6,389	42.0	268	6,420	44.6	286	12,810	43.3	555	
Total rock + fine	18,232	43.7	796	15,775	47.0	741	34,008	45.2	1,538	

#### Bangombé deposit

On the basis of the mineral resources, the figures for recoverable resources are established taking the following into account:

- geological uncertainties, therefore excluding inferred mineral resources;
- the presence of durable infrastructures judged not to be moveable, of which mapping was completed in 2016;
- commercial specifications with a cut-off grade of 37%Mn on the rock-ore fraction;

mining and technical factors arising from reconciliations, carried out/estimated.

The definition of recoverable resources factors in criteria established for the given geological domain that are subject to change in light of further information and studies. For the ore masses of the Plateau and the inner edges, these criteria relate to a minimum ore thickness of 2 metres and the mining methods associated with at least an outline diagram. For outer edges, recoverable resources correspond to the ore included in a mining plan with an excavation diagram.

Recoverable resources for which the mining project is complete are converted into reserves. Reserves are included in recoverable resources. The long-term mining sequence of the Bangombé deposit is based on recoverable resources, which will ideally sustain the first few years of the plan.

The recommendations of the auditor (Melabar GeoConsulting 2014) led to exclusion of the reserve inner edges and the declassification of part of the outer edges to probable reserves at 1 January 2017. Work is under way to convert these resources into reserves.

#### Okouma-Bafoula deposit

The ore at the Okouma deposit was estimated and classified as recoverable resources using the same procedure applied to the Bangombé deposit. Work is under way to convert these resources into reserves.

Comilog S.A.'s long-term mining sequence does not include the recoverable resources at the Okouma-Ba-foula deposit.

#### Moulili deposit

The MT1 section has been exploited since 2010 and the MT3 section has been exploited since 2013. The estimate of recoverable resources and reserves at 1 January 2017 is equivalent to the estimate at 1 January 2016, for which 2016 production was withdrawn. A cutoff of 44.5% on the yield weight of the fine portion

(1-10 mm) was applied. Surveys of the MT2 and MT4 sections were unable to estimate any recoverable resources or reserves in these areas.

Comilog S.A's long-term mining sequence includes the Moulili reserves.

## 2.7.2.3 LE NICKEL-SLN'S RESERVES AND RESOURCES

## SAPROLITE RESERVES AND RESOURCES FOR PYROMETALLURGY

An external audit was carried out in 2013 by Sigma Blue Pty Ltd, which certified that the estimates for resources and reserves of nickel-bearing saprolitic ores intended to supply the Société Le Nickel pyrometallurgy plant at Doniambo were free of material error and were evaluated acceptably and, in compliance with the recommendations of the JORC code.

#### MINERAL RESOURCES

Mineral resources are grouped together according to their classification, using the criteria defined by the SLN geologists and in accordance with the JORC code definition.

In accordance with the system for describing drilling data, the tonnages and grades given correspond solely to the weathered, ore-bearing phase of saprolites at a defined cut-off grade and not to the saprolitic column as a whole.

#### **DEVELOPMENTS IN MINERAL RESOURCES AT 1 JANUARY 2017**

MINERAL RESOURCES		01/01/2017		01/01/2016			
	MT	%NI	KTNI	MT	%NI	KTNI	
Measured	39.5	2.43	957	28.2	2.41	681	
Indicated	66.4	2.44	1,618	79.0	2.41	1,903	
Inferred	73.1	2.43	1,776	72.6	2.43	1,768	
Total	178.9	2.43	4,351	179.9	2.42	4,352	

For the most part, mineral resources are estimated by modelling 3D blocks using linear geostatistical methods for the ore masses as a whole.

Ore tonnages are given in millions of dry tonnes and the humidity contents, whether observed in production in progress or estimated, range from 22 to 45% according to ore mass.

The figures were established with cut-off grades applied to the weathered fraction, the range of which depends on the type of processing (mineralurgical or conventional) and economic conditions.

Changes to the resource figures are due to the combined effects of variations in cut-off grade (increasing at Tiébaghi, decreasing at Thio), the updating of geological models at all of the sites and the mining production conducted in 2016. Work carried out outside the mining centre, particularly at the *Massif du Boulinda* and the outskirts of Kouaoua, allowed the

mineral resource figures to remain equivalent to those published at 1 January 2016, despite 2016 production.

#### **EXPLORATION RESULTS**

Exploration results also correspond to saprolitic ore. At 1 January 2017, they were assessed as 676 KtNi, down from the previous year. This change is mainly the result of the transformation of part of the exploration results into mineral resources.

#### RECOVERABLE RESOURCES AND RESERVES

The table below sets out the figures for saprolite recoverable resources and reserves for the Doniambo pyrometallurgy plant surveyed in 2016 and published at 01/01/2017, with the figures published at 1 January 2016 in italics. These figures stem from the above mentioned mineral resources and factor in the following:

- traditional run-of-mine processing similar to that used at the sites of Nickel-SLN and/or subcontractors which includes screening at approximately 80 mm with or without recovery of part of the coarser fractions, depending on the type of ore;
- mineralurgical processing at Népoui-Kopéto and Tiébaghi;
- optimization of mining projects in the case of reserves

Ore tonnages are given in millions of dry tonnes, and metal tonnages in thousands of tonnes of nickel content in the ore.

Recoverable resources and reserves of ore intended for mineralurgical processing are estimated as "washery concentrate" arising from processing all the ore from Népoui-Kopéto, and 1.90-2.35%Ni range for Tiébaghi).

#### **CHANGES IN RECOVERABLE RESOURCES AND RESERVES AS AT END 2016**

RECOVERABLE RESOURCES		01/01/2017		01/01/2016			
	MT	%NI	KTNI	MT	%NI	KTNI	
Measured	25.7	2.58	662	18.3	2.60	475	
Indicated	48.6	2.45	1,189	52.8	2.53	1,338	
Inferred	51.2	2.48	1,267	48.6	2.51	1,220	
Total	125.4	2.49	3,118	119.7	2.53	3,033	

	01/01/2017			01/01/2016			
RESERVES	MT	%NI	KTNI	MT	%NI	KTNI	
Proven	19.8	2.62	519	13.0	2.67	346	
Probable	17.9	2.47	442	24.3	2.60	631	
Total	37.6	2.55	960	37.3	2.62	977	

Measured and indicated recoverable resources are estimated at 1,851 ktNi, with their proportion in inventoried total remaining stable from the figures published on 1 January 2016. The increase in recoverable resources is a result of the effects on mineral resources mentioned above, as well as the decrease in the separation grade between traditional ore and UTM ore at Tiébaghi.

The inferred recoverable resources, estimated at 1,267 ktNi, are up 4% from the previous year. This change is primarily the result of a reduction in cut-off grade at the Thio sites (Camp des Sapins and Plateau).

SLN's mining production in 2016 amounted to 57.6 ktNi (thousands of tonnes of nickel, corresponding to the tonnages of nickel contained in the ore carried to the various shore sites (wharf or mechanical loading).

248% of recoverable resources consumed in 2016 were renewed.

Reserves are estimated at 960 ktNi at year-end 2016, compared to 977 ktNi published at year-end 2015. The change in recoverable resources is a result of the effects on recoverable resources mentioned above, as well as the application of new economic optimisation parameters. The portion of proven reserves increased during 2016 from 35% to 54% of total reserves following the updating of models and the integration of planning survey results, particularly those carried out at the Massif de Tiébaghi.

SLN draws up its mining and industrial plan on the basis of all its reserves and part of the recoverable resources regarded as economically exploitable but not yet included in any mining project.

#### MINERAL RESOURCES FOR HYDROMETALLURGY

For the whole of the mineral deposits of Société Le Nickel-SLN and at a cut-off grade of 1.0%Ni, inferred and measured mineral resources in limonites are currently estimated at 6,000 ktNi.

Outside the centres with mineralurgical processing facilities, exploration results on low-grade saprolite zones, which are currently uneconomical for pyrometallurgy processing, point on a preliminary basis to 2,000 kt in nickel content which may be recoverable using the hydrometallurgical process developed by ERAMET, or exported to be transformed by ferronickel producers.

Mineral resources for hydrometallurgy have not been audited to date. They are, however, estimated using the methodology defined for estimating resources intended for the Doniambo plant.

#### 2.7.2.4 RESERVES AND RESOURCES OF PT WEDA BAY NICKEL

#### MINERAL RESOURCES

The data on mineral resources relate to the tonnages. Ni content and thousands of tonnes of nickel contained in ore envelopes within limonite and saprolites strata at a 1%Ni cut-off rate, without applying any transformation or beneficiation factors. Mineral resources are calculated at the 1%Ni cut-off grade, and are broken down by prospect, distinguishing between lateritic and saprolitic products.

Average dry densities for limonites and saprolites were established on the basis of measurements performed in 1999-2001 and 2008-2012.

Given the small proportion of sound dividing rock, the saprolite tonnages and nickel content provided are representative of the saprolitic column as a whole.

Global resources are calculated by 3D block modelling performed by the Weda Bay Nickel geology team. Measured and indicated resources are estimated by ordinary kriging, while inferred resources are estimated either by inverse square distance or by ordinary kriging when kriging is permitted by variogram quality. Local resources were estimated for the Bukit Limber Barat deposit by Tenzing Pty Ltd, and on the Coastal, Tofu Blowen and Kao Rahaï masses, by the ERAMET Pt Weda Bay Nickel teams, using multivariate uniform conditioning.

The figures set out below are from local estimates for the saprolites classed as measured or indicated

resources converted into reserves, and of global estimates for the other masses in the saprolites and the limonite horizon.

Due to the postponement of the project, there was no prospecting campaign in 2016 and the mineral resources remain unchanged compared to the figures published at 1 January 2016.

The mineral resources correspond to an overall nickel tonnage of 9.3 million tonnes, of which almost 60% were classified as measured and indicated resources.

#### **ESTIMATION OF LIMONITE AND SAPROLITE MINERAL RESOURCES AT 1 JANUARY 2017**

MINERAL RESOURCES		01/01/2017				
LIMONITES	МТ	%NI	KTNI			
Measured	36.0	1.26	455			
Indicated	68.0	1.22	829			
Inferred	44.9	1.21	543			
Total	148.9	1.23	1,827			

MINERAL RESOURCES		01/01/2017				
SAPROLITES	MT	%NI	KTNI			
Measured	98.8	1.72	1,694			
Indicated	169.8	1.54	2,613			
Inferred	215.2	1.49	3,206			
Total	483.8	1.55	7,513			
Total	632.7	1.48	9,340			

Studies from 2016 also identified masses made of minerals with an average nickel content varying between 1.8 and 2.0%, representing 35% of mineral resources measured and indicated for saprolites.

#### **RESERVES**

Due to the postponement of the hydrometallurgical ore processing project, reserves associated with it are not published. These reserves will have to be updated once an optimal processing project has been halted, based on economic parameters related to the adopted process.

#### 2.7.2.5 TIZIR'S RESERVES AND RESOURCES

#### MINERAL RESOURCES

The data on mineral resources are mineral-sand tonnages and heavy-mineral contents (HM) identified in the seven mineral masses.

The 2016 update of mineral resources is based on:

- the subtraction of 2015 mineral resources exploited in 2016 amounting to 39.8 Mt@1.7% HM;
- the re-estimation of the indicated resource in the Lompoul, Diogo and Mboro masses;
- the re-estimation of the inferred resource in the southern Noto mass and the northern Lompoul mass.

#### **TIZIR MINERAL RESOURCES AT 1 JANUARY 2017**

MINERAL RESOURCES	T.V. (MT)	<i>IN SITU</i> HM MT	НМ %	ZIRCON %	LEUCOXENE %	RUTILE %	ILMENITE %
Measured	1,509	21.8	1.4	10.7	3.2	2.5	72
Indicated	350	4.8	1.4	10.7	3.2	2.5	72
Inferred	41	0.5	1.2	10.7	3.2	2.5	72
Total	1,900	27.1	1.4	10.7	3.2	2.5	72

Mineral resources were estimated at a cutoff grade of 1.0% HM applied to grade accumulations up to a depth of 6 metres and below the natural groundwater level, except for two masses where accumulation occurs at groundwater. The heavy metal assemblages (zircon, ilmenite, rutile and leucoxene) are reported as percentages of HM.

#### RESERVES

Following the optimisation of the dredge passageway and schedule, a high quality material within a distance of 100 metres from the dredge path that is suitable for dozer push was integrated into the probable reserves. It resulted in a total increase of reserves of 171 Mt@1.3% HM, corresponding to roughly three years of extension of the life of the mine.

The reserves thus correspond to part of the mineral resource contained in the optimised dredge path and in the adjacent zones. They incorporate mineral dilution and are based on the economics of the project.

The update of the reserves incorporates the subtraction of the ore exploited in 2016 and the update of the optimised operating plan. Reserves are included in mineral resources.

#### **TIZIR RESERVES AT 1 JANUARY 2017**

RESERVES	ORE IN TONNES MT	HM MT	НМ %	ZIRCON %	LEUCOXENE %	RUTILE %	ILMENITE %
Measured	1,122	16.6	1.5	10.7	3.2	2.5	72
Indicated	343	5.1	1.5	10.7	3.2	2.5	72
Total	1,465	21.7	1.5	10.7	3.2	2.5	72

#### CHANGES IN RESOURCES AND RESERVES IN 2016

Changes to resources and reserves at the end of 2016 were characterised by a significant increase in measured and indicated mineral resources and a roughly 13% increase in reserves, allowing for the Grande Côte mine's lifespan to be planned through to 2043 at a nominal operating rate.

#### 2.7.2.6 RESOURCES OF ERAMINE SA

#### DRAINABLE RESOURCES

Drainable resources were calculated in April 2015 by Montgomery and Associates as Qualified Persons, at the Centenario-Ratonès brine field. The calculation used the effective porosities for each lithological units in the aquifer. The cut-off grade of 200mg/L was applied to the resource envelopes. The results are presented for the zone located inside the perimeter of the concessions owned by Eramine SA.

The equivalent LCE tonnage is calculated using the mass of lithium multiplied by a factor from the atomic mass of each element of lithium carbonate, 5.322785.

#### **DRAINABLE RESOURCES AT 1 JANUARY 2017**

DRAINABLE RESOURCES	BRINE VOLUME (MILLION CUBIC METRES)	AVERAGE DENSITY	LI CONTENT (MG/L)	LCE (KILOTONNES)
measured	471.1	1.17	359	900
Indicated	982.4	1.17	361	1,890
Inferred	3,391.3	1.15	313	5,658
Total	4,844.8	1.16	344	8,448

#### EXTRACTABLE RESOURCES

Brine volumes and "Lithium Carbonate Equivalent" (LCE) tonnages were calculated for a pumping field

with 18 wells at production start, with another three wells added during 40 years of pumping. Each well has an extraction rate of 19L/sec. The pumping field is only defined for the Ratonès salt flat.

The +15% scenario includes two additional wells compared to the basic scenario described below.

#### **EXTRACTABLE RESOURCES AT 1 JANUARY 2017 (MODFLOW MODEL 2015)**

EXTRACTABLE RESOURCES	LCE AVERAGE ANNUAL MASS AT 20 YEARS (KILOTONNES)	LCE AVERAGE ANNUAL MASS AT 40 YEARS (KILOTONNES)	CONCENTRATION OF LITHIUM METAL AT 20 YEARS (MG/L)	CONCENTRATION OF LITHIUM METAL AT 40 YEARS (MG/L)
Measured	15.0	13.4	392	360
Measured + Indicated	21.1	19.4		

The lithium content is the contents extracted from the shaft field averaged out over the duration of pumping.

The equivalent LCE tonnage is calculated using the mass of lithium multiplied by a factor from the atomic mass of each element of lithium carbonate, or 5.322785.

The average mass of LCE extracted per year up to the twentieth year of production is 15 kt. Similarly, the average mass of LCE extracted between 20 and 40 years of production is estimated at 13.4 kt.

Inferred drainable resources are indicated for information purposes only, and are included in the extractable resources used to draw up the business plan.

#### 2.7.2.7 RESOURCES OF MABOUMINE

#### MINERAL RESOURCES

Data concerning mineral resources refer to tonnages, niobium content and thousands of tonnes of niobium, rare-earth metal content (metal equivalent) and thousands of tonnes of rare-earth metals, tantalum content and thousands of tonnes of tantalum, and uranium content and thousands of tonnes of uranium in the superficial banded ore estimated in the 3D modelled envelope, with no application of any transformation or beneficiation factors. The mineral resources of the superficial banded ore are calculated with a cut-off grade of 0.4% Nb<sub>2</sub>O<sub>5</sub>.

The average dry densities of the ores were established on the basis of measurements performed in 2013.

Global resources are estimated by ordinary kriging in a 3D block model.

Mineral resources and their classification were certified in 2015 by SGS Géostat. The distinction between inferred mineral resources 1 and 2 is based on the level of information relative to the estimated elements (TR, Ta and U not estimated in inferred resources 2).

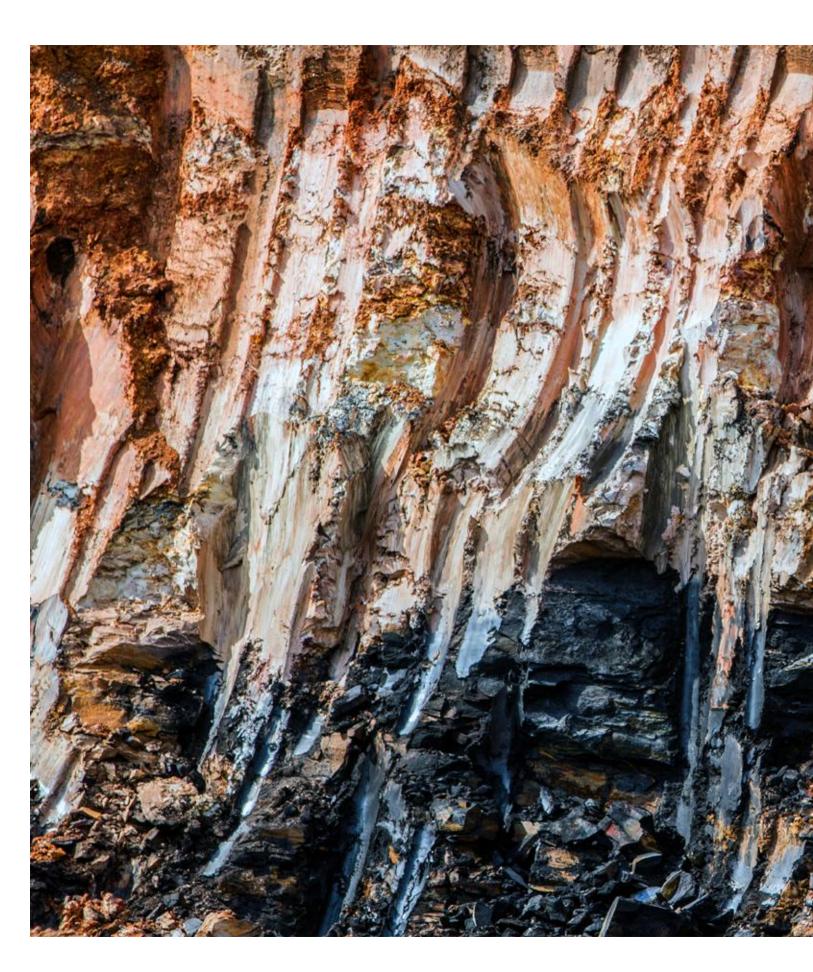
#### MINERAL RESOURCES FOR SUPERFICIAL BANDED ORE WITH A CUT-OFF GRADE OF 0.4%NB,0 $_{\circ}$

MINERAL RESOURCES	MT	% NB	KTNB	% TR	KTTR	%0 TA	KTTA	%0U	KTU
Measured	66.5	0.98	650	0.97	644	0.30	20	0.20	15
Indicated	-	-	-	-	-	-	-	-	-
Inferred 1	79.3	0.70	554	1.04	828	0.20	16	0.20	16
Inferred 2	49.7	0.85	420		219 <sup>(*)</sup>	-	NE	-	NE

NE: Not estimated.

(\*) Estimated for Cerium only.

Note: The figures presented are rounded to 100,000 tonnes for ore and 1,000 tonnes for metals. Grades are calculated on rounded tonnages.



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## 3.1 COMMODITY RISK

The ERAMET group is exposed to commodity price volatility, affecting both its sales as a nickel and manganese producer and its production costs as a consumer of energy (fuel oil and electricity) and commodities (nickel and aluminium).

The main Group entities involved are:

- ERAMET. Le Nickel-SLN and Aubert & Duval for nickel:
- Le Nickel-SLN for fuel oil;
- Aubert & Duval for aluminium:
- Erasteel Kloster AB and ERAMET Norway A/S for electricity.

Hedges are contracted with horizons of one to four years, depending on the commodities, and are based on the budget. Only a portion of planned consumption or production is hedged when the criteria in the hedging policy are met. The Group uses various instruments to hedge and limit its exposure while profiting from favourable price fluctuations (futures and options).

Manganese and coke exposures are not hedged since there is no organised market for these commodities.

At 31 December 2016, the fair value of hedges set up for the various commodities was:

- €0 million in liabilities for nickel (€2 million in liabilities at 31 December 2015);
- €0 million in liabilities for fuel oil (€16 million in liabilities at 31 December 2015);
- €0 million in liabilities for aluminium (€1 million in liabilities at 31 December 2015);
- €0 million in liabilities for electricity (€4 million in liabilities at 31 December 2015).

## 3.2 SPECIAL RELATIONSHIPS WITH GROUP PARTNERS

#### 3.2.1 POLITICAL RISKS

The Group produces and/or markets its products in non-OECD countries, some of which may be classed as countries with no long-term political or economic stability. While the Group ensures that appropriate measures are taken to avoid such risks, the direct and indirect consequences of conflict, terrorist activities, political instability or health risks in the countries in which the Group operates and markets its products could affect the Group's financial position and prospects.

#### 3.2.2 SUPPLY/SALE CONTRACTS

The Group has overall control of the contracts for supply and sale of ore and its by-products, where such contracts are entered into with companies it controls (such as the supply and sale contract between ERAMET and Le Nickel-SLN, and the supply of ERAMET Manganese production sites by Comilog). The other commercial agreements regarding continuing operations do not entail any particular risks or commitments for the Group. These agreements are mainly for purchases of commodities (electricity, coke and special alloys) and freight services (sea and land).

To date, ERAMET has not entered into any major contracts entailing a major obligation or commitment for the Group as a whole, other than those entered into in the normal course of its business.

## 3.2.3 RELATIONSHIPS WITH THIRD PARTIES

To support its various activities and projects, the Group's policy is to develop and maintain firm, sustainable and complementary partnerships with national partners and local firms. These partnerships may take the form of a stake in Group subsidiaries, with a number of special covenants to take account of the existing shareholder balance.

#### 3.2.3.1 ERAMET NICKEL

#### RELATIONSHIP WITH STCPI AND NEW CALEDONIA-LE NICKEL-SLN SHAREHOLDERS' AGREEMENT

Le Nickel-SLN, a subsidiary with 56% of its shares held by ERAMET and 10% by Nisshin Steel, also has a 34% stake held by the Société Territoriale Calédonienne de Participation Industrielle—STCPI.

STCPI is a "SAS" (simplified joint-stock corporation). the sole purpose of which is to hold this interest in Le Nickel-SLN and an interest of around 4% in the capital of ERAMET (where two directors represent it out of the seventeen on the ERAMET Board). The interest in the share capital of Le Nickel-SLN, initially 30%, was raised to 34% in a share-swap transaction on 23 July 2007, and then sold by the French government when ERAMET was privatised. Its political, financial and strategic value lies in the association of local public interests with the Group's mining and industrial interests in New Caledonia. STCPI represents the three New Caledonian Provinces: the Southern Province, and the Northern and Island Provinces. The Board members and observer are selected to guarantee a balanced representation between the Northern and Island Provinces and the Southern Province

The Le Nickel-SLN shareholders' agreement of 13 September 2000 followed on from the agreement of 17 July 2000 between the government, the Provinces of New Caledonia and representatives of the island's main political parties. In 2010, the shareholders' agreement was extended for a first additional term until 31 December 2011. Since 2010 it has been extended annually for periods of one year. Its terms include the following:

- distribution of the directorships on the following basis, at present: eight for ERAMET (including the representative of Nisshin Steel), and four for STCPI, which is also entitled to appoint an observer;
- a reciprocal right of pre-emption for each party;
- a reciprocal call option on the shares held by the party that falls under the control of a company, "whose main activity, or the main activity of the Group to which it belongs competes with that of Le Nickel-SLN":
- a non-dilution clause whereby, in the event of the sale of shares to another shareholder or a share capital increase, each party will retain the same interest in the share capital or voting rights they had previously held, either through the retrocession of shares or joint exercise of the subscription rights in a share capital increase.

Following a STCPI press release on 27 June 2008 offering to open discussions regarding the size of its stake in Le Nickel-SLN, an ERAMET Board meeting on 11 July 2008 resolved that there was no reason to change the shareholding structure of Le Nickel-SLN, which represents a satisfactory balance.

Following a meeting of its Board of Directors on 19 November 2009, Le Nickel-SLN announced that it was instituting new modern corporate governance measures to further involve New Caledonia, with the creation of a Strategy Committee, an Audit Committee and a Remuneration Committee. STCPI has significant representation on all three committees, and chairs the Audit Committee.

On 13 July 2010, STCPI and ERAMET agreed to hold discussions aimed at adjusting the agreement. Its guiding principles would remain unchanged, but the adjustments would take account of the full array of

industrial, commercial and technological changes both within Le Nickel-SLN and in its environment since the original agreement. The extensions of that agreement in 2011, 2012, 2013, 2014, 2015 and 2016 until 31 December 2017 allow these discussions to continue.

#### SUPPLY CONTRACT WITH NISSHIN STEEL

The ERAMET group and Nisshin Steel have had a ferronickel supply agreement in place since 1991. Nisshin Steel is a Japanese producer of stainless steel with a 10% interest in Le Nickel-SLN. Nisshin-Steel is a major customer, accounting for 10% of sales in the Nickel Division. This agreement was renewed in 2001 and 2007 and is designed to guarantee ferronickel deliveries for several years and iron out any fluctuations in nickel prices.

## RELATIONSHIP WITH PT ANTAM AND INDONESIA (WEDA BAY PROJECT)

The Indonesian company, Pt Weda Bay Nickel, is the project and exploration company created to develop the nickel deposit in Weda Bay, situated on the island of Halmahera in Indonesia. 90% of its capital is held by Strand Minerals (Indonesia), and the remaining 10% is held by the nickel-producing Indonesian public limited corporation Pt Antam Tbk (Antam), a company specialising in exploration, mining operations, refining and distribution of mining products. Antam is represented by a director on the Board of Pt Weda Bay Nickel (out of a total of four directors, of whom three represent ERAMET) and it also holds an option to increase its shareholding to 25%.

Pt Weda Bay Nickel's exploration and mining are carried out under a Contract of Work with the Indonesian government, the annual renewal of which is under discussion with the authorities.

#### 3.2.3.2 ERAMET MANGANESE

### RELATIONSHIP WITH THE GOVERNMENT OF GARON

Comilog has a special relationship with the government of Gabon, which is represented by three members on

the Board of Directors. In 2014, Société Équatoriale des Mines, a fully state-owned company, became a shareholder of Comilog, replacing the government of Gabon, which had been a shareholder since 1973. From the outset, the State has supported Comilog, both through tax measures (a mining agreement and special tax agreement to finance the sintering complex) and industrial measures (as Comilog's partner in building the Owendo Port, of which its subsidiary, Port Minéralier d'Owendo, holds the concession), and more recently by granting a railway concession to Setrag, in which Comilog is the leading partner, and by granting a mining exploration licence for the Mabounié polymetallic deposit (Maboumine project). This relationship, based on trust and the recognition of mutual interests. makes it possible to work together on a constructive basis and to plan for the development of new industrial projects.

For the purposes of its project to build two silicomanganese and metallic-manganese metallurgical units at Moanda in the Upper Ogooué (known as the Moanda Metallurgy Complex), Comilog signed two agreements with the Gabonese authorities on 7 January 2010 in Libreville. Among other items, the first agreement laid down the specific legal, tax and customs framework for the project, while the second specified the conditions for securing the future energy supply to the complex. To implement the project, a special financing facility was set up, with guarantees provided by ERAMET and the Gabonese Republic. The new Moanda Metallurgy Complex was inaugurated in 2015 at a ceremony attended by the Gabonese President and the ERAMET

On 20 October 2010, ERAMET and the Gabonese Republic concluded an agreement to step up the Gabonese Republic's interest in the capital of Comilog. Under its terms, from 2010 to 2015 ERAMET was to transfer to the Gabonese Republic in stages a further stake of up to 10% of Comilog S.A.'s capital, which would increase the Gabonese Republic's shareholding in Comilog S.A. to 35.4%. The first transfer stage (2010-2011) involved 3.54% of the share capital; 2.17% of the capital was transferred on 17 December 2010, and the remaining 1.37% for this stage was transferred on 14 June 2011. At 31 December 2016, the equity interest in Comilog held by Société Équatoriale des Mines (SEM, a fully State-owned company) and the Caisse des Dépôts du Gabon on the one hand, and by ERAMET on the other, represented 28.94% and 63.71% respectively.

In addition, a candidate proposed by the Gabonese State was appointed director by the ERAMET General Meeting of Shareholders on 15 May 2013.

## TIZIR PARTNERSHIP WITH MINERAL DEPOSITS LIMITED

On 25 October 2011, ERAMET and Mineral Deposits Ltd created a 50/50 joint venture to take up a 100% stake in TiZir Titanium and Iron (TTI) (Norway) and 90% of the Grande Côte mineral sands project in Senegal. Grande Côte aims to provide TTI with a supply of good-quality ilmenite for its titanium dioxide slag production, and TiZir with a strong position in the zircon market. TiZir avails of ERAMET's know-how in mineral processing, metallurgy, R&D, logistics and marketing, as well as the experience of the MDL team in project development and the exploitation of mineral sands. The respective financial commitments of both partners are detailed in Note 14 to the consolidated financial statements presented in Section 6 of this document.

## 3.3 MINING AND INDUSTRIAL RISKS

# 3.3.1 RISKS RELATED TO THE EVALUATION OF MINING RESERVES AND RESOURCES

Mining reserves and resources may evolve over time, particularly with changes to the technical and economic assumptions used in mining (geological data, mining cost factors, mining technology). Accordingly, resource and reserve estimates are revised each year, both quantitatively and qualitatively. Details of the estimates and assumptions used for this purpose are given in Section 2, sub-section "Reserves and resources" in this document.

## 3.3.2 MINING PROJECT DEVELOPMENT RISKS

Since they are capital-intensive and take up a considerable amount of time, studies for the launch of new mining operations or for the renovation of existing operations are investment decisions which require prior technical feasibility studies with financing assumptions and profitability calculations, which are themselves directly influenced by the relevant commodity prices and currency rates, the cost of credit and the type of financing chosen. In periods of slower demand, some of these decisions may be delayed or cancelled, which may have an impact on a mining operation's profitability.

## 3.3.3 SAFETY AND ENVIRONMENTAL RISKS

Given the unique capacity of metals for almost indefinite recycling, the Group's business activities naturally dovetail with a sustainable development approach in a global context of scarcity, and therefore of the maximum re-use and optimisation of natural resources. However, though durable and recyclable, these products may entail hazards or risks at some stage of their transformation or use. The Group therefore is faced with the challenge of identifying all such hazards and preventing and controlling the risks to its sites and projects and to their external environment, while contributing to the sustainability and development of its business activity.

With regard to projects, the Group applies criteria such as consideration of the health, safety, social and environmental dimensions of sustainable development as part of its investment procedure, and the Environment, Industrial Risks, Product Responsibility and Social Responsibility functions are systematically represented on project steering committees.

The section below describes the procedures deployed by the Communications and Sustainable Development Department to control industrial and environmental risks at sites.

#### 3.3.3.1 INDUSTRIAL RISK PREVENTION POLICY

## METHODOLOGICAL ASSISTANCE WITH RISK ANALYSIS

The Group provides assistance to the sites in performing their hazard studies. These analyses are used to exhaustively identify major accident scenarios and their causes and impacts, as a result of which prevention and/or protection safeguards (important safety items) are implemented to reduce the likelihood or seriousness of an event. In 2016 this mainly involved the EcoTitanium and Valmet (recycling of batteries and catalysts at Erasteel) projects, and the proposed industrial development of the ERAMET Sandouville site.

In addition, following the last major accident which took place in November 2015 in Brazil involving a third party mining entity (tailings dam failure at the Samarco iron ore mine with considerable consequences), ERAMET conducted a technical audit of its liquid waste storage facilities to ensure that such accidents could not occur on the Group sites concerned.

## PREVENTIVE ENGINEERING REQUIRED UNDER THE GROUP'S PROPERTY INSURANCE POLICY

In 2016, ERAMET continued its policy of biannual engineering visits (preventive insurance audits) to all industrial sites in close cooperation with the insurers, underwriters and the Group Insurance Department.

The following sites were visited:

#### • ERAMET Alliages:

- Aubert & Duval Firminy, Issoire, Les Ancizes and Interforge and AD TAF in Gennevilliers,
- Erasteel: Champagnole, Stubs and Commentry (in the context of the monitoring of the Valmet project);

#### • ERAMET Manganese:

• ERAMET Norway Sauda and Porsgrunn;

#### ERAMET Nickel:

- ERAMET Sandouville, SLN (Doniambo, Nepoui, Kouaoua and Thio);
- and ERAMET Research.

The follow-up indicators for the actions decided as a result of these visits are set out in an annual summary report covering compliance with ERAMET's industrial risk matrix (updated in 2016) and the progress of recommendations made by the insurer during prevention visits (version of December 2016, issued in January 2017).

In accordance with Group practice, close involvement of the on-site industrial risk officers and the leading insurer's engineering teams in all investment programmes ensures that insurer recommendations are factored into new facilities from the design stage onwards.

In 2016, studies focused mainly on the EcoTitanium and Valmet projects and the proposed industrial development of the ERAMET Sandouville site, the protection of SLN's 63 kV cable cellar and the protection of critical electrical rooms.

## GROUP CRISIS PREVENTION AND MANAGEMENT PROCEDURES

These procedures focus on three scenarios:

- crisis prevention: applicable standards, identification and implementation of operational measures to counter weak signals, crisis simulation exercises so that each person knows their role and to continually improve emergency planning (in conjunction with the industrial risk matrix, which was updated in 2016);
- serious incident management: definition of a serious incident, Group reporting, feedback;
- crisis management: as the sites already have their own emergency plans (contingency plan, ERP or other) the corporate crisis management system was updated in 2016. It includes procedures for the escalation of alerts, the assessment of their severity, the organisation in crisis units and feedback, as well as crisis management coordination interfaces with site emergency plans. The new version of the system will be rolled out starting in 2017.

These procedures have been deployed across all sites. As in 2015, special attention was paid to crisis simulation exercises: out of the 42 sites monitored, 90% conducted one or more exercises in 2016, some of them in cooperation with the fire brigade.

## 3.3.3.2 ENVIRONMENTAL RISK PREVENTION POLICY

#### AUDIT POLICY

ERAMET has implemented an internal system that regularly audits the performance of its entities in terms of Environment, Health and Safety. The audits are arranged by the Group's Safety and Environment departments, based on a stringent reference matrix that at a minimum meets the requirements of ISO 14001 and OHSAS 18001. Details of the internal audit process are provided in Section 5.2 Environmental protection.

This system is essential to ensure the proper integration of multi-faceted regulations and the challenges that apply to various activities. This detailed knowledge is also primordial for the proactive examination of regulatory changes and to encourage progress through exchanges and synergy between sites and Divisions.

The data produced by these auditing and control systems allows the Group to constantly bolster its continuous improvement process.

## "ZERO DISPUTE" GOAL (ENVIRONMENTAL COMPLIANCE)

The ERAMET group promotes a policy of strict regulatory compliance, transparency and dialogue with the supervisory authorities in all circumstances, particularly in the event of temporary difficulties or special operating conditions. Since 2007, it has worked towards a "Zero dispute" goal (environmental compliance) aimed at achieving zero formal notices or legal proceedings liable to arise from any breach by Group sites of binding regulatory requirements.

The list of disputes takes into account four types of incidents:

- Type 1-low-level signals: Written warning by the authorities as a reminder of a deadline which, if not observed, could lead to formal notice (known in the US as a "notice of violation"), a third-party claim against the plant or in the media.
- Type 2: Declaration of a non-compliance and notice by the authorities to take action by a

specific deadline in order to avoid a fine; example in mainland France, New Caledonia, Gabon: notice of violation, in the US: "notice of enforcement" or "consent agreement" between the authorities and the operator, or an "administrative order".

- Type 3-Legal action: Legal proceedings by the public prosecutor or any other public authority following a notice of violation or a claim brought before the courts by a third party. Legal claims by employees or third parties for damages arising from an environmental infringement. Legal claims by third parties against an administrative permit issued pursuant to environmental legislation.
- Type 4-Actual sanction: An administrative sanction (fine, suspension of permit), unfavourable legal ruling or criminal conviction.

The 2016 "Zero Dispute" assessment shows that in aggregate terms the number of cases was in keeping with the previous assessment. The number of Type 3 and Type 4 disputes was quite low (three incidents) and the incidents were not so serious, and the same was true of Type 2 incidents (three incidents as opposed to 11 in 2015).

#### 3.3.4 TRANSPORT RISKS

#### 3.3.4.1 SEA FREIGHT

The Group makes extensive use of shipping to transport its products; first, in various stages, to production sites, and then for delivery to customers, because of the long distances between the mines where raw materials are extracted and the sites where they are processed, and between those sites and the markets. To protect itself against sharp rises in freight costs, the Group seeks to negotiate long-term contracts with predefined conditions and to book some ships on a long-term basis. During periods of low sales activity, however, this may entail the renegotiation of contracts.

The risk of damage is moreover covered by specific insurance policies.

## 3.3.4.2 RAIL TRANSPORT AND HARBOUR FACILITIES

In Gabon, the Group was awarded the concession to operate the Transgabon railway for a 30-year term beginning in November 2005. In addition to providing a public service and transporting miscellaneous goods, the railway carries manganese ore from the Moanda mine to the port in Owendo (Libreville). Comilog, through its Port Minéralier d'Owendo subsidiary, has a concession to operate the ore port of Owendo.

In Senegal, TiZir's Grande Côte operations also include the 25-year railway concession as of 2011 to transport ore from the mining site to the Dakar harbour facilities. Grande Côte Opérations also benefits from a licence to use the port area at the Dakar autonomous port.

An interruption in sea or rail transport or a sharp rise in transport prices, notwithstanding long-term contracts, would nevertheless have a negative impact on results.

## 3.4 LEGAL AND TAX RISKS/ DISPUTES

# 3.4.1 THE GROUP'S DEPENDENCE ON THE LEGISLATIVE AND REGULATORY ENVIRONMENT

#### 3.4.1.1 SPECIFIC REGULATIONS

Mining operations are subject to specific regulations, depending on extraction locations and activities. These regulations chiefly relate to:

- mining permit and concession regimes;
- obligations specific to mining operations;

- environmental protection and biodiversity limits and controls;
- site restoration after depletion.

These regulations may change, with a possible impact on operations and results. This is currently the case in Gabon, following the introduction of the Mining Code with the enactment of Law 017/2014 of 30 January 2015, although the decrees for its application have not been published yet.

In addition to actual mining activity, industrial operations are also subject to specific regulations, depending on the industrial site. These regulations mainly cover:

- the regimes governing mining permits and authorisations:
- compliance with limitations on waste discharge into the natural environment during site operation, taking due account of the major industrial risks and health impacts associated with operations, and the management and elimination of industrial waste;
- the obligations entailed in restoring the site after cessation of operations, factoring in the risks relating to polluted sites, ground pollution and waste.

These regulations may change, with a possible impact on operations, particularly where additional capital expenditure is required to factor in environmental concerns in response to changes in regulations.

#### 3.4.1.2 SPECIFIC TAX CONCERNS

The Group's business is partially subject to a special tax framework (royalties, duties and taxes). Its companies and units in mainland France are liable for tax at the standard French rate. The current corporate income tax rate is 33.33%, excluding an additional welfare contribution of 3.3%.

It should be noted that ERAMET is the parent company of a tax consolidation group comprising 22 companies at 31 December 2016. The following notes apply to subsidiaries outside mainland France:

Le Nickel-SLN is liable for the 35% mining and metallurgical corporation tax in New Caledonia. Since 1975 the company has enjoyed a tax freeze, which has been renewed several times. The last renewal was for 15 years from 1 January 2002 to December 2016, pursuant to a local order of 13 June 2002. Discussions have been initiated with the Government of New Caledonia to define the terms of a new agreement for stability and long-term partnership. Moreover, some of the subsidiary's investment programmes in New Caledonia have benefited from the tax exemption measures introduced by the Paul and Girardin Acts and tax relief granted under the New Caledonian Tax Code on capital expenditure in metallurgy.

In 2014, New Caledonia introduced a reform of its tax system. On 31 December 2014, a number of laws were published in the New Caledonia Official Journal, and they came into force on 1 January 2015. SLN's distributions to ERAMET will henceforth be subject to an additional income tax contribution of 3% (for any distribution in excess of 30 million Pacific francs, or €251,400). In addition, the tax withholding on dividend payments in New Caledonia was raised from 5% to 10% as a result of the introduction of a solidarity contribution of 5%. As an extension to this reform, a new law was published on 29 December 2015 creating an upper limit to the deductibility of overheads of 5% of the amount of external services.

- The Weda Bay project is governed by a contract of work defining, among other things, the tax regime applicable to production activity at the start of the site's operations. Tax matters currently under discussion with the Indonesian Government concern issues relating to State revenue (royalties, tax incentives, VAT). The outcome of these discussions will be decisive for the project's continuity and profitability.
- The Comilog subsidiary is liable for income tax at 35% and export duty and mining royalties representing approximately 6% of the pithead value of the products mined (close to FOB value), and also a 15% tax on dividends (10% on the fiscal scheme for cor-

porate groups). This tax regime is fixed until 2032 as part of a mining agreement signed in October 2004 and ratified by the Gabonese Parliament in 2005. The double taxation convention between Gabon and France signed in Libreville on 20 September 1995 took effect on 1 March 2008, replacing the earlier convention of 21 April 1966. The current convention was published in the Official Journal of the Republic of Gabon of 24-31 July 2011.

A new Mining Code was introduced in Gabon in 2015. The new regulations do not entail any major changes for companies already engaged in mining, but they do contain some favourable provisions for holders of mining exploration licences and companies commencing operations.

 China is currently in the process of tightening controls on foreign companies where cross-border flows are involved. This creates more stringent reporting requirements, a tightening of transfer pricing rules, the adoption of anti-abuse tax rules and reclassification of the business as a permanent establishment of a foreign company in China.

China also undertook a reform of its indirect taxation, with the introduction of a value-added tax system to replace the existing "business tax" and the adoption of new accounting rules concerning value added tax.

Finally, China has issued a reform programme to improve the organisation of tax services and the tax collection system.

• Under an Agreement signed with the Senegalese government in 2005 and Amendment 1 to the agreement signed in 2007, Grande Côte Opérations (GCO) benefits from a mining concession regime for 25 years from November 2007. Under the provisions of the mining code, it enjoys full exemption for 15 years (exemption from VAT, customs duties, corporate tax, patenting and property tax), not including the investment period (construction).

Moreover, in the case of mining royalties, by way of exemption from the Mining Code, which sets these royalties at 3% of the pithead value, GCO agreed in 2007 to raise these royalties to 5% and to apply production sharing at 10% on the basis of net margin on certain costs.

• Generally, subsidiaries based abroad are liable for standard-rate local taxation and benefit from the double-taxation conventions in force. Tax is not withheld on dividends paid to the parent company by subsidiaries in Norway, Sweden, the United States, China and Belgium, On the other hand, tax is withheld on dividends paid by Comilog (Gabon) and SLN (New Caledonia) at a rate of 15% (10% as part of the fiscal scheme for corporate groups) and 10% respectively.

#### 3.4.2 CONTINGENT TAX LIABILITIES

Aubert & Duval is subject to a tax audit for the years 2009 to 2016, focusing on the assumption of the existence of a permanent establishment in Italy.

Following a report by the Guardia di Finanza, the tax authority is examining the case. The company has already submitted its defence. It is not possible to comment on the outcome of the review at this stage in proceedings.

In 2016, Comilog received a certified report following an inspection in respect of customs clearance of materials, spare parts and mining equipment imported from 2009 to 2012. Comilog filed its defence with the customs tax authority in January 2017. It is not possible to comment on the outcome of the review at this stage in proceedings.

#### 3.4.3 MAJOR LAWSUITS

Apart from the matters explained below, as far as the Company is aware no government, judicial or arbitration proceedings exist, pending or imminent, that are liable to have or in the last 12 months have had any material effects on the financial position or profitability of the Company and/or the Group.

#### 3.4.3.1 ERAMET NICKEL

None.

#### 3.4.3.2 FRAMET MANGANESE

#### FORMER COMILOG EMPLOYEES IN CONGO

Before the Transgabonese railway started operating, Comilog exported its manganese ore via Congo, where it employed nearly 1,000 people at the time. Following a very serious rail accident on 5 September 1991 in the Republic of Congo, Comilog's rail shipments of ore through this country were suspended. This situation persisted and led to the discontinuation of Comilog's operations in the Congo, and dismissal of its Congolese employees. After several years of negotiations delayed by the civil war in the Congo, a "Memorandum of Understanding for the final settlement of litigation relative to the cessation of Comilog's activities in the Republic of Congo" was concluded between the Republic of Congo, the Gabonese Republic and Comilog on 19 July 2003. Under this memorandum, Comilog and the Republic of Congo put an end to all past and future disputes, and the Republic of Congo agreed to take on all liabilities and obligations arising from Comilog's operations in the Congo. Under the terms of this agreement, Comilog paid the Republic of Congo the sum of one billion two hundred million CFA francs to compensate the employees who were dismissed. This sum was in addition to the real and movable assets transferred free of charge by Comilog. Challenging the terms of the agreement, 867 former employees of Comilog in Congo summoned three French subsidiaries of Comilog, which had never been their employees, and Comilog to appear before the Conciliation Committee of the Paris Labour Relations Court on 9 October 2008. In a ruling on 26 January 2011, the adjudication panel of the Labour Court declared that it had no territorial competence in the matter. The applicants filed an appeal before the Paris Court of Appeal. The Court of Appeal agreed to conduct an initial examination of six cases. In judgements on 20 June 2013, the Paris Court of Appeal ordered two of Comilog's French subsidiaries to produce various documents. Comilog and its subsidiaries submitted an appeal against these rulings to the Court of Cassation, and accordingly issued a request to the Court of Appeal for an adjournment until the Court of Cassation had ruled. The Court of Cassation ruling on 28 January 2015 rejected the appeals, confirming that the Paris Court of Appeal judgement of 20 June 2013 had not decided that French employment courts would be competent to rule on the merits of the dispute between the claimants and their former Gabonese employer, and that it had moreover not decided that the French subsidiaries of Comilog were their employers.

Consequently the six cases were again examined by the Paris Court of Appeal, issuing six judgements on 10 September 2015 whereby it ruled that Comilog's French subsidiaries were not co-employers of the plaintiffs and that Comilog was in fact a Gabonese company. It dismissed the challenges of the four plaintiffs, who appealed against these four rulings. However, in the case of two of the plaintiffs, who had instigated proceedings with the Congolese authorities, it stipulated French jurisdiction to rule on the claims made against Comilog, considering that these plaintiffs had been denied justice by the Congolese authorities and that these legal disputes had a sufficient connection with France. Comilog lodged an appeal in the Court of Cassation against those two judgements.

## CRIMINAL PROCEEDINGS AGAINST THE CEO OF SFTRAG

On 3 February 2014, a railway accident involving a Setrag passenger train on a level crossing at Nkoltang (Gabon) led to the deaths of seven occupants of a vehicle. The CEO of Setrag, the Transgabonese railway concession operator, was subsequently charged with manslaughter.

The evidence presented by the public prosecutor did not demonstrate any criminal offence or breach by Setrag of the concession agreement with the State or of the laws and regulations governing rail safety.

On 16 March 2016, the Libreville Tribunal dismissed these charges and ruled that public prosecution should seek other legal grounds for recourse.

#### GULF CHEMICAL & METALLURGICAL CORP.

In February 2013, the Group was informed of civil proceedings against Group companies, seeking redress for alleged damage to residents living close to the plant in Freeport, Texas. A summons was received in March 2015 and the dispute was settled in May 2016 for an amount of USD300,000.

#### 3.4.3.3 ERAMET ALLOYS

None.

## 3.5 LIQUIDITY, MARKET AND COUNTERPARTY RISKS

#### 3.5.1 LIQUIDITY RISK

The Group has a healthy financial liquidity position at 31 December 2016, with  $\in$ 1,691 million of cash surpluses, of which  $\in$ 1,360 million is classified as cash and cash equivalents. These cash surpluses are essentially transferred to Metal Securities, the Group company in charge of centralising and investing the ERAMET group's cash surpluses.

In other respects, the Group's net debt amounted to  $\in$ 836 million at 31 December 2016.

For more details, see Note 7 to the consolidated financial statements presented in Section 6 of this document.

#### COVENANTS

The main covenants at Group level are described in Note 7 to the consolidated financial statements in Section 6 of this document.

#### 3.5.2 MARKET RISKS

The Group is primarily exposed to three types of market risk: currency risk, interest rate risk and commodity risk. These three types of risk are measured and managed by the Group Treasury Department in accordance with Group policies.

#### 3.5.2.1 CURRENCY RISK

The ERAMET group is exposed to two types of currency risk, as follows:

- transactional currency risks when a Group company pays or receives net flows in a currency other than its functional currency;
- foreign currency risks to the balance sheet due to changes in the net assets of subsidiaries measured in currencies other than the Euro.

#### TRANSACTIONAL RISKS

The Group has pooled its subsidiaries' transactional currency risks since 2003. Each Group company reports to Group Treasury on its currency exposure. This management scheme is part of a multi-year policy based on procedures approved by the Executive Committee and monthly reporting to its members.

Currency hedging has been carried out via the special-purpose entity, Metal Currencies, since 2007. The subsidiaries in question determine the amount of their net exposure. The associated risks are then hedged if the net amount is greater than €2 million or the equivalent thereof per currency and per year.

Currency hedging primarily involves the US dollar, but also includes the Norwegian krone, the pound sterling and the Swedish krona.

Details of hedges are explained in Note 7 to the consolidated financial statements in Section 6 of this document.

At 31 December 2016, the fair value of currency hedges covering transactional risks represented net liabilities of  $\in$  39 million (net liabilities of  $\in$  89 million at 31 December 2015).

Sales and purchases denominated in foreign currencies (invoices issued, invoices received, receipts and payments) are translated at a monthly exchange rate that represents an accurate approximation of the market exchange rate. At the end of each month, trade receivables/payables and bank account balances are restated at the hedging rate indicated by the Treasury Department. Any differences between:

 the monthly exchange rate applied to recognise sales and receipts/purchases and payments; and • the contractual settlement price for hedges,

are recognised by each company under current operating profit/(loss) on sales (under "Translation adjustments on sales") or purchases (under "Cost of goods sold").

A change of plus or minus 0.10 in value in the EUR/USD rate would have an impact, before tax, on the hedges recognised in equity of +€23 million if rates rise, and approximately -€28 million if they fall.

#### **BALANCE SHEET RISKS**

The ERAMET group manages part of the currency risks to the balance sheet by issuing financial liabilities denominated in the same currency as the net assets concerned.

The Group manages balance sheet currency risk on a case-by-case basis.

#### 3.5.2.2 INTEREST RATE RISK

 a) Regarding its gross debt position, the Group considers its debt position and market trends when deciding whether to hedge for interest rates. The Group's Treasury Department is responsible for setting up hedges.

10-basis point change in rates would not have a significant annual impact on the Group's overall floating-rate debt.

 Cash surpluses managed by Metal Securities are mostly invested in instruments linked to the EONIA rate (Euro OverNight Index Average) or EURIBOR (Euro InterBank Offered Rate). 10-basis point change in rates would not have a significant annual impact on financial income.

#### 3.5.3 COUNTERPARTY RISK

The Group is exposed to several types of counterparty risk: in relation to its customers and its financial partners, particularly because of its cash surpluses.

For customer risk, the Group uses credit insurance, letters of credit or documentary credits. For unsecured receivables, the Group has a number of different monitoring and hedging tools: business intelligence ahead of transactions (rating and business-intelligence agencies, published financial statements etc.). Trade receivables are specifically monitored by a credit manager for each Group Division, with a Credit Committee meeting monthly to set credit and outstanding-balance limits for each customer. In addition, every two months a Group Credit Committee exchanges best practices and reviews the commercial situation of key accounts.

For credit risk concerning financial counterparties, the procedure applicable to Metal Securities sets general investment limits according to counterparty rating and maturity. Each counterparty is also subject to regular monitoring of the assessments by credit analysts and/or rating agencies, and all risks are reviewed quarterly.

For UCITS, the procedure applicable to Metal Securities sets a double risk-dispersion rule, with both a maximum investment ratio for a given UCITS and the spreading of the assets managed by Metal Securities. This procedure is in addition to the risk-spreading rules applied by the fund managers themselves to their assets.

# 3.6 INSURANCE/ COVERAGE OF RISKS LIKELY TO BE INCURRED BY THE ISSUER

# 3.6.1 THE GROUP'S GENERAL COVERAGE POLICY/RISK COVERAGE STRATEGY

#### 3.6.1.1 GROUP ORGANISATION

The Group Risk and Insurance Department establishes and develops management's risk policy and, following approval by the Executive Committee, draws up insurance strategies: implementation of Group programmes, monitoring of prevention policy in coordination with the Communications and Sustainable Development Department and seeking optimal risk/premium/retention solutions, including use of the Group's captive reinsurer. Pursuant to the Group Charter, it reports to the Group's Chief Financial Officer and on a functional basis to the Audit Committee, and also has direct access to the Group Chairman/CEO.

#### 3.6.1.2 RISK IDENTIFICATION AND CONTROL

As part of the implementation of its risk management policy, in 2014 the Group remapped its risks on the principle of a three-year process (remapping in year 1, followed by two updates in years 2 and 3). In accordance with this principle, the Group's 2014 mapping was updated at the end of 2016.

The main risks identified by the risk mapping are treated in several ways:

- implementation of action plans aimed at strengthening the existing control mechanisms for the major risks identified;
- as far as possible, integration with the Group's internal audit plan: this aims to ensure that the existing control process functions properly, and that the agreed action plans are actually implemented;
- transfer to the insurance market whenever this is possible and advisable.

#### 3.6.1.3 USE OF THE INSURANCE MARKET

As risks are identified and their impact controlled, the Group seeks the most appropriate solutions on the insurance market that offer an optimum cost/cover balance. Through underwriters, the Group has deployed global insurance schemes with pools of internationally renowned and financially sound insurers. The Group also uses the market to cover risks that are specific to some of its subsidiaries' activities or non-recurring operations, and in cases where insurance is required under local regulations.

#### 3.6.1.4 REINSURANCE

The Group also has a captive reinsurance company (ERAS) that enables it to provide primary coverage in some insurance schemes. The Group is thus able to more effectively manage premiums via a retrocession mechanism and to decide on retention limits. The

Divisions are accordingly encouraged to develop their own prevention programmes.

#### 3.6.1.5 AMOUNT OF COVER

The Group considers that it has established sufficient cover, both in terms of scope and amounts insured or cover limits, for the main risks relating to its global operations.

# 3.6.2 THE DIFFERENT TYPES OF INSURANCE TAKEN OUT

The Group has a varied range of insurance schemes designed to cover the different insurable risks to which it is exposed.

The four main insurance schemes cover civil liability, environmental civil liability, property damage, business interruption and transport risks.

#### 3.6.2.1 CIVIL LIABILITY INSURANCE

#### GENERAL CIVIL LIABILITY INSURANCE

This scheme covers the civil liability incurred by the Group as a result of damage caused to third parties by its business operations or products, i.e. general operating liability, lessors' insurance, product liability including for aerospace products, professional civil liability and cover for sudden and accidental pollution. Cover is comprehensive, meaning that everything not excluded is covered, exclusions being those commonly applied for such risks. Cover is applied on a "claims" basis, meaning that it applies to any claim made during the insurance period (including the subsequent five-year period, pursuant to French regulations). For any claims received, the scheme applies from France. If applicable, when local regulations require local policies, it is used in addition to these policies to compensate for differences in conditions and/or limits on a DIC/DIL basis worldwide. This scheme is covered by AXA Corporate Solutions (lead insurer).

It is based on a "master" policy issued in France covering €75 million and two additional "excess" policies of €50 and €25 million, supplementing the master policy and providing additional cover of €150 million.

#### CIVIL LIABILITY FOR AERONAUTICAL PRODUCTS

The capacity of this scheme, operated with Allianz Global Corporate & Specialty is &800 million.

#### ENVIRONMENTAL CIVIL LIABILITY

As this programme was up for renewal, it was put up for tender in 2016. The new scheme with a capacity of €30 million has been subscribed with AXA Corporate Solutions.

# 3.6.2.2 PROPERTY DAMAGE AND BUSINESS INTERRUPTION INSURANCE

This worldwide scheme covers property damage incurred suddenly and accidentally to the insured property, including the risk of machinery breakage, and any operating losses arising to all Group entities. Cover is comprehensive, meaning that everything not excluded is covered, with exclusions commonly applied for such risks.

This scheme is covered by a pool of insurers with HDI-Gerling Industrie as lead insurer, for a maximum guarantee of  $\leq 300$  million.

#### 3.6.2.3 TRANSPORT INSURANCE

A global Group transport insurance scheme is in place. This scheme covers all Group entities worldwide, for all types of transport and all types of freight or goods transported. The scheme comprises three policies: "cargo" for goods shipping, "charterer" with RAETS Club and "hull and machinery" with AXA Corporate Solutions.





# REPORT BY THE CHAIRMAN OF THE BOARD OF DIRECTORS APPROVED BY THE BOARD OF DIRECTORS ON 23 FEBRUARY 2017

Pursuant to the provisions of Article L. 225-37 of the French Commercial Code, this report covers, on one hand, the composition of the Board of Directors, the application of the principle of balanced representation of men and women on the Board and the conditions governing the preparation and organisation of the Board's work and, on the other hand, the internal control and risk management procedures in place within the Company.

#### 4.1.1 COMPOSITION OF THE BOARD OF DIRECTORS AND CONDITIONS FOR THE PREPARATION AND ORGANISATION OF ITS WORK

#### 4.1.1.1 CORPORATE GOVERNANCE CODE

In accordance with the decision of the Board of Directors taken on 9 December 2008, ERAMET refers to the AFEP/MEDEF corporate governance code for listed companies ("the AFEP/MEDEF code"), as its reference framework; the code is available on the AFEP and MEDEF websites.

The Company considers that its practices are compliant with AFEP/MEDEF code recommendations. In some cases, certain adjustments have been made to those recommendations for reasons detailed in the table set out in the Appendix to this report.

#### 4.1.1.2 BOARD OF DIRECTORS

#### COMPOSITION/INDEPENDENCE

In accordance with the Shareholders' Agreement of 16 March 2012 (amended on 21 March 2013, subject to Decision and Notice No. 212C0647 of the Autorité des marchés financiers (AMF) at its conclusion as well as AMF Decision and Notice No. 216C1753 concerning changes to the concert with the acquisition by the Agence des participations de l'État (APE) of 100% of the share capital of FSI Equation on 29 August 2016), between SORAME and CEIR, on one hand, and FSI Equation (a subsidiary of APE, acting for the French State), on the other, the Board of Directors is comprised as follows:

- five directors put forward by the SORAME-CEIR concert party;
- three directors put forward by the Agence des participations de l'État (APE);
- two directors put forward by STCPI;
- one director put forward by mutual agreement between SORAME-CEIR and APE;
- five "qualified persons", three put forward by the SORAME-CEIR concert and two by the APE, selected in view of their expertise and their independence with respect to the nominating party and the Company itself, in line with the AFEP/MEDEF corporate governance code for listed companies;
- one director called on to chair the Board of Directors

Furthermore, in accordance with the law of 14 June 2013 related to job security (Article L. 225-27-1 of the French Commercial Code) and Article 10.9 of the Articles of Association, two directors representing employees were designated, one by the Company Works Council and the other by the European Works Council, and took up their duties in 2014.

Full details of the composition of the Board of Directors at the time of this report can be found in the table set out in the Appendix to this report.

The AFEP/MEDEF code considers a director to be independent "when he/she has no relationship of any kind whatsoever with the Company, its Group or it management that could compromise his/her freedom of judgement. Therefore, an independent director means any non-executive corporate officer of the company or its group who does not have any special ties (significant shareholder, employee, other) with the company, its group or its management." The AFEP/MEDEF code also identifies a number of criteria that the Board must consider to determine whether a director can be classified as independent:

- "not being or not having been in the preceding five
  - a salaried employee or executive corporate officer of the company,
  - a salaried employee, executive corporate officer or director of a company consolidated by the company,
  - a salaried employee, executive corporate officer or director of the parent company or of a company consolidated by the latter";
- "not being an executive corporate officer of a company in which the company directly or indirectly holds a directorship or in which a directorship is held by a salaried employee designated as such or by an executive corporate officer (current or former within the past five years), of the company";
- "not being a customer, supplier, merchant banker or commercial banker:
  - classified as significant vis-a-vis the company or its group;
  - or for which the company or its group represents a significant percentage of its business activity.

The assessment of the significance of the relationship with the company or its group is debated by the board and the quantitative and qualitative criteria leading to this assessment (continuity, economic dependency, exclusivity, etc.) are explained in the annual report";

• "not having close family ties with a corporate officer";

- "not having been a statutory auditor of the company in the past five year";
- "not having been a director of the company for more than twelve years. A director is no longer considered as independent after twelve years".

At the time of this report, based on annual examination by the Board of the criteria set out above, the Board contained seven independent directors out of a total of 17 Board members (the two directors representing employees not being counted in accordance with AFEP/ MEDEF code provisions), therefore, more than one third of Board members are independent, in accordance with recommendation 8.3 of the AFEP/MEDEF code in respect of controlled companies.

It is noted that at the annual review of the independent status of directors, the Board performed an appraisal of business relationships existing between the ERAMET group and the group in which certain independent directors hold a corporate office. ERAMET's mining and metallurgical business generates business flows with a limited number of customers that have no other business relationships with ERAMET directors. To carry out its business, ERAMET uses a number of suppliers of raw materials, goods and services. Among these, there are two groups in which two directors in particular (Ms. Lepoutre for petroleum products and Mr. Tendil for insurance) work in a professional capacity. This appraisal enabled the Board to verify that there were no significant business relationships in that regard, either in terms of the nature of goods or services provided, or in terms of their corresponding value or the conditions of their negotiation or provision.

With regard to the independence of directors where the duration of their duties extends beyond 12 years, at its meeting of 16 February 2011, the Board of Directors reasoned that Mr. Treuille, first appointed as a director of the Company in July 1999, could continue to be considered independent owing to his far-reaching experience and expertise. In February 2017, the Board of Directors considered that Mr. Treuille could no longer be considered independent as of the next Shareholders' meeting, owing to the length of his appointment. The Board however wished that Mr. Treuille could continue to be Chairman of the Audit Committee for the current year. At its meeting of 21 March 2013, the Board of Directors also reasoned that Mr. Tona. representative of AREVA from 2002 to 2012, who has had no ties with AREVA since May 2012, satisfied the requisite conditions of independence.

At the time of this report, the Board of Directors of ERAMET consists of 19 members, including seven

women, two of whom are directors representing employees, designated in accordance with Article L. 225-27-1 of the French Commercial Code. If Directors representing employees are excluded, according to the wording of Article L. 225-18-1 effective as of 1 January 2017, the proportion of women on the Board is 29% (5 members out of 17), which is lower than that specified in the first paragraph of Article L. 225-18-1 (40% or 7 members for a Board of 17 members). It should be noted that the compliance of the composition of the Board with this requirement should be assessed at the end of the first General Shareholders' Meeting held after 1 January 2017. At the General Shareholders' Meeting of 23 May 2017, shareholders will be invited to approve the appointment of new directors to restore the balance of the composition of the Board.

Under Article 10 of the Articles of Association, directors may not be over seventy years of age at the time of their appointment and are appointed for a four-year term of office. The Chairman and a majority of members of the Board of Directors (including legal entities and their permanent representatives) must be nationals of a member state of the European Union. In accordance with the Articles of Association, each director should hold at least one share in the Company and, at its meeting of 11 May 2011 the Board of Directors indicated that, in addition, each director should hold one hundred shares within eighteen months of joining the Board.

For historical reasons associated with the Company's shareholding structure and the existence of a Shareholders' Agreement since 1999, the terms of office of Board members appointed by the General Shareholders' Meeting are as follows: three terms of office will come to an end at the General Shareholders' Meeting called to approve the financial statements for the year ended 31 December 2016, ten other mandates will end at the General Shareholders' Meeting called to approve the financial statements for the year ended 31 December 2018, and three mandates will end at the General Shareholder's meeting called to approve the financial statement for the year ended 31 December 2019

#### OTHER PARTICIPANTS AT BOARD MEETINGS

At its meeting of 12 April 2000, drawing on the option provided for in Article 18 of the Articles of Association, the Board of Directors decided to provide two Observer posts on the Board and to appoint Group employees to that role, in addition to Works Council representatives.

In practice, the two Observers were appointed at the recommendation of the European Works Council; if an Observer guitted his/her membership of the Board, the Board ordered an early termination of his/her term of office. In view of the new provision specifying mandatory representation of employees on the Board, introduced by the law of 14 June 2013 concerning job security (Article L. 225-27-1 of the French Commercial Code), the General Shareholders' Meeting held in May 2014 amended Article 18 of the Company's Articles of Association to remove the option offered to the Board of Directors to appoint Observers. The terms of office of the two Observers ran until their expiry on 26 July 2016.

Company Works Council delegate Jean-Philippe Letellier (as of 1 February 2017).

#### ERAMET DIRECTORS' CHARTER

The duties and obligations of the directors are set out in the directors' charter, provided for under Article 11-4 of the Articles of Association. Sub-section 6 of Article 12 of the Articles of Association also states that "it is the duty of directors to defend the interests of ERAMET in all circumstances and, whilst carrying out their duties, they shall refrain from any and all actions, or inaction, that may compromise those interests."

Any new director elected by the General Shareholders' Meeting or co-opted by the Board, whether a director in his own right or the permanent representative of a legal entity, must adhere to the charter which gives a general description of the directors' responsibilities, the principles governing their actions and the rules of conduct imposed by current legislation and the Company's Articles of Association.

The charter, which was first adopted in 1999, places particular emphasis on directors' competence, their right of access to information and their duty of disclosure, their attendance at Board meetings and, insofar as possible, at General Shareholders' Meetings, and their independence. In particular, Board members are asked at all times to ensure that there is no direct or indirect conflict of interest between the Company and any company in which they may hold a position. Such a situation, which must be notified to the Board, may result in a refusal to appoint or a resignation (structural conflict) or an abstention (one-off conflict), depending on the case in point. At the time of writing this report, to the Company's knowledge, no director was involved in a conflict of interest within the meaning of paragraph 14.2 of Appendix 1 to EC Regulation No. 809/2004.

The obligation of confidentiality and of refraining from dealing in Company shares when in possession of unpublished material information, is stressed. Since 2005, the rule prohibiting dealing in Company shares has been set down in a procedure that applies to corporate officers and executives and whose circulation list is regularly updated. At the Board meeting of 16 February 2011, the procedure itself was reviewed and updated and the Board adopted a securities trading code of conduct for the ERAMET group, which was updated in 2016. The securities trading code of conduct, aimed at preventing insider trading offences and infringements, establishes a period of abstention from any transaction involving ERAMET securities prior to publication of the Company's annual and interim financial statements and its quarterly financial results.

#### INTERNAL RULES

The internal rules specifying the arrangements for organisation of the Board of Directors are available from the Secretary of the Board of Directors at the Company's head office. It is specified therein that the Board approves the Group's strategic objectives and strategic investments, as well as any transaction, particularly acquisitions or disposals, that may significantly affect Group results, the structure of its balance sheet or its risk profile. Prior to each Board meeting and according to the agenda, directors receive the accounts, budget and forecasts. Board members will also review press releases related to the financial statements or to acquisitions or disposals prior to their distribution, except in a duly justified emergency.

The internal rules also specify the membership, organisation and operation of the Committees, as described here below. The Committees may, within the scope of their respective competencies and having first informed the Chairman, confer with members of the Group's management. They report on the information obtained and advice received.

#### CODE OF CONDUCT

At the recommendation of the Audit Committee, on 20 January 2010, the Board of Directors adopted the provisions of the Group's code of conduct. The complete text of the code of conduct is available on the ERAMET website. The purpose of the code of conduct is to formalize a set of essential common principles of conduct for everyone in the Group to refer to and comply with in all situations. These principles apply, in the first instance, to the Group, but the Group encourages all its partners to adhere to the same standards. The principles are as follows: combat any kind of fraud or corruption, avoid any conflict of interest, respect competition rules, protect Group information, respect and protect health and safety at work, supply quality products and services while observing security and environmental protection standards, promote the Group's territorial and civic responsibility, supply quality information to the Group's local partners and provide reliable and comprehensive information to its shareholders

A new version of the code of conduct was drafted to further develop and better illustrate the principles guiding the Group's actions and those of its employees and has been in force since 1 January 2015.

The decision to redraft the code of conduct was taken for the following reasons:

- to take into account significant national or international legal developments that had arisen since the Group's previous code of conduct came into force in 2010:
- to enable ERAMET to respond more effectively to changes taking place in society worldwide and to the expectations of all of our stakeholders;
- to provide each employee of the Group with a detailed, clear and explicit reference document, encompassing the main legal or voluntary obligations that we should all respect as part of our duties.

This update to the code of conduct, translated into the Group's twelve languages, was distributed to all Group employees in 2015. It is passed on by members of the Executive Committee, the Management Committee of each Division and the main Corporate managers. An Ethics Officer has specific responsibility for monitoring proper application of the code of conduct.

#### ASSESSMENT OF THE BOARD'S WORK

The conclusions of the last formal triennial assessment of the work of the Board of Directors were reviewed at the Board meeting of 14 May 2014. The Board approved the main points drawn from these conclusions and called for the organisation of shorter Board meetings, an extended period of time for prior examination of the draft financial statements and annual budgets and a stronger role for the Selection Committee with regard to the executive succession plan.

A further assessment of the Board's work during financial year 2015 was initiated with the directors at the end of 2015. Its conclusions were discussed at the Board meeting of 17 February and 27 May 2016. The Board approved a number of proposals to improve its work, including in particular, increased information to Board members on the draft agenda items concerning the work of the Committees, a well-supported presentation on the Group's outlook in terms of social and environmental responsibility and risk mapping and management, the organisation of regular presentations on feedback on projects and improved information on strategic issues and assets.

At its meeting of 9 November 2016, in compliance with the AFEP-MEDEF Code, the Board of Directors decided to implement a formal assessment of the work of the Board and of its dedicated Committees. The Board decided to entrust the assessment to an "Ad Hoc" Committee, composed of Board members and helped with the support of external counsel appointed by the Remuneration Committee. Conclusions of the evaluation process will be presented to the Board, discussed and deliberated upon, at the meeting scheduled on 23 May 2017. Said deliberations will determine implementation steps for recommendations arising from this assessment.

#### **MEETINGS**

#### Convening meetings

Meetings are held as often as necessary by the Chairman who sends a convening notice to all Board members, in accordance with the law. Convening notices may be sent to members by any means, including email, in principle one week prior to the date of the meeting. With the exception of meetings held by telephone during the year, Board meetings are usually held at the Company's head office (Tour Maine-Montparnasse).

#### Board meeting procedures

At each Board meeting, a dossier containing files on most of the items on the agenda is given to every participant at the Meeting.

The meeting usually begins with a preliminary report by the Chairman on the main events since the last meeting, followed by a presentation by the Divisional Heads on the market conditions relevant to each of the three Divisions. Projects of particular importance in terms of the Group strategy are also presented.

At the end of the meeting, particularly when the Board is approving the financial statements, a draft press release is usually submitted to directors for their approval and is published at the end of the day or the next day, before markets open, in order to report to the market on the main developments affecting the Company and the Group.

#### Meeting minutes

The Secretary of the Board (in principle, the Company's General Counsel) draws up the minutes of each Board meeting, which the Chairman submits to directors for approval at the subsequent Board meeting, the draft minutes being sent to each participant (directors and employee representative) together with the convening notice and agenda approximately one week before the scheduled meeting date.

#### **WORK IN 2016**

The Board of Directors met ten times in 2016.

In addition to examining recurring items relating to the Group's business, Board meetings were concerned, in particular, with:

- approval of the Group and Company financial statements for 2015 and the convening of the Annual General Shareholders' Meeting;
- review of the 2016 interim financial statements:

- review of the key events affecting the Group and its business divisions:
- the productivity improvement programmes and investment projects of the three divisions;
- the financing of the Group and its main subsidiaries;
- review of the 2016-2026 long-term operational plan;
- review of the report required by Article L. 225-102-3
   of the French Commercial Code on payments made
   to the authorities of countries where the Group
   operates mining activities;
- an update on safety within the Group.

In order to carry out its work, the Board is also aided by the work of four Committees which it has set up. Each Committee may refer to external experts on matters within their area of expertise, as necessary.

Individual participation at meetings of the Board of Directors and the Committees, in 2016 is shown in the table below.

	BOARD OF DIRECTORS	AUDIT COMMITTEE	REMUNERATION COMMITTEE	STRATEGIC COMMITTEE	SELECTION COMMITTEE
Michel Antsélévé	70%	-	-	-	-
Valérie Baudson <sup>(1)</sup>	100%	100%	-	-	-
Patrick Buffet	100%	-	-	100%	100%
Cyrille Duval (SORAME)	80%	-	-	100%	100%
Édouard Duval	100%	-	-	100%	100%
Georges Duval	100%	-	-	100%	-
Nathalie de La Fournière (CEIR)	100%	-	-	-	-
Marie-Axelle Gautier	90%	100%	-	-	-
Jean-Yves Gilet	90%	-	- [	100%	100%
Philippe Gomès	90%	-	-	-	-
Caroline Grégoire-Sainte-Marie <sup>(3)</sup>	100%	-	-	50%	-
Thierry Le Hénaff <sup>(4)</sup>	100%	-	-	-	-
Manoelle Lepoutre	90%	-	100%	100%	-
Miriam Maes <sup>(2)</sup>	83%	75%	-	-	-
Pia Olders	90%	-	- [	100%	-
Ferdinand Poaouteta <sup>(2)</sup>	50%	-	-	-	-
Catherine Ronge <sup>(5)</sup>	66%	66%	-	-	-
Sonia Sikorav <sup>(2)</sup>	100%	-	-	100%	-
Claude Tendil	90%	-	100%	-	-
Frédéric Tona	100%	100%	100%	-	-
Antoine Treuille	90%	100%	100%	-	-
Alexis Zajdenweber (FSI Equation)	100%	100%	-	100%	100%-
Average attendance	90%	90%	100%	97%	100%

- (1) Resigned as of 31 March 2016.
- (2) Appointed as of 27 May 2016.
- (3) Resigned as of 27 May 2016.
- (4) Resigned from the Strategic Committee as of 31 December 2015 and from the Board as of 17 February 2016.
- (5) Appointed as of 17 February 2016.

#### **AUDIT COMMITTEE**

The rules specifying the composition of the Audit Committee (minimum four members, maximum seven members, two thirds being independent Directors, in line with the AFEP/MEDEF corporate governance code), its operation and its responsibilities were reviewed and updated by the Board in 2016.

In accordance with Article L. 823-19 of the French Commercial Code, this Committee has particular responsibility for monitoring (i) the preparation of financial information and making recommendations, as necessary, to ensure the integrity of said information; (ii) the effectiveness of internal control and risk management systems, as well as internal audit, as required, with regard to the procedures for preparation and processing of financial and accounting information; (iii) recommendations issued concerning Statutory Auditors proposed for appointment or renewal by the General Shareholders' Meeting; (iv) the work carried out by the Statutory Auditors; (v) compliance by the Statutory Auditors with the independence conditions, (vi) approval of the provision of non-audit-related services, (vii) the report to the Board of Directors on its work performed and the results of the work to certify the accounts. The Committee is thus responsible for all the functions of an audit committee set out in recommendation 15.2 of the AFEP/MEDEF code.

To that end, and in application of the responsibilities referred to in the preceding paragraph, it is the responsibility of the Committee to (i) review the suitability and proper application of the accounting methods used (including off balance sheet commitments); (ii) analyse the interim and annual financial statements; (iii) examine the internal audit plans and their conclusions; (iv) monitor major disputes; (v) examine the Group's currency and commodity risk management policies and its hedging and investment policies; (vi) give its opinion to the Board concerning proposals for the appointment of Statutory Auditors; and (vii) examine the Chairman's report on the preparation and organisation of the Board's work and internal control procedures. The committee meets at least two days prior to the Board's review.

The Company refers to the AMF working group's report on Audit Committees when organising the Audit Committee's work (AMF recommendation of 22 July 2010).

Audit Committee meetings are attended, in particular, by the Chief Financial Officer, the Statutory Auditors, the Group's Internal Audit Director, the Director of Accounting, Tax and Consolidation, the Director of Planning and Management Control, the Financing and Treasury Director and the Group Director of Risk Management and Insurance.

The Audit Committee receives summary reports of audits conducted by the Group's internal audit

The Audit Committee currently comprises six directors: Marie-Axelle Gautier (director representing employees), Miriam Maes (independent director), Catherine Ronge (independent director), Antoine Treuille (Chairman of the committee-independent director), Frédéric Tona (independent director) and Alexis Zajdenweber (director representing the French State).

Marie-Axelle Gautier holds a doctorate in public law and is head of public law-mining law in ERAMET's legal department.

Miriam Maes is a graduate in business administration from the Nijenrode Business University (Netherlands). She is Chair of Foresee based in London, a consulting company that provides sustainable development and energy management advice to companies.

Catherine Ronge is a graduate of the École normale supérieure, with a postgraduate degree in Physics and a doctorate in quantum physics. She is Chair of Weave Air, a strategy consultancy firm.

Antoine Treuille is a graduate of ESSEC with an MBA from Columbia University, USA. He is Executive Managing Director of Altamont Capital Partners LLC, a private equity firm based in New York.

Frédéric Tona holds a doctorate in Applied Geology. He spent 30 years working in the mining division of the AREVA group. He is an independent consultant and a director of various companies.

Alexis Zajdenweber is a graduate of the National School of Administration and Sciences Po Paris and holds a postgraduate degree in Economics. He is Director of Energy Shareholdings at the Agence des participations de l'État (APE).

The Audit Committee met seven times in 2016.

In addition to presenting the financial statements for the previous year in February and examining the interim financial statements in July, each year the Committee reviews internal audit reports for the year as well as the internal audit programme for the following year. The examination of the financial statements by the Committee is accompanied by a presentation by the Statutory Auditors describing the findings of their work and the main issues involved.

In addition to the review of the annual and interim financial statements and the internal audits, in 2016, the Committee examined the following points in particular:

- the Chairman's report on the work of the Board of Directors and on internal control:
- the work of the Internal Audit Department in 2016 and its draft work plan for 2017;
- the changes to the duties of the Audit Committee in accordance with order 2016-315 of 17 March 2016;
- the monitoring of changes to the Group's working capital requirement and that of its main subsidiaries;
- the Group's financing activities;
- the Group's risk management monitoring procedures;
- the evolution of the Damage/Business Interruption insurance scheme, effective as of 1 January 2017 (which confirmed the choice of using a captive reinsurer);
- the Group's currency, fuel and nickel risk hedging
- corporate governance and the investment and risk allocation policy of the Group's financing company, Metal Securities;
- the procedure for monitoring the Group's off-balance-sheet commitments.

#### REMUNERATION COMMITTEE

The rules specifying the composition of the Remuneration Committee (minimum three members, maximum five members and a majority being independent directors), its operation and its responsibilities were reviewed by the Board in 2016. This Committee is mainly responsible for making recommendations to the Board of Directors with regard to the remuneration of executive corporate officers of the ERAMET group appointed by the Board of Directors.

The Group's Director of Human Resources, Health, Safety and Security acts as Secretary of the Committee.

The Remuneration Committee currently has four members: Manoelle Lepoutre (independent director), Claude Tendil (Chairman of the Committee-independent director), Frédéric Tona (independent director) and Antoine Treuille (independent director).

The remuneration policy for executive corporate officers established by the Board of Directors is based on the following elements:

- Remuneration is composed of a fixed portion and a variable portion, decided annually by the Board on the basis of recommendations by the Remuneration Committee. The fixed portion has remained unchanged since 1 January 2013, except for the review, on 22 December 2015, of Mr. Vecten's remuneration.
- The variable portion is based on a certain number of criteria and specific targets, the choice and weighting of which are approved by the Board of Directors every year, at the recommendation of the Remuneration Committee; for example, in 2016 it was based on: (i) actual economic performance (Current Operating Profit/Loss); (ii) financial performance (net cash position); (iii) achievements with respect to the budget and schedule of major capital expenditure programmes, industrial projects or acquisition and development activities; (iv) "managerial" results in terms of team motivation and leadership, project and strategy proposals and objectives in relation to health, safety, environmental and industrial risks. For reasons of confidentiality, these results, which were compared against pre-established targets precisely defined by the Remuneration Committee and the Board of Directors, may not be disclosed to the general public. The variable portion of remuneration for executive corporate officers may not exceed 140% of the gross annual fixed remuneration. The qualitative portion of variable remuneration represents 40% of variable remuneration. Full details are set out in the section on remuneration items falling due or granted to each executive corporate officer of the Company for the financial year ended and submitted to a vote at the General Shareholders' Meeting.
- In addition, in respect of stock-based compensation plans, executive corporate officers may benefit from performance share plans or share subscription or

purchase option plans, the terms and conditions of which are decided upon by the Board of Directors. at the recommendation of the Remuneration Committee. Since the Board meeting of 23 July 2007, executive corporate officers are required to retain 20% of shares acquired under performance share plans throughout their entire term of office. Share grants are awarded annually at the same time of year and are not discounted. Since these concern existing shares as opposed to new shares, there is no share dilution. With regard to the dilution of voting rights, the allocation of existing shares only has a marginal impact, given the composition of ERAMET's equity, on one hand, and the selectivity of the criteria established for these plans, on the other. The share plan regulations prohibit hedging operations and executive corporate officers give a formal undertaking in this respect. In 2016, a total of 22,405 performance shares, in the form of existing shares, all conditional upon the fulfilment of specific performance conditions, were granted to the executive corporate officer. The performance conditions are calculated over a three-year period, as follows: the relative performance of ERAMET shares for one-third of the share grant (this involves comparing the change in total shareholder return over a three-year period with that of a panel of around sixty comparable companies from two industry panels, namely "diversified metals and mining" and "steel", and the Euromonev Mining Index, with the performance conditions being fully achieved if the ERAMET share is ranked among the top 15% of the panel) and the intrinsic performance of certain financial indicators achieved in three instalments over a three year period for two-thirds of the share grant (50% of the current operating profit/loss and 50% of the operating cashflow from operating activities, the annual objectives referring to the Company's budgetary targets, with no adjustment but excluding exogenous tax or policy factors and excluding any other item submitted by Management, as determined by the Remuneration Committee, with performance conditions only being fully achieved when these targets are significantly out-performed). No share subscription or purchase options were granted during the financial year to these same beneficiaries.

 Executive corporate officers are eligible for the existing defined benefit supplementary pension plan for ERAMET executives, with new arrangements applicable as from 1 July 2008. In the event of settlement of their pension rights vis-à-vis social security, they may be entitled to a supplementary pension that may not exceed 35% of the reference salary defined in the plan's internal regulations, with said reference salary being capped, in the same regulations, at twenty-five times the annual social security ceiling. The overall remuneration of corporate officers takes into account the benefit represented by the supplementary pension plan. People who have completed at least two years service with the Company are eligible for this plan. The reference period used to calculate the reference salary is twelve months for the annual fixed portion and the average of the three last variable remunerations, calculated on the basis of full years, for the variable portion. The arrangement does not provide for any annual rate of increase of potential pension entitlements. All these arrangements, combined with the overall limit of 35% of the reference salary, which is itself limited to 25 times the annual social security ceiling(1) give the whole pension plan quite a balanced structure. Based on the latest actuarial calculation, the present value of the estimated portion of the executive corporate officer in office at 31 December 2016, out of the total commitments in respect of the past service of all beneficiaries of this supplementary pension plan. amounted to €11.3 million at the end of December 2016, with the total amount of commitments being measured under IFRS at €51.3 million.

• Following the reappointment of the Chairman and CEO to that role, decided by the Board of Directors on 29 May 2015, and on the recommendation of the Remuneration Committee, on 29 May 2015 the Board of Directors, with the Chairman and CEO abstaining, voted unanimously to retain all elements of the remuneration of the Chairman and CEO and all the provisions of his corporate officer contract dated 20 February 2008 (incorporating all the amendments decided since by the Company's Board of Directors at the recommendation of the Remuneration Committee). However, two changes were made to the severance pay falling due to the Chairman and CEO in the event of his departure from the Company (as a result of forced resignation, cancellation or non-renewal of his term of office

or modification of the conditions under which he originally joined the ERAMET group):

- The amount of severance pay which may fall due is equal to twice (instead of three times, as it was previously) the last gross annual fixed remuneration plus twice (instead of three times) the average gross annual variable remuneration received in the last three complete years prior to his departure.
- The severance pay benefit specified in his corporate officer contract is conditional upon the fulfilment of performance conditions: the total gross variable remuneration amount (itself subject to specific performance conditions) received over the final three full financial years of his term of office must be 35% or more of the total gross annual fixed remuneration received during the same three-year period-instead of 20% as it was previously. Consequently, these arrangements rule out the payment of such a benefit should the Chairman and CEO fail to achieve his targets. In accordance with the provisions of Article L. 225-42-1 of the French Commercial Code, these modified arrangements were the subject of a resolution approved by the Annual General Shareholders' Meeting of 27 May 2016. In addition, in accordance with AFEP/MEDEF Code recommendations, Patrick Buffet does not hold a contract of employment binding him with the Company.

There is no provision for corporate officers to receive payment in respect of a non-competition commitment upon conclusion of their respective terms of office.

In the event of a change in control of ERAMET and the termination of an employment contract that is considered to be attributable to the employer, a specific guarantee, which may not be combined with other indemnities applicable under contracts or collective bargaining agreements, was decided in 2005 and implemented. At 31 December 2016, this guarantee applied to 10 of the Group's senior executives (certain members of the Group Executive Committee who are not corporate officers and members of the Divisional Executive Committees). This guarantee, which represents an indemnity of three years' remuneration (fixed plus variable) for each executive concerned, was estimated at a total of €4.9 million at 31 December 2016. Patrick Buffet does not benefit from this guarantee.

Under their employment contracts, certain employees also benefit from contractual indemnities, including an indemnity payable upon retirement, calculated on the basis of one to two years' salary (fixed plus variable) and including the rights vested under the collective bargaining agreement to which they are subject.

• Corporate officers also benefit from a supplementary healthcare plan and a supplementary disability and life insurance scheme, offered to all ERAMET group employees.

The Remuneration Committee met six times in 2016.

During the year, besides validating the proposed 2015 bonuses and 2016 targets for executive corporate officers, the Committee also proposed to the Board of Directors, which the latter approved, a 2016 Erashare worldwide free share plan, as part of the annual performance share award plan for corporate officers and senior executives of the Company and its subsidiaries, granting two free shares to all employees of the Company and its subsidiaries, in addition to a selective performance share and free share plan for 2016, granting a total of 134,327 shares, including 93,909 performance shares and 40,418 bonus shares to 255 Group executives (including 44,700 performance shares to executive corporate officers, of which 22,405 performance shares to executive corporate officers).

#### SELECTION COMMITTEE

Comprising four members (three directors and the Chairman), the Selection Committee recommends the appointment of the directors heading up each of the Group's three Divisions and the Group's Chief Financial Officer. The rules specifying the composition, operation and responsibilities of the Selection Committee were reviewed by the Board of Directors on 25 May 2012.

With regard to the consideration of proposals for the appointment of new directors, the Selection Committee ensures that no legal incompatibility or conflict of interest exists and, concerning proposals for the appointment of new independent directors, it studies the extent to which potential candidates meet the independence criteria laid down by the AFEP/ MEDEF code. Finally, with regard to the replacement of executive corporate officers in the event of an unforeseen vacancy, it examines and provides an opinion on solutions for their succession.

The Committee is currently composed of Patrick Buffet, Cyrille Duval, Édouard Duval and Alexis Zajdenweber. The committee does not have an independent Director among its members. This is due to the specific rules of the Shareholders' Agreement designed to structure the relationship between the controlling shareholders of the Company.

The Selection Committee met six times in 2016 to examine the nominations of new directorships and succession planning for key Group management personnel.

#### STRATEGIC COMMITTEE

The Strategic Committee has nine members (eight directors and the Chairman). The rules specifying the composition, operation and responsibilities of the Strategic Committee were reviewed by the Board of Directors in 2016

The role of the Strategic Committee is to examine and provide an opinion to the Board of Directors on the main strategic lines of the Company as proposed by General Management, as well as on investment, disposal and partnership projects of particular strategic importance, or indeed on any specific matter of strategic significance to the Group.

The Committee currently comprises Patrick Buffet, Alexis Zajdenweber, Cyrille Duval, Édouard Duval, Georges Duval, Jean-Yves Gilet, Manoelle Lepoutre (independent director), Pia Olders (director representing employees) and Sonia Sikorav (independent director).

The Director Strategy and Financial Communication acts as Secretary of the Committee.

In 2016, the Strategic Committee met five times. At these meetings, the Strategic Committee examined developments taking place in the markets in which the Group's three Divisions operate and their competitiveness. On a case by case basis, the Committee examined the productivity improvement programmes carried out, as well as certain investment or disinvestment projects.

#### MEANS OF SHAREHOLDER PARTICIPATION AT GENERAL SHAREHOLDERS' MEETINGS

The means by which shareholders may participate at General Shareholders' Meetings are set out in Articles 8, 20, 21 and 22 of the Articles of Association.

#### 4.1.1.3 GENERAL MANAGEMENT

#### COMPANY MANAGEMENT METHOD

Since the deliberations of the Board meeting of 26 March 2003, the Company's Chief Executive Officer is also Chairman of the Board of Directors, given that the Board considered this arrangement best suited to the Company's organisation and shareholding structure, with 63% of the share capital controlled by two shareholder groups in concert. Regular dialogue between the two main shareholders that are party to the shareholders' agreement and General Management is thus facilitated through a single point of contact combining the duties of Chairman of the Board of Directors and CEO. This governance method is by far the most common among French companies whose securities are listed on a regulated market. The amalgamation of the functions of Chairman and Chief Executive Officer is in compliance with balanced corporate governance rules, based on:

- a Board structure comprising at least one third independent directors;
- prior examination by the Strategic Committee followed by Board approval are required for major strategic lines of action, as described in the above paragraph on the "Strategic Committee" and in the below paragraph on the "Composition of General Management.

In accordance with Article 16 of the Articles of Association, the Board may, at the recommendation of the head of the Company's General Management, appoint up to five Deputy CEOs. The Company's CEO and the Deputy CEOs must be nationals of a member state of the European Union and may not hold the position beyond the age of 70.

#### COMPOSITION OF GENERAL MANAGEMENT

The General Management of the Company and of the Group is organised as follows:

#### Chairman and CEO: Patrick Buffet

At its meeting of 25 April 2007, the Board of Directors granted him all powers conferred by French law to a Chairman and CEO of a public limited company. At its meetings of 11 May 2011 and 29 May 2015, the Board of Directors renewed his powers. The Board also granted

the Chairman and CEO powers to substitute and delegate, under his responsibility, to such persons as he sees fit, with the possibility of sub-delegating such part of his powers as he feels appropriate, by granting special powers for one or more specific purposes.

The Chairman and CEO exercises full authority pursuant to the law and within the scope of the Company's corporate purpose, subject to the proviso that, "no decision relating to the Company's major strategic, economic, financial or technological direction may be taken without first being discussed by the Board", as specified in Article 13, Sub-section 2 of the Articles of Association

In line with Article 13, sub-section 4 of the Articles of Association, "acts concerning the Company are signed either by the CEO, the Deputy CEO or by any specially authorised person."

Since September 2004, the Company's management method has also included an Executive Committee and an International Management Committee (IMC), which are both chaired by the Chairman and CEO.

The Executive Committee consists of the Chairman and CEO, two delegate CEOs in charge of the Mining Divisions and Alloys Division respectively, the Human Resources, Health, Safety and Security Director, the CFO, and the Communications and Sustainable Development Director. The fact that the heads of corporate support departments (Human Resources, Health, Safety and Security Department, Administration and Finance Department and Communications and Sustainable Development Department) are members of the Executive Committee strengthens the effectiveness and consistency of their actions. The aim is to enable cross-functional departments to carry out their three essential roles, namely an operational role, a supervisory role and a service role for the Divisions.

The China Division reports to the delegate CEO in charge of the Mining Divisions. The Administration and Finance department, Human Resources, Health, Safety & Security department, the Communications and Sustainable Development department, the department of Strategy and Investor Relations, the Industrial Affairs department, the Legal department and ERAMET International, all report to the CEO.

The CFO also supervises IT, Internal Audit, Management Control, Treasury, Risk Management and Insurance, Financing, Accounting and Taxation.

The monthly Divisional meetings chaired by the Chairman and CEO monitor the monthly reports and identify critical operating decisions concerning the Divisions.

The International Management Committee meets periodically and is attended by members of the Executive Committee, the Chairman of ERAMET International, the CEO of Le Nickel-SLN, the CEO of Comilog, the Maboumine Project Director, the Director of ERAMET in China, the Executive Director in charge of Group development in Africa, ERAMET's General Representative in Gabon, the Director of Strategy and Financial Communication and the Group General Counsel.

# 4.1.2 INTERNAL CONTROL PROCEDURES

# 4.1.2.1 THE COMPANY'S INTERNAL CONTROL OBJECTIVES

In accordance with the AMF reference framework, updated in July 2010, the internal control procedures in force at ERAMET are designed to:

- ensure that transaction execution or management activities and the behaviour of personnel comply with the policies laid down by the Company's governing bodies and those set out in applicable legislation and regulations and that they adhere to the Company's values, standards and internal rules:
- check that the accounting, financial and management information provided to the Company's governing bodies faithfully reflects the Company's business activities and position;
- ensure that insurance procedures and/or programmes are put in place to protect the Company's assets against risks of loss resulting from theft, fire, improper or illegal actions and natural hazards;
- prevent and control risks of error or fraud, in particular in the areas of accounting and finance.

However, as with any control system, it cannot provide an absolute guarantee that these risks are totally eliminated.

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#### INTERNAL CONTROL PLAYERS

Owing to the diversity of its business activities, ERAMET is organised into three Divisions, each with all the functions required for its operations (management, production, sales, purchasing, finance, etc.), In addition to its general management function, the head office provides support and carries out the control work required for the Group's overall cohesion. The following are the main internal control players:

- the Executive Committee, whose membership is set out in the "General Management" section above, meets once every two weeks. The International Management Committee, whose membership is also set out in the "General Management" section above, deals more specifically with organisational matters. It meets periodically;
- the Internal Audit Department, reporting to the Chief Financial Officer (CFO) as delegated by the Chairman. Its mission is in particular to be accountable to management bodies for its assessment of the compliance and effectiveness of internal control systems implemented within the Group. This assessment takes into account the risks identified by the Group's set of tools (risk mapping, self-assessment tools for internal control, interviews conducted by the Internal Audit Department with the Executive Committee, the Group's operational departments, the main subsidiaries and the auditors). Based on an Audit Plan proposed by Internal Audit and approved on an annual basis by the Executive Committee and the Audit Committee, the Internal Audit Department performs the tasks defined in the Plan within the various Group units, in complete independence, in compliance with the Audit Charter and based on a framework defined by international professional standards, initiated jointly by the Chairman and the Director of internal Audit. The critical points identified during the various tasks performed by Internal Audit are presented as recommendations to the audited entities, which must implement appropriate action plans. The Internal Audit Department provides the Audit Committee with regular updates on its work and findings, as well as the degree of completion of action plans within the audited entities. It reports regularly to members of the Executive Committee on the results of its work

and progress achieved with regard to the resulting action plans. Each year the Audit Committee also reviews the internal audit plan of the Group and its subsidiaries (the current plan and the plan for the following year) and proposes any adjustments it considers necessary to the Board of Directors;

- the Group Planning and Management Control Department reports to the CFO. This department sets out the structure of ERAMET's management control and monitors the development of the Divisions' management systems to ensure they are consistent with the Group's goals. The department defines the relevant key performance indicators for the Group, at each level, and helps to implement them in each Division and entity. It is also responsible for Group reporting;
- the Legal Department reports to the Chairman and CEO. As a service centre, it provides the whole Group with legal support on all issues within its area of expertise:
- the Financing and Treasury Department, reporting to the Chief Financial Officer (CFO), in liaison with the Board committees of the main subsidiaries, manages the hedging of foreign currency exposure and commodity risk, particularly with regard to nickel and fuel oil, and is in charge of financial resource management (investments and borrowings) for the whole Group;
- the Group Risk Management and Insurance department, reporting to the CFO and functionally to the Audit Committee, promotes and coordinates risk management. As such:
  - It carries out an annual update of the Group risk map working from the Divisional risk maps prepared by each of the divisional risk managers.
  - It ensures the implementation of action plans for all major risks to increase the level of risk control.
  - It reports to the Executive Committee and the Audit Committee on risk management measures taken
  - It is also responsible for arranging and monitoring all insurance policies subscribed by the Group;
- the Tax Department, part of the Accounting, Tax and Consolidation Department, reporting to the CFO. As a service centre, it assists the Group's various subsidiaries with their respective tax obligations and fulfils those of the parent company;

- the Communications and Sustainable Development Department. It assists the various Divisions to control and reduce the Group's environmental impact, thereby ensuring the sustainability of ERAMET's business activities, products and markets in line with regulatory, political and labour developments;
- the Group Human Resources, Health, Safety and Security Department. It manages the Company's human resources and ensures that HR policies are consistent across the Group's various entities. The department coordinates Safety and Security policies within the Group and formalises health issues via a network of local contacts at the sites;
- more generally, every management level in the Company is responsible within its field of expertise for defining, implementing and steering internal control, under the management of the relevant Director and Executive Committee member.

#### RISK MANAGEMENT

#### Risk management charter

On 11 December 2013, the Board of Directors adopted the terms of the ERAMET group Risk Management Charter. The ERAMET group defines its plan for risk management as follows:

"Our plan of action for Risk Management is a lever for Group management and contributes, in particular, to achieving the following objectives:

- protect our main human and financial resources, and our corporate image;
- safeguard value creation;
- encourage risk-taking at an acceptable level;
- comply with legal and regulatory obligations, and with the values promoted by the Group;
- seek out value-creating opportunities for the Group (e.g. new markets, new customers, etc.)."

The full text of the Charter is available on the ERAMET website.

Because of the constant change taking place in the economic and regulatory environments encompassing the Group's activities, ERAMET must be knowledgeable of the internal and external risks that could prevent it from achieving its objectives or that could affect any of its main assets or key business processes. The approach implemented by the Group consists of two stages: firstly, the identification and assessment of major risks and, secondly, risk management.

The objective is to align with best practices, including:

- the use of a risk monitoring tool (ERARISK) to synthesize and identify major risks;
- the creation of a Risk Management Committee, which meets around ten times a year and covers all risk areas (security, environment, health and safety, industrial risks, insurance and risk managers).

The risk map was updated in November 2016 and presented to the Audit Committee in December 2016.

#### Treatment of risk

The main risks identified by risk mapping are treated in two different ways:

- Action plans aimed at strengthening the existing control mechanisms are deployed for the major risks identified. The Group Risk Managers are responsible for monitoring this procedure.
- The results of the risk mapping exercise are included in the Group's internal audit plan: this aims to ensure that the existing control process functions properly, and that the agreed action plans are actually implemented.

Operational risks are mainly managed at Divisional level, in a manner adapted to the specific business activities. Industrial and environmental risks are monitored by the Divisions, together with the Communications and Sustainable Development Department.

Liquidity, interest rate, currency and commodity risks are managed by the Treasury Department for the whole Group, together with the relevant contacts in the larger subsidiaries.

Finally, the Group Risk Management and Insurance department, together with the Division heads, establishes the policy for coverage of insurable risk, for all the Group's companies. The various insurance programmes are described in the Group's 2015 Registration Document. Any additions to these insurance programmes will be detailed in the Group's 2016 Registration Document.

# SUMMARY OF INTERNAL CONTROL PROCEDURES IMPLEMENTED IN THE GROUP

- Existing charters: the Audit Committee, Internal Audit (updated in 2015), Legal Affairs Department, Group Risk Management and Insurance Department, Management Control, Tax Department and IT Systems Department have each published a charter. The purpose of these charters is to specify the operating rules of the various committees and departments and to formalise relationships with other parties. A new Group Code of Conduct came into effect on 1 January 2015.
- Signing authority, other powers: the delegate CEOs in charge of the Divisions, have all the powers delegated by the Chairman and CEO. The Group CFO has the power granted by the Chairman and CEO to operate the Company's various bank accounts.
- Information systems: the role of the Group IT Department is to make IT systems more harmonised across the Group and support the various subsidiaries. It has set up a worldwide network and a single Group email system. Security has been improved through the auditing of certain systems and the implementation of specific tools. A standard for office technology (hardware and software packages) has been established. Several projects to improve management systems are ongoing in the Divisions, including the implementation of integrated procurement applications for better control of commitments and separation of duties throughout the supply chain. A global organisational structure, covering the whole Group and its subsidiaries, is in the process of being implemented. The modernisation work involves three aspects:

- A redesigned workstation, encompassing the latest technologies in terms of office automation software, communications, data security and internet browsing is currently being rolled out.
- The main servers are consolidated in regional centres. The global network is reinforced and, if necessary, can be doubled in size to support the new technical architecture.
- Concerning business applications, a number of projects are underway to modernise our main ERP platforms developed around the SAP solution with the aim of providing a more harmonised solution in the long-term for the Group as a whole.
- General organisation of procedures: ERAMET has drawn up and published within the Company and its subsidiaries, internal procedure manuals concerning investing, foreign currency hedging, management procedures (budgeting, operational planning, long-term financing plans, updating forecasts, analysis of over/under-spends, etc.), a consolidation manual and shared accounting rules, travel and expense accounts and financial procedures in relation to cash. Three procedures relating to crisis scenario prevention and management have been established and distributed. They relate to the anticipation and identification of weak signals, major incidents and crisis management in respect of issues or events relating to the safety of facilities, property or persons, and the control of industrial and environmental risks.
- Legal and operational control of subsidiaries by the parent company:
  - Owing to the diversity of their businesses, the
    Divisions are managed independently for their
    day-to-day management. Each Division has a
    Management Committee that makes all the decisions within its area of responsibility, reporting
    to the Group Executive Committee on a regular
    basis.
  - The Legal Department acts as Secretary to the Board for the main companies (Le Nickel-SLN, Comilog S.A.).
  - In 2008, the Board of Directors of Comilog S.A. set up an Audit Committee and a Remuneration Committee. At the meeting of the Board of Directors of Le Nickel (SLN) held in November 2008, the Directors representing ERAMET also

proposed the establishment of three committees: a Strategy Committee, an Audit Committee and a Remuneration Committee, as part of a modernised corporate governance structure. This was implemented at the SLN Board meeting of 17 November 2009. This arrangement was modified at the SLN Board meeting of 4 December 2012 to take into account the separation of the functions of Chairman and CEO of the Company and the appointment of new persons to those positions, replacing the Chairman and CEO.

- Division meetings: monthly meetings are organised with the management of each Division to review monthly performance and analyse budget over/under-spends and the resulting action plans. Management/Accounting and Treasury Committee meetings are also held monthly, bringing together Division and parent company CFOs, accountants, management controllers and treasurers, respectively, to deal with common issues and provide the necessary coordination. Specific meetings take place every month to discuss sales, accounting, treasury, insurance and other issues with the Divisions. Finally, specific budgeting, forecast updating and planning meetings are organised with the same participants as Division meetings to address these issues.
- Implementation of the internal audit plan: Internal Audit carried out 16 assignments in 2016 across all the Group's subsidiaries.
- Control of strategic investments: under the capital expenditure procedures, all projects exceeding €4 million are examined at corporate level in accordance with specific procedures (presentation file, approval meetings, follow-up, etc.). Capital expenditure projects are controlled and approved from a technical perspective by the Industrial Affairs Department, and from a financial perspective by the Administration & Finance Department Strategic projects are presented to the Strategic Committee and to the Board of Directors of ERAMET. The main projects are audited internally once capital expenditure has begun.
- Monitoring of commitments undertaken/ received: independently of the above mentioned procedure, quarterly accounting reporting provides information on these commitments. Moreover, the Legal Department provides support for major contract negotiations or in the event of disputes.

#### INTERNAL CONTROL SYSTEM FOR THE PREPARATION OF FINANCIAL AND ACCOUNTING INFORMATION

- Organisation of the accounting function within the Group: the Accounting Units of the parent company and its subsidiaries record daily transactions (purchases, sales, cash flow, etc.) and ensure that the accounting methods comply with the Group's established procedures. These operations are performed in a shared service centre (SSC) based in Clermont-Ferrand which contains almost all of the accounts departments of the Group's French companies. The Accounting, Tax and Consolidation Department, within the Group Administration and Finance Department, keeps the accounts of the parent company and its French subsidiaries, files tax returns and complies with the obligations relating to tax consolidation, and publishes ERAMET's individual and consolidated financial statements. The necessary coordination with subsidiaries is provided by the Accounting/Management Committee, through monthly meetings attended by the CFOs, accountants and management controllers of the main Divisions and Subsidiaries.
- Procedures for the preparation of the consolidated financial statements: the consolidation returns are input into the BusinessObjects Finance software by each subsidiary, and Division- and Group-level consolidation is carried out by the central consolidation department. Consolidation is monthly with annual items (taxes, provisions, etc.) estimated at various times during the year.
- Accounting manual: the consolidation manual is distributed to all subsidiaries and contains the accounting rules which are common to the whole Group and which apply to financial statements drawn up in compliance with IFRS. It sets out the measurement methods used by the Group and specifies the rules to be followed when preparing the financial statements.
- Budget and management control: the budget for the three-year operational plan, including the budget for the first year, is calculated at year-end for the following year and the budget forecast for the current year will be updated at least three times during the course of the year. These budgets and forecast updates, as well as the related action plans,

- are formally approved by Division management, the Group Executive Committee and, subsequently, by the Chairman and CEO of ERAMET. An analysis of discrepancies between budgeted and actual figures is carried out on a monthly basis, firstly at Division level and subsequently at Group level. As a supplement to the financial statements, the Management Control Department prepares analyses of the Group's performance for the period.
- Cash and Financing control: in addition to its pivotal role in managing foreign currency and commodity risk, the Group Administration and Finance Department sets up financing for the Group's main subsidiaries and carries out financial investments together with the managers of those subsidiaries. It centralises cash forecasting for the main companies, in conjunction with Group management control, and assists them in establishing payment methods for at-risk countries. At the end of 2004, the Group set up a cash pooling company, Metal Securities, to serve as a central cash hub for all Group companies. At the end of 2006, an "exchange rate guarantee" company, Metal Currencies, was established to centralise foreign exchange transactions, which had in the past been recognised in the financial statements of each Group entity. Both Metal Securities and Metal Currencies are subject to corporate governance established in full collaboration with the managers of the relevant subsidiaries.
- Work of the Audit Committee of the Board of Directors: the Audit Committee reviews the interim and annual financial statements, monitors major disputes and ensures compliance with currency and commodity risk management policy procedures, as well as hedging policies. It reviews the internal audit plan and the actions decided upon based on the audits carried out.
- Liaison with the Statutory Auditors: the Auditors carry out half-yearly reviews of the financial statements, which are approved at meetings held with the Divisional and Group Finance Departments, the Division Heads, the Group CFO and, subsequently, with the Chairman and CEO of ERAMET.

Paris, 23 February 2017

Chairman of the Board of Directors

#### LIST OF DIRECTORS AND THEIR POSITIONS

SURNAME, FIRST NAME OR COMPANY NAME POSITION FAMILY CONNECTION EXPERTISE	DATE OF FIRST APPOINTMENT	DATE OF LAST REAPPOINT- MENT, AND END DATE OF TERM OF OFFICE	OTHER POSITIONS HELD
Buffet Patrick Director <sup>(3)(5)</sup> Chairman and CEO since 25 April 2007 Born 19 October 1953 (63 years) French national Business address: Tour Maine-Montparnasse 33, avenue du Maine 75015 Paris Mr. Buffet is a mining engineer. He was Senior Executive Vice President of Suez until 2007.	Director: Co-opted to the Board on 7 March 2007 Chairman and CEO: Board meeting of 25 April 2007	Reappointments: General Shareholders' Meetings of 25 April 2007, 11 May 2011 and 29 May 2015, for a four-year term Expiry date: General Shareholders' Meeting called to approve the 2018 financial statements	In Group companies  Director of Le Nickel-SLN  Director of Comilog S.A. In non-Group companies  Director of Bureau Veritas and Banimmo (Belgium) (listed companies)  Offices held and completed during the past five years  Chairman and CEO of Le Nickel-SLN (until 31 December 2012)  Member of the Supervisory Board of Arcole Industries (unlisted) (until 4 October 2014)
Antsélévé Michel Director: Born 19 February 1965 (51 years) Gabonese national Business address: Présidence de la République Libreville Gabon Mr. Antsélévé is Special Advisor to the President of the Gabonese Republic, Head of the Mines, Hydrocarbon, Energy and Hydraulic Resources Department.	General Shareholders' Meeting of 15 May 2013	Expiry date: General Sharehol- ders' Meeting called to approve the 2016 financial statements	In non-Group companies  Director representing the Presidency of the Gabonese Republic on the Boards of Directors of Société de Développement des Ports (Gabon), Compagnie Minière de Belinga (Gabon) and Société Nationale de Gestion et de Construction du Logement Social (Gabon)  Offices held and completed during the past five years  Director representing the Gabonese Republic on the Board of Directors of Compagnie de Navigation Intérieure (Gabon) (until 2013)  Director representing the Presidency of the Gabonese Republic on the Boards of Directors of Société de Développement des Ports (Gabon) (until 2016)
Duval Georges Director <sup>(5)</sup> Born 3 May 1946 (70 years) French national Business address: Tour Maine-Montparnasse 33, avenue du Maine 75015 Paris Brother of Édouard Duval, cousin of Cyrille Duval and Nathalie de La Fournière. Mr. Duval is CEO of SORAME and CEIR.	General Shareholders' Meeting of 21 July 1999	Reappointment: General Shareholders' Meetings of 21 May 2003, 25 April 2007, 11 May 2011 and 29 May 2015, for a four-year term Expiry date: General Shareholders' Meeting called to approve the 2018 financial statements	In Group companies  Chairman of ERAMET Alloys Squad Administrator In non-Group companies (unlisted companies) CEO of SORAME SAS CEO of CEIR SAS Offices held and completed during the past five years Deputy CEO of ERAMET (until April 2016) Chairman of UKAD, Aubert & Duval (SAS) (until 2016); ERAMET Holding Alliages (SAS) (until 2016), Erasteel (SAS) (until 2016)
Duval Édouard Director <sup>(3)(5)</sup> Born 2 December 1944 (72 years) French national Business address: Tour Maine-Montparnasse 33, avenue du Maine 75015 Paris Brother of Georges Duval, cousin of Cyrille Duval and Nathalie de La Fournière. Mr. DUVAL is Chairman of SORAME and CEO of CEIR.	General Shareholders' Meeting of 21 July 1999	Reappointments: General Shareholders' Meetings of 21 May 2003, 25 April 2007, 11 May 2011 and 29 May 2015, for a four-year term Expiry date: General Shareholders' Meeting called to approve the 2018 financial statements	In Group companies  • Director of Le Nickel-SLN In non-Group companies (unlisted companies)  • Chairman of SORAME SAS  • CEO of CEIR  Offices held and completed during the past five years  • Chairman of ERAMET International (SAS) (until 2015)  • Deputy CEO of ERAMET Holding Alliages. (SAS) (until 2015)

- (1) Audit Committee.
  (2) Remuneration Committee.
  (3) Selection Committee.
  (4) Independent Director.
  (5) Strategic Committee.

SURNAME, FIRST NAME OR COMPANY NAME POSITION FAMILY CONNECTION EXPERTISE	DATE OF FIRST APPOINTMENT	DATE OF LAST REAPPOINT- MENT, AND END DATE OF TERM OF OFFICE	OTHER POSITIONS HELD
Director <sup>(3)(5)</sup> represented by  Duval Cyrille  Permanent representative of SORAME on the Board of Directors  Born 18 July 1948 (68 years)  French national  Business address:  Tour Maine-Montparnasse 33, avenue du Maine 75015 Paris  Uncle of Nathalie de La Fournière, cousin of Georges and Édouard Duval  Mr. Duval is CEO of SORAME and Chairman of CEIR.	General Shareholders' meeting of 11 May 2011	Reappointment: General Shareholders' Meetings of 29 May 2015, for a four-year term Expiry date: General Shareholders' Meeting called to approve the 2018 financial statements	In Group companies  Deputy CEO of ERAMET Holding Alliages. Director of Comilog SA and Metal Securities Chairman of Brown Europe In non-Group companies Director of Nexans (listed company) (unlisted companies) Chairman of CEIR CEO of SORAME Offices held and completed during the past five years (Group companies) Manager of Transmet (until April 2014) Manager of SCI Grande Plaine (until 2016) Chairman of Forges de Montplaisir (until 2016)
CEIR Director represented by de La Fournière Nathalie Permanent representative of CEIR on the Board of Directors Born 1 May 1967 (49 years) French national Address: c/o ERAMET Tour Maine-Montparnasse 33, avenue du Maine 75015 Paris Niece of Cyrille Duval, cousin of Georges and Édouard Duval Ms. de La Fournière is Finance and Administration Director of the Agence d'urbanisme et d'aménagement Toulouse Aire Métropolitaine.	General Shareholders' Meeting of 11 May 2011	Reappointment: General Shareholders' Meetings of 29 May 2015, for a four-year term Expiry date: General Shareholders' Meeting called to approve the 2018 financial statements	In non-Group companies  • None  Offices held and completed during the past five years  • None
Gautier Marie Axelle <sup>(1)</sup> Director representing employees Born 22 July 1974 (42 years) French national Business address: Tour Maine-Montparnasse 33, avenue du Maine 75015 Paris Ms. Gautier is in charge of the public law/mining law unit of the Legal Affairs Department.	Appointed by the European Works Council on 12 November 2014 in accordance with Article 10.9 of the Articles of Association	Expiry date: 11 November 2018	In Group companies  • None In non-Group companies  • None Offices held and completed during the past five years  • Director of ArcelorMittal Geo Lorraine (until June 2011)
FSI Equation Director <sup>(1)(3)(5)</sup> Represented by Zajdenweber Alexis Born 18 May 1976 (40 years) French national Business address: Agence des participations de l'État (APE) 139, rue de Bercy Teledoc 229 75012 Paris Mr. Zajdenweber is Director of Energy Shareholdings at the Agence des participations de l'État (APE).	Co-opted by the Board on 25 May 2012 (ratified by the General Shareholders' Meeting of 15 May 2013)	Reappointment: General Shareholders' Meetings of 29 May 2015, for a four-year term Expiry date: General Shareholders' Meeting called to approve the 2018 financial statements	In non-Group companies  • Member of the Supervisory Board of Électricité Réseau Distribution France (ERDF)  • Director of AREVA  Offices held and completed during the past five years  • Director of Monnaie de Paris (from 2009 to 2011)

- (1) Audit Committee.
- (2) Remuneration Committee.(3) Selection Committee.(4) Independent Director.

- (5) Strategic Committee.

SURNAME, FIRST NAME OR COMPANY NAME POSITION FAMILY CONNECTION EXPERTISE	DATE OF FIRST APPOINTMENT	DATE OF LAST REAPPOINT- MENT, AND END DATE OF TERM OF OFFICE	OTHER POSITIONS HELD
Jean Yves Gilet Director <sup>(5)</sup> Born 9 May 1956 (60 years) French national Business address: 16, rue de Saint-Simon 75007 Paris Mr. Gilet is Chairman of Gilet Trust Invest.	Co-opted by the Board on 23 September 2016	Expiry date: General Sharehol- ders' Meeting called to approve the 2018 financial statements	In non-Group companies  • Member of the Board of Directors of Eiffage and Orange  Offices held and completed during the past five years  • CEO of Fonds Stratégique d'Investissement (2010-2013)  • Member of the Board of Directors of CGG Veritas (2014-2015)  • Executive Director of Bpifrance Participations (2013-2016)
Gomès Philippe Director Born 27 October 1958 (58 years) French national Business address: Assemblée Nationale 126, rue de l'Université 75355 Paris 07 SP Mr. Gomès is member of parliament of the second constituency of New Caledonia.	Co-opted by the Board on 10 December 2014	Expiry date: General Sharehol- ders' Meeting called to approve the 2016 financial statements	In non-Group companies  Deputy Chairman of STCPI  Chairman of the Board of Directors of ENERCAL  Chairman of Nouvelle-Calédonie Energie  Offices held and completed during the past five years  Deputy CEO of STCPI (from 2004 to 2009)  Chairman of the Agence pour la desserte aérienne de la Nouvelle-Calédonie (ADANC) (from 2009 to 2011)  Chairman of Société Immobilière Calédonienne (SIC) (from 2004 to 2009)  Chairman of Société de Participation Minière du Sud Calédonien (SPMSC) (from 2005 to 2009 and in 2014)
Lepoutre Manoelle Director <sup>(2)(4)(5)</sup> Born 8 May 1959 (57 years) French national Business address: TOTAL 2, place Jean-Millier La Défense 6 92078 Paris La Défense Cedex Mme Lepoutre is Director of Civil Society Engagement	General Shareholders' Meeting of 11 May 2011	Reappointment: General Shareholders' Meetings of 29 May 2015, for a four-year term Expiry date: General Shareholders' Meeting called to approve the 2018 financial statements	In non-Group companies (unlisted companies)  • Director of Fondation Villette-Entreprises  • Director of the Nancy School of Geology  • Académie des Technologies  Offices held and completed during the past five years  • Director of IFREMER (until 2011)
Maes Miriam Director <sup>(1)(4)</sup> Born 8 May 1956 (60 years) Dutch national Business address: 3-4 Bramham Gardens, London, SW5 OJQ. Mme Maes is Chair of Foresee based in London, a consulting company that provides sustainable development and energy management advice to companies.	Appointed by the General Shareholders' Meeting of 27 May 2016	Expiry date: General Sharehol- ders' Meeting called to approve the 2019 financial statements	In Group companies  None In non-Group companies  Director of Assystem SA (France) (listed company), Naturex (France) (listed company), Vilmorin & Cie (France) (listed company), Urenco and UCN (Netherlands) and Port de Rotterdam (Netherlands)  Chair of the Board of Directors of Elia Asset BV and Elia System Operator BV (Belgium) (listed company)  Chair of Foresee (United Kingdom)  Offices held and completed during the past five years  Chair of Sabien Technology Group Ltd (United Kingdom) (until 2015)  Director of Kiwi Power Ltd (United Kingdom) (until 2014)

- Audit Committee.
   Remuneration Committee.
   Selection Committee.
   Independent Director.
   Strategic Committee.

SURNAME, FIRST NAME OR COMPANY NAME POSITION FAMILY CONNECTION EXPERTISE	DATE OF FIRST APPOINTMENT	DATE OF LAST REAPPOINT- MENT, AND END DATE OF TERM OF OFFICE	OTHER POSITIONS HELD
Olders Pia Director representing employees Born 3 May 1971 (45 years) French national Business address: Tour Maine-Montparnasse 33, avenue du Maine 75015 Paris Ms. Olders is head of insurance portfolios.	Appointed by the Central Works Council on 23 June 2014 in accordance with Article 10.9 of the Articles of Association	Expiry date: 22 June 2018	In Group companies  • None In non-Group companies  • None Offices held and completed during the past five years  • None
Poaouteta Ferdinand Director Born 14 June 1960 (56 years) French national Business address: Tour Maine-Montparnasse 33, avenue du Maine 75015 Paris Mr. Poaouteta is Special Advisor to the President of the North Province of New Caledonia, in charge of mining issues	Appointed by the General Shareholders' Meeting of 27 May 2016	Expiry date: General Sharehol- ders' Meeting called to approve the 2019 financial statements	In Group companies  • Observer-Le Nickel-SLN In non-Group companies  • Substitute for Paul Neaoutyne, Director and Chairman of the Institut calédonien de participation (ICAP)  Offices held and completed during the past five years  • None
Ronge Catherine Director <sup>(1)(4)</sup> Born 13 April 1961 (55 years) French national Business address: Weave Air 37-41, rue du Rocher 75008 Paris Ms. Ronge is Chair of Weave Air, a strategy consultancy firm.	Co-opted by the Board on 17 February 2016	Expiry date: General Sharehol- ders' Meeting called to approve the 2016 financial statements	In non-Group companies  • Director of Colas, Paprec and Innortex (start-up)  Offices held and completed during the past five years  • Director of Innoveox
Sikorav Sonia Director (4)(5) Born 8 May 1957 (59 years) French national Business address: Tour Maine-Montparnasse 33, avenue du Maine 75015 Paris Ms. Sikorav is an independent director and has held executive management, strategy management and procurement management positions in different industrial groups.  Appointed by the General Shareholders' Meeting of 27 May 2016		Expiry date: General Sharehol- ders' Meeting called to approve the 2019 financial statements	In Group companies  • None In non-Group companies  • Director of NSC Groupe (listed company) (France)  • Director of Eolane (France)  Offices held and completed during the past five years  • Director of ENSCP-École nationale de chimie de Paris (until 2014)

- Audit Committee.
   Remuneration Committee.
   Selection Committee.
   Independent Director.

- (5) Strategic Committee.

SURNAME, FIRST NAME OR COMPANY NAME POSITION FAMILY CONNECTION EXPERTISE	DATE OF FIRST APPOINTMENT	DATE OF LAST REAPPOINT- MENT, AND END DATE OF TERM OF OFFICE	OTHER POSITIONS HELD
Tendil Claude Director <sup>(2)(4)</sup> Born 25 July 1945 (71 years) French national Business address: GENERALI France 7-9, boulevard Haussmann 75309 Paris Cedex 09 Mr. Tendil is Chairman of the GENERALI Group in France.	Co-opted by the Board on 25 May 2012 (ratified by the General Shareholders' Meeting of 15 May 2013)	Reappointment: General Sharehol- ders' Meetings of 29 May 2015, for a four-year term Expiry date: General Sharehol- ders' Meeting called to approve the 2018 financial statements	In non-Group companies Chairman of the Board of GENERALI IARD Director of Europ Assistance Holding and SCOR SE Chairman of RVS (association) Member of the Executive Committee of MEDEF Offices held and completed during the past five years CEO of Generali France, Generali Vie, Generali lard (until October 2013) Chairman of the Board of Europ Assistance Holding (until 2015) and Europ Assistance Italy (until April 2015) Director of Assicurazioni Generali SpA Member of the Supervisory Board of Generali Investments SpA Permanent representative of Europ Assistance Holding on the Board of Europ Assistance Spain (until 2014) Chairman of the Board of Directors of GENE-RALI France, GENERALI France Assurances and GENERALI Vie (until 2016)
Tona Frederic Director <sup>(1)(2)(4)</sup> Born 27 August 1947 (69 years) French national Business address: c/o ERAMET Tour Maine-Montparnasse 33, avenue du Maine 75015 Paris Mr. Tona is an independent mining consultant.	General Shareholders' Meeting of 15 May 2013	Expiry date: General Sharehol- ders' Meeting called to approve the 2016 financial statements	In non-Group companies  None Offices held and completed during the past five years  Director of OMM (OSEAD Mining Morocco) (until 2014), OSEAD SAS (France), SOMAIR (Niger), COMINAK (Niger), IMOURAREN (Niger) and CFMM (France).  Director of CMT (Compagnie Minière de Touissit) (Morocco) and Minrex SA (Morocco) (until September 2016).  Director of ERAMET in his capacity as representative of AREVA until May 2011, then in his own name until 25 May 2012.
Treuille Antoine Director <sup>(1)(2)(4)</sup> Born 7 October 1948 (68 years) Business address: Charter Pacific Corporation 3239, 47 Street Astoria, NY 11103 USA Mr. Treuille is Chairman of Charter Pacific Corporation (United States).	General Shareholders' Meeting of 21 July 1999	Reappointment: General Shareholders' Meetings of 21 May 2003, 25 April 2007, 11 May 2011 and 29 May 2015 for a four-year term Expiry date: General Shareholders' Meeting called to approve the 2018 financial statements	In non-Group companies (unlisted companies)  Chairman of Charter Pacific Corporation (United States),  Director: French American Foundation (United States) and Fondation Franco-Américaine Foch (France)  Offices held and completed during the past five years  Chairman of: Altamont Capital Partners, LLC (Unite States) (until 2014), Mercantile Capital Partners LLC (United States) (until 2013)  Director of BIC SA (France), Harris Interactive, Partex Corporation and Imperial Headwear Inc. (United States) (until 2013).

Audit Committee.
 Remuneration Committee.
 Selection Committee.
 Independent Director.
 Strategic Committee.

As provided by paragraph 14.1 of Appendix 1 of EC Regulation No. 809/2004, the Company states that, to its knowledge and at the time of writing this report:

- No conviction of fraud has been handed down in the last five years against any member of the Board of Directors or of General Management.
- In the last five years, no member of the Board of Directors or of General Management has been associated with a bankruptcy, receivership or liquidation
- in their capacity as member of an administrative, management or supervisory body, or as CEO of a company.
- No criminal charge and/or official public penalty has been handed down in the last five years against any member of the Board of Directors or of General Management by the statutory or regulatory authorities (including the relevant professional bodies); and
- No director or member of General Management has in the last five years been barred by a court from acting as a member of an administrative, management or supervisory body or from participating in the management or business affairs of a listed
- No director is subject to a conflict of interest within the meaning of Section 14.2 of Appendix 1 of EC Regulation No. 809/2004 or has entered into a service contract with ERAMET.

#### SUMMARY OF CHANGES TO THE COMPOSITION OF THE BOARD OF DIRECTORS DURING THE 2016 FINANCIAL YEAR AND UP TO THE DATE OF FILING OF THIS REGISTRATION **DOCUMENT**

Co-options	On 17 February 2016, Catherine Ronge was nominated by the Board of Directors as a Director, replacing Thierry Le Hénaff who resigned.  On 23 September 2016, Jean-Yves Gilet was nominated by the Board as a Director replacing Mr Alexis Zajdenweber who resigned.
Appointment of new permanent representatives representing legal entity Directors	On 1 September 2016, Alexis Zajdenweber was nominated as the new permanent representative of FSI Equation on the Board of Directors, replacing Mr. Jean-Yves Gilet.
Appointments by the General Shareholders' Meeting	On 27 May 2016, the General Shareholders' Meeting appointed Miriam Maes as a Director, replacing Valérie Baudson who resigned. On 27 May 2016, the General Shareholders' Meeting appointed Sonia Sikorav as a Director, replacing Caroline Grégoire Sainte Marie who resigned. On 27 May 2016, the General Shareholders' Meeting appointed Ferdinand Poaouteta as a Director.
Resignations	Thierry Le Hénaff resigned his directorship with effect from 17 February 2016. Valérie Baudson resigned her directorship with effect from 31 March 2016. Caroline Grégoire Sainte Marie resigned her directorship with effect from 27 May 2016. Alexis Zajdenweber resigned his directorship with effect from 1 September 2016, in view of his appointment on the same date as the new permanent representative of FSI Equation.

#### IMPLEMENTATION OF THE "COMPLY OR EXPLAIN" RULE

AFEP-MEDEF CODE RECOMMENDATION	ERAMET CORPORATE GOVERNANCE
Recommendation 10.3 It is recommended that an annual meeting is held at which executive corporate officers are not in attendance.	The internal rules of the Board of Directors do not expressly mention the option of holding annual meetings for non-executive directors without having executive corporate officers in attendance. However, in practice, the Remuneration Committee is composed only of non-executive directors; it meets at least once a year, without the presence of the executive corporate officers concerned, to evaluate their performance, and the executive corporate officers are not present at the presentation of the Remuneration Committee's report to the Board.
Recommendation 13.2: Directors' terms of office should be staggered so as to avoid replacement of the entire body and to favour a smooth replacement of directors.	At the General Shareholders' Meeting in May 2016, three directors were appointed for a term of four years to implement a better staggering of terms of office. The distribution of terms of office is currently staggered among three groups of directors: one group of four directors, whose terms of office will end at the General Shareholders' Meeting called to approve the financial statements for the year ended 2016; a second group of ten directors, whose terms of office will end at the General Shareholders' Meeting called to approve the financial statements for the year ending 2018; and a third group of three directors, whose terms of office will end at the General Shareholders' Meeting called to approve the financial statements for the year ending 2019.
Recommendation 14.3 on committee operating procedures the committees of the Board may request external technical studies relating to matters within their competence, at the Company's expense, after informing the Chairman of the Board of Directors or the Board of Directors itself, and subject to reporting back to the Board thereon. In the event of committees having recourse to services offered by external consultants (e.g. a remuneration consultant in order to obtain information on remuneration systems and levels applicable in the main markets), the committees must ensure that the consultant concerned is objective.	The internal rules of the Board committees were amended in 2016 to provide that the committees may conduct or commission any studies that can inform the deliberations of the Board of Directors, up to a maximum annual amount of €200,000 per committee. To this end, the committees may request external technical studies relating to matters within their competence, at the expense of the Company, after being put out to competitive tender and after informing the Chairman and CEO or the Board of Directors itself, subject to reporting back to the Board thereon. In the event of committees having recourse to services offered by external consultants, the committees must ensure that the consultant concerned is objective.
Recommendation 16.1 on the composition of the Selection Committee: "it should not include any executive corporate officers and should mainly comprise independent directors."	The Selection Committee does not include any independent directors and the Chairman and CEO is a member of the Committee. This is due to the specific rules of the Shareholders' Agreement designed to structure the relationship between the Company's main shareholders.
Recommendation 16.2.1 on the powers of the Selection Committee: "with regard to the selection of new directors" "this committee is responsible for making proposals to the Board after reviewing in detail all the elements to be taken into account as part of its deliberations, particularly in view of the composition and the changes in the Company's shareholding structure, to achieve a balanced composition of the Board: representation of women and men, nationality, international experience, expertise, etc. In particular, the committee organises a procedure for selecting future independent directors and conducts its own reviews of potential candidates before approaching any of these."	It is not the remit of the Selection Committee to propose candidates for directorships to the Board of Directors.  This situation is due to the particular rules of the Shareholders' Agreement, intended to structure relationships between controlling shareholders of the Company, which only makes provision to the effect that the Selection Committee "is responsible for proposing, to the Company's governing bodies, the appointment of candidates to the positions of heads of the Company's various divisions and to the position of Financial Director of the ERAMET group". However, the Selection Committee Charter specifies that "with regard to the examination of proposals for the appointment of new independent directors, the Selection Committee is responsible for examining, whilst adhering to the provisions of the Shareholders' Agreement, the extent to which possible candidates satisfy the independence criteria put forward by the AFEP/MEDEF code and to report to the Board of Directors on its findings in that respect" and that "with regard to the examination of proposals for the appointment of new directors, the Selection Committee is responsible for ensuring, whilst adhering to the provisions of the Shareholders' Agreement, that candidates for directorships do not present any legal incompatibility or conflict of interest".
Recommendation 17.1 on the composition of the Remuneration Committee: "It is recommended [] that the Remuneration Committee should have one salaried Director among its members."	The current Shareholders' Agreement specifies a contractually predefined composition of the Remuneration Committee

AFEP-MEDEF CODE RECOMMENDATION	ERAMET CORPORATE GOVERNANCE
Recommendation 24.5.1 on severance pay: "the performance conditions set by the Board for this benefit should be assessed over a period of at least two years. The conditions must be demanding and may not allow for the compensation of a director, unless his or her departure is imposed in some way, regardless of the form of said departure. The payment of severance pay to an executive corporate officer must be excluded where the officer elects to leave the Company in order to hold another position, or is assigned to another position within the same group, or is able to benefit from pension rights."	Should the Chairman and CEO leave the Company (pursuant to forced resignation, cancellation or non-renewal of his term of office, or modification of the conditions under which he originally joined the ERAMET group), his entitlement to severance pay, as provided for in his corporate officer contract, is conditional upon the fulfilment of performance conditions: the sum of gross variable remuneration (itself subject to specific performance conditions) received over the last three complete years of his term of office must be 35% or more of the total gross annual fixed remuneration received during the same three-year period. Consequently, these arrangements rule out the payment of such a benefit should the Chairman and CEO fail to achieve his targets. Following the renewal of the Chairman and CEO's term of office at the Board meeting of 29 May 2015, pursuant to the provisions of Article L. 225-42-1 of the French Commercial Code, these arrangements were approved by the General Shareholders' Meeting of 27 May 2016.
Recommendation 24.6.2 on defined benefit supplementary pension plans pursuant to Article L. 137-11 of the French Social Security Code: "the reference period used for the calculation of pension benefits must cover several years"	The reference period is twelve months for the fixed portion and the average of the three last gross variable remunerations, calculated in full years, for the variable portion. Length of service must be greater than two years.  These supplementary pension plan arrangements, combined with the overall limit of 35% of the reference remuneration, which is itself limited to 25 times the annual social security ceiling <sup>(1)</sup> , provide the whole pension plan with a very well balanced structure.
Recommendation 25.1: ongoing provision of information to shareholders on remuneration of corporate officers "All components of executive corporate officers' remuneration, whether potential or vested, are publicly disclosed immediately after the Board meeting at which they are approved."	There is no communication after Board meetings held to review remuneration. The components are communicated in the registration document.

(1) The annual social security ceiling in 2016 was €38,616.

### 4.2

# STATUTORY AUDITORS' REPORT DRAWN UP PURSUANT TO ARTICLE L. 225-235 OF THE FRENCH COMMERCIAL CODE ON THE REPORT OF THE CHAIRMAN OF THE BOARD OF DIRECTORS OF ERAMET

#### Financial Year 2016

Statutory auditor's report prepared in accordance with Article L. 225-235 of the French Commercial Code (Code de commerce), on the report prepared by the Chairman of the Board of Directors of ERAMET

To the Shareholders.

In our capacity as statutory auditor of ERAMET and in accordance with Article L. 225-235 of the French Commercial Code (Code de commerce), we hereby report on the report prepared by the Chairman of your Company in accordance with Article L. 225-37 of the French Commercial Code for the year ended 31 December 2016.

It is the Chairman's responsibility to prepare and submit for the Board of Directors' approval a report on the internal control and risk management procedures implemented by the Company and to provide the other information required by Article L. 225-37 of the French Commercial Code relating to matters such as corporate governance.

Our role is to:

 report on any matters as to the information contained in the Chairman's report in respect of the internal control and risk management procedures relating to the preparation and processing of the accounting and financial information; and  confirm that the report also includes the other information required by Article L. 225-37 of the French Commercial Code. It should be noted that our role is not to verify the fairness of this other information.

We conducted our work in accordance with professional standards applicable in France.

# INFORMATION ON THE INTERNAL CONTROL AND RISK MANAGEMENT PROCEDURES RELATING TO THE PREPARATION AND PROCESSING OF THE ACCOUNTING AND FINANCIAL INFORMATION

The professional standards require that we perform the necessary procedures to assess the fairness of the information provided in the Chairman's report in respect of the internal control and risk management procedures relating to the preparation and processing of the accounting and financial information. These procedures mainly consisted of:

 obtaining an understanding of the internal control and risk management procedures relating to the preparation and processing of the accounting and financial information on which the information in the Chairman's report is based, and of the existing documentation;

- obtaining an understanding of the work involved in the preparation of this information and of the existing documentation;
- determining if any material weaknesses in the internal control procedures relating to the preparation and processing of the accounting and financial information that we would have noted in the course of our work are properly disclosed in the Chairman's report.

On the basis of our work, we have no matters to report on the information relating to the Company's internal control and risk management procedures relating to the preparation and processing of the accounting and financial information contained in the report prepared by the Chairman of the Board of the Directors in accordance with Article L. 225-37 of the French Commercial Code

#### OTHER INFORMATION

We confirm that the report prepared by the Chairman of the Board of the Directors also contained the other information required by Article L. 225-37 of the French Commercial Code.

Paris-La Défense, February 27, 2017 The Statutory Auditor French original signed by

**KPMG Audit** 

Department of KPMG S.A. Denis Marangé Ernst & Young Audit

Jean-Roch Varon

# REMUNERATION OF CORPORATE OFFICERS

#### 4.3.1 REMUNERATION POLICY FOR EXECUTIVE CORPORATE OFFICERS

The remuneration of executive corporate officers is set annually by the Board of Directors at the recommendation of the Remuneration Committee. The remuneration of each executive corporate officer is broken down into a fixed portion and a variable portion. The goals of executive corporate officers are determined by the Remuneration Committee and submitted to the Board of Directors for approval.

The table below sets out an individual breakdown of gross remuneration due to corporate officers in 2016:

#### TABLE 1-SUMMARY TABLE OF THE REMUNERATION. SHARES AND OPTIONS GRANTED TO EACH EXECUTIVE CORPORATE OFFICER

	REMUNERATION DUE IN THE YEAR VALUE OF PERFORMANCE SHARES GRANTED DURING THE YEAR <sup>(2)</sup>				TOTAL	TOTAL
(IN EUROS)	2016	2015	2016 2015		2016	2015
Patrick Buffet <sup>(1)</sup> Chairman and CEO	1,831,564	1,259,194	515,539	1,346,989	2,347,103	2,606,183
<b>Georges Duval</b> <sup>(1)</sup> Deputy CEO until 22 April 2016	101,951	445,915		180,360	101,951	626,275
Philippe Vecten <sup>(1)</sup> Deputy CEO until 22 April 2016	115,457	471,328		284,368	115,457	755,696
Total corporate officers	2,048,972	2,176,437	515,539	1,811,717	2,564,511	3,988,154
Michel Carnec Human Resources Director	446,659	418,936	98,828	258,215	545,487	677,151
Thomas Devedjian Chief Financial Officer	679,955	211,252	126,555	0	806,510	211,252
Denis Hugelmann (as of 22 April 2016) Delegate CEO in charge of Alloys Division	382,669		92,040		474,709	
Catherine Tissot-Colle Director of Communications & Sustainable Development	289,400	269,684	69,030	173,446	358,430	443,130
Philippe Vecten Delegate CEO in charge of the Mining Divisions	658,843		126,555		785,398	
Total corporate officers and executive committee	4,506,498	3,076,309	1,028,547	2,243,378	5,535,045	5,319,687

<sup>(1)</sup> Until 22 April 2016 (GD/PV).

Valuation of other long-term remuneration plans: there is no long-term remuneration plan.

<sup>(2)</sup> Calculated according to the fair value per share on the day of granting by the Board of Directors, namely €23.01 at 27 May 2016 and €60.12 at 19 February 2015; for reference, the closing share price on 23 February 2017 was €52.28-no options were granted during the financial year.

<sup>(3)</sup> The valuation method used to calculate the value of performance shares does not permit the actual remuneration of executives to be extrapolated from these figures for the years in question.

#### TABLE 2-SUMMARY OF THE REMUNERATION OF EACH EXECUTIVE CORPORATE OFFICER

SUMMARY OF THE REMUNERATION OF EACH EXECUTIVE CORPORATE OFFICER AND/OR EXECUTIVE COMMITTEE MEMBERS

SUMMARY OF THE REMUNERATION OF EACH EXECUTIVE CORPORAT	6 AMOUNT FOR 2015			
	DUE	PAID	DUE	PAID
Patrick Buffet Chairman and CEO				
Fixed remuneration	807,365	807,365	807,365	807,365
Annual variable remuneration	938,384	377,921 <sup>(4)</sup>	377,921	949,151
Directors' fees	77,129	65,222	65,222	74,200
Benefits in kind <sup>(1)</sup>	8,686	8,686	8,686	8,686
Total	1,831,564	1,259,194	1,259,194	1,839,402
Georges Duval <sup>(2)(3)</sup> Deputy CEO				
Fixed remuneration	100,836	100,836	326,600	326,600
Annual variable remuneration		88,063 <sup>(4)</sup>	88,063	127,227
Directors' fees		27,640	27,640	36,700
Benefits in kind <sup>(1)</sup>	1,115	3,612	3,612	3,951
Total	101,951	220,151	445,915	494,478
Philippe Vecten <sup>(2)</sup> Deputy CEO Mining Divisions				
Fixed remuneration <sup>(5)</sup>	113,224	113,224	312,191	306,940
Annual variable remuneration		110,258(4)	110,258	173,821
Directors' fees		42,181	42,181	38,248
Benefits in kind <sup>(1)</sup>	2,233	6,698	6,698	6,698
Total	115,457	272,361	471,328	525,707
Sub-total corporate officers	2,048,972	1,751,706	2,176,437	2,859,587
Michel Carnec Human Resources Director				
Fixed remuneration	278,615	278,615	278,615	278,615
Annual variable remuneration	136,788	117,565	117,565	131,329
Directors' fees	25,500	17,000	17,000	24,000
Benefits in kind <sup>(1)</sup>	5,756	5,756	5,756	5,756
Total	446,659	418,936	418,936	439,700
Thomas Devedjian <sup>(8)</sup> Chief Financial Officer				
Fixed remuneration	370,000	370,000	123,333	123,333
Annual variable remuneration	292,877	86,383	86,383	-
Directors' fees	12,470			
Benefits in kind <sup>(1)</sup>	4,608	4,608	1,536	1,536
Total	679,955	460,991	211,252	124,869
Denis Hugelmann <sup>©</sup> Delegate CEO Alloys Division				
Fixed remuneration	264,150	264,150		
Annual variable remuneration	114,170			
Directors' fees				
Benefits in kind <sup>(1)</sup>	4,349			
Total	382,669	264,150	0	0

#### SUMMARY OF THE REMUNERATION OF EACH EXECUTIVE CORPORATE OFFICER AND/OR EXECUTIVE COMMITTEE MEMBERS

	AMOUNT FOR	2016	AMOUNT FOR 2015	
	DUE	PAID	DUE	PAID
Catherine Tissot-Colle Director of Communications & Sustainable Development				
Fixed remuneration	187,250	187,250	187,250	187,250
Annual variable remuneration	97,081	77,365	77,365	84,916
Directors' fees				
Benefits in kind <sup>(1)</sup>	5,069	5,069	5,069	5,069
Total	289,400	269,684	269,684	277,235
Philippe Vecten <sup>(2)</sup> Delegate CEO of Mining Divisions				
Fixed remuneration	256,776	256,776		
Annual variable remuneration	333,789			
Directors' fees	63,813			
Benefits in kind <sup>(1)</sup>	4,465			
Total	658,843	256,776	0	0
Total corporate officers and executive committee	4,506,498	3,422,243	3,076,309	3,701,391

- (1) This relates to the provision of a Company car.
- (2) Term of office ended on 22 April 2016.
- (3) Retired with effect from 1 July 2016.
- (4) In view of the Group's financial situation, the corporate officers have voluntarily waived 20% of their variable portion as validated by the Board of Directors.
- (5) Fixed remuneration reviewed at Board Meeting of 22 December 2015.
- (6) Appointed Delegate CEO of the Alloys Division as of 22 April 2016.
- (7) Variable remuneration paid pro rata from 22 April 2016 to 31 December 2016.
- (8) Hired on 1 September 2015.

No multi-year variable remuneration fell due or was paid out during the financial year.

The combined total remuneration received by the top ten earners at ERAMET in respect of 2016 was 7,143,548.70, which has been certified by the Statutory Auditors.

#### TABLE 3-DIRECTORS' FEES AND OTHER REMUNERATION RECEIVED BY NON-EXECUTIVE CORPORATE OFFICERS

The amount of Directors' fees paid to ERAMET's Board members in January 2017 in respect of 2016 was €771,500 (€745,000 in 2015). The total sum allocated to the Board of Directors was set at €700,000 at the General Shareholders' Meeting of 15 May 2013 (thirteenth resolution), to be distributed freely among the directors by the Board of Directors.

From 2016 onwards, and in accordance with recommendation 20.1 of the AFEP/MEDEF code, in order to have a predominant variable portion, the distribution rules for Directors' fees are as follows:

- an annual fixed amount of €10,000;
- a sum of €2,000 for each Board meeting attended in person, with an annual limit of €14,000 or seven meetings;
- an annual lump sum of €5,000 for Audit Committee, Remuneration Committee and Strategic Committee members;
- a sum of €1,800 for each Audit Committee meeting attended in person, with an annual limit of €9,000, or five Audit Committee meetings; for each Remuneration Committee meeting attended in person

with an annual limit of €7,200 or four Remuneration Committee meetings; and for each Strategic Committee meeting attended in person with an annual limit of €7,200, or four Strategic Committee meetings.

In addition, €1,525 in travel expenses is paid to each director living abroad in respect of each Board meeting, where travel is required (and for Committee meetings, where the meeting takes place more than 48 hours before or after a Board meeting).

The Directors' fees paid to ERAMET directors by other companies in the Group amounted to an overall total of €71,500 in 2016 (€45,000 in 2015).

No other remuneration was paid to non-executive corporate officers, with the exception of the remunerations specified below.

The distribution of Directors' fees at the beginning of 2017 in respect of 2016 was as follows (in Euros, before deductions):

	ERAMET	OTHER COMPANIES	TOTAL 2016	TOTAL 2015
Michel Antsélévé	34,128		34,128	36,070
Valérie Baudson <sup>(3)</sup>	7,429		7,429	32,569
Patrick Buffet <sup>(1)</sup>	35,629	41,500	77,129	65,222
Cyrille Duval <sup>(1)</sup> (SORAME)	35,629	16,000	51,629	54,222
Other remuneration: €110,517				
Édouard Duval <sup>(1)</sup>	35,629	14,000	49,629	35,379
Other remuneration: €48,280				
Georges Duval <sup>(1)</sup>	29,215	-	29,215	27,640
Other remuneration: €788,494				
Nathalie de La Fournière(CEIR) <sup>(2)</sup>	23,621	-	23,621	20,883
Marie Axelle Gautier <sup>(8)</sup>	30,986	-	30,986	27,640
Other remuneration: €87,750				
Jean Yves Gilet <sup>(4)</sup>	35,629	-	35,629	37,222
Philippe Gomès	34,128	-	34,128	33,790
Caroline Grégoire-Sainte-Marie <sup>(5)</sup>	15,796	-	15,796	43,487
Thierry Le Hénaff <sup>(6)</sup>	3,182	-	3,182	30,219
Manoelle Lepoutre	47,637	-	47,637	39,724
Miriam Maes(11)	32,774	-	32,774	-
Ferdinand Poaouteta <sup>(10)</sup>	13,147	-	13,147	-
Pia Older <sup>(7)</sup>	29,215	-	29,215	27,640
Other remuneration: €53,684				
Catherine Ronge <sup>(6)</sup>	32,037	-	32,037	-
Sonia Sikorav <sup>(5)</sup>	25,737	-	25,737	-
Michel Somnolet <sup>(3)</sup>	-	-	-	19,149
Claude Tendil	35,629	-	35,629	35,010
Frédéric Tona	49,408	-	49,408	60,070
Antoine Treuille	70,421	-	70,421	76,931
Alexis Zajdenweber <sup>(9)</sup>	42,994	-	42,994	35,379
Total	700,000	71,500	771,500	745,000

- (1) Other remuneration: see other tables related to corporate officers' remuneration.
- (2) Appointment of Nathalie de La Fournière as the new permanent representative of CEIR, replacing Patrick Duval, on 4 May 2015.

  (3) Appointment of Valérie Baudson by the General Shareholders' Meeting of 29 May 2015, replacing Michel Somnolet-resignation with effect from 31 March 2016.
- (4) Amount paid to FSI Equation up until 22 September 2016. In September 2016, Jean-Yves Gilet, previously permanent representative of FSI Equation, was co-opted as director, replacing Alexis Zajdenweber.
- (5) Appointment of Sonia Sikorav by the General Shareholders' Meeting of 27 May 2016, replacing Caroline Grégoire Sainte Marie
- (6) Co-option of Catherine Ronge, replacing Thierry Le Hénaff who resigned with effect from 17 February 2016
- (7) Director representing employees-Appointment 23 June 2014
- (8) Director representing employees-Appointment 12 November 2014
- (9) Amount paid to the Ministry of Finance-In September 2016, Alexis Zajdenweber, previously director representing the State, was appointed permanent representative of FSI Equation.
- (10) Appointment of Ferdinand Poaouteta by the General Shareholders' Meeting on 27 May 2016, replacing Louis Mapou
- (11) Appointment of Miriam Maes by the Shareholders' General Meeting on 27 May 2016, replacing Valérie Baudson

#### TABLES 4 AND 5-NOT APPLICABLE

No share purchase or subscription options were granted to executive corporate officers during the financial year. No share purchase or subscription options were exercised by executive corporate officers during the financial year.

#### TABLE 6-PERFORMANCE SHARES GRANTED TO EACH EXECUTIVE CORPORATE OFFICER DURING THE YEAR

	PLAN NO. AND DATE	NUMBER OF SHARES GRANTED	VALUE OF SHARES <sup>(1)</sup>	ACQUISITION DATE	DATE AVAILABLE	PERFORMANCE CONDITIONS
						Performance of the ERAMET share price in relation to that of comparable companies listed on the Stoxx 600 Basic Resources index (1/3) and intrinsic performance according to financial indicators (2/3) (operating margin (current operating income/revenue) and operating cash flow); progressive acquisition over three years
P. Buffet	Plan of 27/05/2016	22,405	515,539	27/05/2019	27/05/2021	as above
Total		22,405	515,539			

<sup>(1)</sup> Calculated according to the fair value per share on the day of granting by the Board of Directors, namely €23.01 at 27 May 2016; for reference, the closing share price on 23 February 2017 was €52.28.

#### TABLE 7-PERFORMANCE SHARES THAT BECAME AVAILABLE DURING THE FINANCIAL YEAR FOR EACH EXECUTIVE CORPORATE OFFICER

	PLAN NO. AND DATE	NUMBER OF SHARES THAT BECAME AVAILABLE DURING THE FINANCIAL YEAR (PLAN HOLDING PERIOD ENDED ON 16 FEBRUARY 2011)	VESTING CONDITIONS (NUMBER OF SHARES TO BE VESTED UPON AVAILABILITY IN THE EVENT THAT ALL PERFORMANCE CONDITIONS ARE MET, ACCORDING TO THE TERMS SET BY THE BOARD UPON GRANTING)
P. Buffet	Plan of 16/02/2011	1,341	8,605
G. Duval	Plan of 16/02/2011	317	2,030
P. Vecten	Plan of 16/02/2011	284	1,820
Total		1,942	12,455

Taking into consideration the performance conditions, the vesting rate as a percentage of shares awarded from the plan of 16 November 2011 is 15.6%

Since the Board meeting of 23 July 2007, corporate officers are required to retain 20% of shares acquired under performance share plans throughout their entire term of office.

#### TABLE 8-NOT APPLICABLE

There is no share purchase or subscription option plan currently in operation.

#### TABLE 9-HISTORY OF PERFORMANCE SHARE GRANTS-INFORMATION ON PERFORMANCE SHARES

	2010 PLAN	2011 PLAN	2012 PLAN	2013 PLAN	2014 PLAN	2015 PLAN	2016 PLAN
Date of Shareholders' Meeting	20/05/2010	20/05/2010	20/05/2010	15/05/2012	15/05/2012	15/05/2012	27/05/2016
Date of Board Meeting	20/05/2010	16/02/2011	15/02/2012	21/03/2013	20/02/2014	19/02/2015	27/05/2016
Total no. of shares granted, of which number granted to (total)	65,008	71,665	89,885	145,040	143,510	132,680	134,327
Corporate officers							
P. Buffet	8,670	8,605	10,755	22,405	22,405	22,405	22,405
G. Duval (until 22/04/2016)	1,600	2,030	1,000	5,085	5,085	3,000	
P. Vecten (until 22/04/2016)	1,865	1,820	2,275	4,730	4,730	4,730	
Date of vesting of France Plan shares	20/05/2013	16/02/2014	15/02/2015	21//03/2016	20/02/2017	19/02/2018	27/05/2019
End date of holding period for France Plan shares	20/05/2015	16/02/1016	15/02/2017	21/03/2018	20/02/2019	19/02/2020	27/05/2019
End date of vesting and holding period for International Plan shares	20/05/2014	16/02/2015	15/02/2016	21/03/2017	20/02/2018	19/02/2019	27/05/2020
Performance conditions	Performance of the ERAMET share price (total shareholder return or TSR) in relation to that of comparable companies listed on the Stoxx 600 Basic Resources index (50%) and the intrinsic performance of financial indicators (50%) (operating margin (current operating income/revenue) and operating cash flow); progressive acquisition over 3 years	Performance of the ERAMET share price (total shareholder return or TSR) in relation to that of comparable companies listed on the Stoxx 600 Basic Resources index (50%) and the intrinsic performance of financial indicators (50%) (operating margin (current operating income/revenue) and operating cash flow); progressive acquisition over 3 years	Performance of the ERAMET share price in relation to that of comparable companies listed on the Stoxx 600 Basic Resources index (50%) and intrinsic performance according to financial indi- cators (50%) (operating margin (current operating in- come/revenue) and operating cash flow); progressive acquisition over 3 years	Performance of the ERAMET share price in relation to that of comparable companies listed on the Stoxx 600 Basic Resources index (1/3) and intrinsic performance of financial indicators (2/3) (operating margin (current operating income/ revenue) and operating cash flow); progressive acquisition over 3 years	Performance of the ERAMET share price in relation to that of comparable companies listed on the Stoxx 600 Basic Resources index (1/3) and intrinsic performance of financial indicators (2/3) (operating margin (current operating income/ revenue) and operating cash flow); progressive acquisition over 3 years	Performance of the ERAMET share price in relation to that of comparable companies listed on the Stoxx 600 Basic Resources index (1/3) and intrinsic performance of financial indicators (2/3) (operating margin (current operating income/ revenue) and operating cash flow); progressive acquisition over 3 years	Performance     of the     ERAMET     share price     in relation     to that of     companies     listed on     the Stoxx     600 Basic     Resources     index (1/3)     and intrinsic     performance     of financial     indicators     (2/3) (operating margin         (current         operating         income/     revenue) and         operating     cash flow);     progressive     acquisition     over 3 years
Number of shares vested at 31/12/2016 (International Plan)	4,397	3,545	6,745			·	
Number of shares vested at 31/12/2016 (France Plan)	17,494	8,008	13,836	18,165			
Cumulative number of cancelled or lapsed shares	47,514	63,256	69,304	95,260			
Performance shares remaining at financial year end	0	0	0	31,615			

The performance conditions, calculated over a threeyear period, for the 2010, 2011 and 2012 performance share plans are as follows: the relative performance of ERAMET shares for 50% of the share grant (this involves comparing the change in total shareholder return over a three-year period with that of a panel of around 30 comparable companies on the Stoxx 600 Basic Resources Index, with the performance conditions being fully achieved if the ERAMET share is ranked among the top 15% of the panel) and the intrinsic performance of certain financial indicators achieved in three instalments over a three year period for 50% of the share grant (25% of the current operating profit/loss and 25% of the operating cash-flow from operating activities, the annual objectives referring to the Company's budgetary targets, with performance conditions only being fully achieved when these

targets are significantly out-performed). Taking into consideration the performance conditions, the vesting rate as a percentage of shares awarded is as follows: 2010: 27.4%-2011: 15.6%-2012: 22.4%.

For the 2013, 2014 and 2015 performance share plans, the performance conditions are calculated over a three-year period, as follows: the relative performance of ERAMET shares for one-third of the share grant (this involves comparing the change in total shareholder return over a three-year period with that of a panel of around 30 comparable companies on the Stoxx 600 Basic Resources Index, with the performance conditions being fully achieved if the ERAMET share is ranked among the top 15% of the panel) and the intrinsic performance of certain financial indicators achieved in three instalments over a three year period for

two-thirds of the share grant (one-third of the current operating profit/loss and one-third of the operating cash-flow from operating activities, the annual objectives referring to the Company's budgetary targets, with performance conditions only being fully achieved when these targets are significantly out-performed). Taking into consideration the performance conditions, the vesting rate as a percentage of shares awarded is as follows: 2013: 16.37%.

#### TABLE 10-NOT APPLICABLE

There is no multi-year variable remuneration for executive corporate officers.

#### TABLE 11-SUMMARY BY CORPORATE OFFICER

CORPORATE OFFICERS	EMPLOYMENT CONTRACT	SUPPLEMENTARY PENSION PLAN	COMPENSATION OR BENEFITS FALLING DUE OR WHICH MAY FALL DUE, AS THE RESULT OF DEPARTURE OR A CHANGE OF POSITION	COMPENSATION RELATED TO A NON-COMPETE CLAUSE
Patrick Buffet Chairman and CEO Start of term of office: 25/04/2007 End of term of office as Director: AGM to approve 2018 financial statements	No	Yes	Yes	No
Georges Duval Deputy CEO Start of term of office: 23/05/2002 End of term of office as Deputy CEO: 22/04/2016 End of term of office as Director: AGM to approve 2018 financial statements	Yes-suspended	Yes	Yes (limited to suspension of employment contract)	No
Philippe Vecten Deputy CEO Start of term of office: 23/05/2007 End of term of office as Deputy CEO: 22/04/2016	Yes-suspended	Yes	Yes (limited to suspension of employment contract)	No

#### 4.3.2 REMUNERATION ITEMS FALLING **DUE OR GRANTED TO EACH EXECUTIVE** CORPORATE OFFICER FOR THE FINANCIAL YEAR ENDED, SUBJECT TO SHAREHOLDER APPROVAL

Pursuant to recommendation 26.2 of the AFEP/MEDEF Code which, in accordance with Article L. 225-37 of the French Commercial Code, is the code of reference applicable to the Company, remuneration items falling due or granted to each executive corporate officer of the Company for the financial year ended are subject to shareholder approval and consist of:

- a fixed portion;
- an annual variable portion and, as the case may be, a multi-year variable portion, with the targets used to determine the variable portion;
- exceptional remuneration items;
- stock options, performance shares and any other long-term remuneration item;
- compensation related to taking up or leaving a post;
- the Supplementary Pension Plan; and

• benefits of any kind.

By voting on the 13th, 14th and 15th resolutions, shareholders are asked to approve the remuneration components falling due or granted to each Executive Corporate Officer, for the financial year ended 31 December 2016.

Consequently, shareholders are asked to consider the following remuneration items for each Executive Corporate Officer.

#### 4.3.2.1 PATRICK BUFFET, CHAIRMAN AND CEO

#### REMUNERATION ITEMS SUBJECT TO SHAREHOLDER APPROVAL

#### REMUNERATION ITEMS FALLING DUE OR GRANTED FOR THE FINANCIAL YEAR ENDED

	AMOUNT OR CARRYING VALUE SUBJECT TO SHAREHOLDER VOTE	PRESENTATION
		No suspended contract of employment; Patrick Buffet has a straightforward corporate officer contract
Fixed remuneration	€807,365 (amount paid)	Gross fixed remuneration for the financial year 2016 approved by the Board of Directors on 22 December 2015 at the recommendation of the Remuneration Committee.
Annual variable remuneration	€938,384 (amount approved for 2016)	At its meeting of 23 February 2017, the Board of Directors, on recommendation by the Remuneration Committee and following validation of the financial items by the Audit Committee, approved the amount of variable remuneration for Patrick Buffet for the financial year 2016 at €938,384 (83.02% of his maximum permitted variable remuneration). The variable portion is based on certain criteria and on specific goals, whose selection and weighting are proposed by the Remuneration Committee and approved by the Board of Directors. The targets for 2016 were as follows: (i) the Company's trading results (Current Operating profit/loss); (ii) the Company's financial position (net cash); (iii) the accomplishment, vis-à-vis the budget and schedule, of major industrial projects or of development activities; (iv) "managerial" results in terms of team motivation and leadership, strategic proposals, projects and goals in the areas of health, safety, the environment and industrial risk. The annual performance goals are based on the budgetary targets for the objective in question, and the Remuneration Committee fixes the upper and lower range of these goals. The level of accomplishment required, for each of these criteria, is precisely established at the start of the financial year but cannot be disclosed to the general public for reasons related to trade secrets and confidentiality. The variable portion may not exceed 140% of gross annual fixed remuneration for the Chairman and CEO.  In 2016, the portion related to quantitative targets represented 60% of maximum annual variable remuneration. The qualitative portion consists of targets corresponding to the completion of specific actions.
Deferred variable remuneration	N/A	Patrick Buffet does not receive any deferred variable remuneration.
Multi-year variable remuneration	N/A	Patrick Buffet does not receive any multi-year variable remuneration.
Exceptional remuneration	N/A	Patrick Buffet does not receive any exceptional remuneration.

	AMOUNT OR CARRYING VALUE SUBJECT TO SHAREHOLDER VOTE	PRESENTATION
Performance shares or stock options, or any other long-term remuneration item	22,405 performance shares = €515,539 (applying the method used in the consolidated financial statements, fair value of the share on the day of granting by the Board of Directors) Options = N/A Other items = N/A	On 27 May 2016, at the recommendation of the Remuneration Committee and following the approval of the General Shareholders' Meeting of 27 May 2016 (14 <sup>th</sup> resolution), the Board of Directors granted Patrick Buffet 22,405 performance shares (that is, 0.08% of share capital), for a value of €515,539 applying the method used in the consolidated financial statements (fair value of the share on the day of granting by the Board of Directors). The number of shares granted, as specified above, corresponds to the maximum number of shares that may be vested, fully or partially, three years following granting provided that the performance conditions are fully or partially met. The performance conditions are only considered to be fully achieved when these targets are significantly out-performed. Furthermore, these performance shares are subject to an additional two-year holding period and 20% of these shares are prohibited from sale until the end of the corporate officer's term of office.  These very rigorous performance conditions are calculated over a three-year period, as follows:  • the relative performance of ERAMET shares for one-third of the share grant (this involves comparing the change in total shareholder return over a three-year period with that of a panel of around 57 comparable companies on the Euromoney Global Mining Index; Diversified Metals & Mining, Steel; with the performance conditions being fully achieved if the ERAMET share is ranked among the top 15% of the panel); and  • the intrinsic performance of certain financial indicators achieved in three instalments over a three-year period for two-thirds of the share grant (one-third of the current operating profit/loss and one-third of the operating cash-flow from operating activities, the annual objectives referring to the Company's budgetary targets); these performance conditions are only considered to be fully achieved when the targets are significantly out-performed). For information purposes, the 2014 performance share plan, which ended in 2016, alll
Directors' fees	€77,129 (gross amount before deductions)	In accordance with the rules for the allocation of Directors' fees applicable to all ERAMET Directors, Patrick Buffet received ERAMET Directors' fees. He also received a gross amount of €27,000 from Comilog and €14,500 from SLN, in accordance with the rules applicable to all directors of those companies. Following the recommendation of the AFEP MEDEF Code, the allocation rule includes a substantial variable portion.
Benefits of any kind	€8,686 (carrying value)	Patrick Buffet has a Company car.

# REMUNERATION ITEMS FALLING DUE OR GRANTED FOR THE FINANCIAL YEAR ENDED WHICH HAVE BEEN OR ARE SUBJECT TO SHAREHOLDER APPROVAL PURSUANT TO THE PROCEDURES RELATED TO REGULATED AGREEMENTS AND COMMITMENTS

	AMOUNT SUBJECT TO SHAREHOLDER VOTE	PRESENTATION
Compensation related to taking up or leaving a post	No payment	Following the reappointment of the Chairman and CEO to that role, decided by the Board of Directors on 29 May 2015, and on the recommendation of the Remuneration Committee, on 29 May 2015 the Board of Directors, with the Chairman and CEO abstaining, voted unanimously to retain all elements of the remuneration of the Chairman and CEO and all the provisions of his corporate officer contract dated 20 February 2008 (incorporating all the amendments decided since by the Company's Board of Directors at the recommendation of the Remuneration Committee). However, two changes were made to the severance pay falling due to the Chairman and CEO in the event of his departure from the Company (as a result of forced resignation, cancellation or non-renewal of his term of office or modification of the conditions under which he originally joined the ERAMET group).  The amount of severance pay which may fall due is equal to twice (instead of three times, as it was previously) the last gross annual fixed remuneration plus twice (instead of three times) the average gross annual variable remuneration received in the last three complete years prior to his departure.  The severance pay benefit specified in his corporate officer contract is conditional upon the fulfilment of performance conditions: the total gross variable remuneration amount (itself subject to specific performance conditions) received over the final three full financial years of his term of office must be 35% or more of the total gross annual fixed remuneration received during the same three-year period-instead of 20% as it was previously. Consequently, these arrangements rule out the payment of such a benefit should the Chairman and CEO fail to achieve his targets.  In accordance with the provisions of Article L. 225-42-1 of the French Commercial Code, these modified arrangements were the subject of a resolution put before the Annual General Shareholders' Meeting of 27 May 2016.
Non-competition compensation	N/A	Patrick Buffet is not bound by a non-compete clause.
Supplementary pension plan	No payment	Patrick Buffet benefits from the existing defined benefit supplementary pension plan for ERAMET executives, entitling him to a supplementary pension that may not exceed 35% of the reference salary defined in the plan's internal rules, with said reference salary being capped at twenty-five times the annual social security ceiling (ASSC). The reference period used to calculate the reference salary is twelve months for the annual fixed portion and the average of the three last variable remunerations, calculated on the basis of full years, for the variable portion.  In Patrick Buffet's case, supplementary pension income is capped at 35% of 25 times the ASSC. This arrangement was authorised by the Board of Directors on 30 July 2008 and approved by the General Shareholders' Meeting of 13 May 2009 (3 <sup>rd</sup> resolution).  By way of illustration, the annual gross income as at 31 December 2016 was €304,101.  A reduction (from 35% to 26.25%) is applied to the annual amount paid in the event of an early draw down of pension benefits between 60 and 65 years.
Supplementary insurance scheme and healthcare plan		Patrick Buffet benefits from the supplementary healthcare plan and the supplementary disability and life insurance scheme operating within the ERAMET group. In accordance with the procedures related to regulated agreements and commitments, this commitment was authorised by the Board of Directors on 17 February 2010 and approved by the General Shareholders' Meeting of 20 May 2010 (3 <sup>rd</sup> resolution).
ASSEDIC entitlement	N/A	Patrick Buffet does not benefit from this entitlement.
Customary severance pay	N/A	Patrick Buffet does not benefit from any customary severance pay, whether upon retirement or upon departure for any other reason.

#### 4.3.2.2 GEORGES DUVAL, DEPUTY CEO UNTIL 22 APRIL 2016

#### REMUNERATION ITEMS SUBJECT TO SHAREHOLDER APPROVAL

#### REMUNERATION ITEMS FALLING DUE OR GRANTED FOR THE FINANCIAL YEAR ENDED

	AMOUNT OR CARRYING VALUE SUBJECT TO SHAREHOLDER VOTE	PRESENTATION
		Georges Duval had a contract of employment, which was suspended throughout his term of office on the Board.
Fixed remuneration until 22 April 2016	€100,836 (amount paid)	Gross fixed remuneration for the financial year 2016 approved by the Board of Directors on 8 December 2015 at the recommendation of the Remuneration Committee.
Annual variable remuneration	N/A	As Georges Duval left office on 22 April 2016, he did not receive any variable remuneration as a corporate officer.
Deferred variable remuneration	N/A	Georges Duval did not receive any deferred variable remuneration.
Multi-year variable remuneration	N/A	Georges Duval did not receive any multi-year variable remuneration.
Exceptional remuneration	N/A	Georges Duval did not receive any exceptional remuneration.
Performance shares or stock options, or any other long-term remuneration item	N/A	As Georges Duval left office on 22 April 2016, he did not receive any performance shares as a corporate officer.
Directors' fees	N/A	As Georges Duval left office on 22 April 2016, he did not receive any directors' fees as a corporate officer.
Benefits of any kind	€1,115 (carrying value)	Georges Duval had a Company car.

## REMUNERATION ITEMS FALLING DUE OR GRANTED FOR THE FINANCIAL YEAR ENDED WHICH HAVE BEEN OR ARE SUBJECT TO SHAREHOLDER APPROVAL PURSUANT TO THE PROCEDURES RELATED TO REGULATED AGREEMENTS AND COMMITMENTS

	AMOUNT SUBJECT TO SHAREHOLDER VOTE	PRESENTATION
Compensation related to taking up or leaving a post	No payment	Georges Duval did not benefit from any commitment or undertaking related to severance pay under the terms of his corporate office.  Georges Duval's suspended employment contract makes provision for the payment, in the event of his dismissal, retirement or pensioning-off, of a contractual payment amounting to 18 months' salary, calculated on the basis of his reference remuneration (fixed plus variable) as an employee, which is not combined with the customary payments calculated by application of the national collective bargaining agreement for executives in the metallurgy industry.
Non-competition compensation	N/A	Georges Duval was not bound by a non-compete clause.
Supplementary pension plan	No payment	Georges Duval, during his term as corporate officer until 22 April 2016, benefited from the existing defined benefit supplementary pension plan for ERAMET executives, entitling him to a supplementary pension that may not exceed 35% of the reference salary defined in the plan's internal rules, with said reference salary being capped at twenty-five times the annual social security ceiling (ASSC). The reference period used to calculate the reference salary is twelve months for the annual fixed portion and the average of the three last variable remunerations, calculated on the basis of full years, for the variable portion.  This arrangement was authorised by the Board of Directors on 30 July 2008 and approved by the General Shareholders' Meeting of 13 May 2009 (3 <sup>rd</sup> resolution).  By way of illustration, the calculation made for Georges Duval based on the reference remuneration as set out above (fixed + average variable for the last three years), amounted to an annual gross income of €148,058 as at 31 December 2015 or 33% of his global gross remuneration (fixed gross annual remuneration + average gross annual variable remuneration for the last three years, including the year 2015).
Supplementary insurance scheme and healthcare plan		Georges Duval benefited from the supplementary healthcare plan and the supplementary disability and life insurance scheme operating within the ERAMET group.  In accordance with the procedures related to regulated agreements and commitments, this commitment was authorised by the Board of Directors on 17 February 2010 and approved by the General Shareholders' Meeting of 20 May 2010 (3rd resolution).

#### 4.3.2.3 PHILIPPE VECTEN, DEPUTY CEO UNTIL 22 APRIL 2016

#### REMUNERATION ITEMS SUBJECT TO SHAREHOLDER APPROVAL

#### REMUNERATION ITEMS FALLING DUE OR GRANTED FOR THE FINANCIAL YEAR ENDED

	AMOUNT OR CARRYING VALUE SUBJECT TO SHAREHOLDER VOTE	PRESENTATION	
		Philippe Vecten had a contract of employment, which was suspended throughout his term of office on the Board.	
Fixed remuneration until 22 April 2016	€113,224 (amount paid)	Gross fixed remuneration for the financial year 2016 approved by the Board of Directors on 22 December 2015 at the recommendation of the Remuneration Committee.	
Annual variable remuneration	N/A	As Philippe Vecten left office on 22 April 2016, he did not receive any variab remuneration as a corporate officer.	
Deferred variable remuneration	N/A	Philippe Vecten did not receive any deferred variable remuneration.	
Multi-year variable remuneration	N/A	Philippe Vecten did not receive any multi-year variable remuneration.	
Exceptional remuneration	N/A	Philippe Vecten did not receive any exceptional remuneration.	
Performance shares or stock options, or any other long-term remuneration item	N/A Options = N/A Other items = N/A	As Philippe Vecten left office on 22 April 2016, he did not receive any performance shares as a corporate officer.	
Directors' fees	N/A	As Philippe Vecten left office on 22 April 2016, he did not receive any directors' fees as a corporate officer.	
Benefits of any kind	2,233	Philippe Vecten had a Company car.	

#### REMUNERATION ITEMS FALLING DUE OR GRANTED FOR THE FINANCIAL YEAR ENDED WHICH HAVE BEEN OR ARE SUBJECT TO SHAREHOLDER APPROVAL PURSUANT TO THE PROCEDURES RELATED TO REGULATED AGREEMENTS AND COMMITMENTS

	AMOUNT SUBJECT TO SHAREHOLDER VOTE	PRESENTATION
Compensation related to taking up or leaving a post	No payment	Philippe Vecten did not benefit from any commitment or undertaking related to severance pay under the terms of his corporate office.  Philippe Vecten's suspended employment contract makes provision for the payment, in the event of dismissal, retirement or pensioning-off, of a customary payment, calculated on the basis of the national collective bargaining agreement for executives in the metallurgy industry and on the basis of his reference remuneration (fixed plus variable) as an employee. The collective bargaining agreement provides for a maximum of 18 months' remuneration for a maximum length of service of 28 or 30 years, depending on the age of the persons concerned upon their departure.  In the event of a change in control of ERAMET and the termination of an employment contract that is considered to be attributable to the employer, a specific guarantee, which may not be combined with other indemnities applicable under contracts or collective bargaining agreements, was decided in 2005 and implemented. It represents an indemnity equivalent to three years' remuneration (fixed + variable).
Non-competition compensation	N/A	Philippe Vecten was not bound by a non-compete clause.
Supplementary pension plan	No payment	Philippe Vecten, during his term as corporate officer benefited from the existing defined benefit supplementary pension plan for ERAMET executives, entitling him to a supplementary pension that may not exceed 35% of the reference salary defined in the plan's internal rules, with said reference salary being capped at twenty-five times the annual social security ceiling (ASSC). The reference period used to calculate the reference salary is twelve months for the annual fixed portion and the average of the three last variable remunerations, calculated on the basis of full years, for the variable portion. This arrangement was authorised by the Board of Directors on 30 July 2008 and approved by the General Shareholders' Meeting of 13 May 2009 (3rd resolution).  By way of illustration, the calculation made for Philippe Vecten based on the reference remuneration as set out above (fixed + average variable for the last three years), amounted to an annual gross income of €167,694 as at 31 December 2015 or 35% of his global gross remuneration (fixed gross annual remuneration + average gross annual variable remuneration for the last three years, including the year 2015).
Supplementary insurance scheme and healthcare plan		Philippe Vecten benefited from the supplementary healthcare plan and the supplementary disability and life insurance scheme operating within the ERAMET group. In accordance with the procedures related to regulated agreements and commitments, this commitment was authorised by the Board of Directors on 17 February 2010 and approved by the General Shareholders' Meeting of 20 May 2010 (3rd resolution).

#### 4.3.3 ARTICLE L. 225-37-2 OF THE FRENCH COMMERCIAL CODE-PRINCIPLES AND CRITERIA FOR DETERMINATION, DISTRIBUTION AND ALLOCATION OF THE FIXED, VARIABLE AND EXCEPTIONAL ELEMENTS THAT MAKE UP THE TOTAL REMUNERATION AND BENEFITS OF ANY KIND ATTRIBUTABLE TO THE CHAIRMAN AND CEO AND DEPUTY CEO, SUBJECT TO SHAREHOLDER APPROVAL

By voting on the 11th and 12th resolutions, shareholders are asked to approve, pursuant to Article L. 225-37-2 of the new Commercial Code (laid down by Law 2016-1691, known as "Sapin II"), the principles and criteria for the determination, distribution and allocation of the fixed, variable and exceptional elements that make up the total remuneration and benefits of any kind attributable to the Chairman and CEO and Deputy CEO, for financial year 2017.

In accordance with the wording of Article L. 225-37-2, the General Shareholders' Meeting is required to approve any change to the above elements, including at each renewal of the term of office. If the General Shareholders' Meeting does not approve the resolution, the principles and criteria previously approved by shareholders continue to apply. In the absence of principles and criteria approved by the General Shareholders' Meeting, the remuneration is determined in accordance with the remuneration assigned in the previous year or, in the absence of remuneration assigned in the previous year, in accordance with existing practices within the Company.

#### 4.3.3.1 PATRICK BUFFET, CHAIRMAN AND CEO

ARTICLE L. 225-37-2 OF THE FRENCH COMMERCIAL CODE—PRINCIPLES AND CRITERIA FOR DETERMINATION, DISTRIBUTION AND ALLOCATION OF THE FIXED, VARIABLE AND EXCEPTIONAL ELEMENTS THAT MAKE UP THE TOTAL REMUNERATION AND BENEFITS OF ANY KIND ATTRIBUTABLE TO THE CHAIRMAN AND CEO, SUBJECT TO SHAREHOLDER APPROVAL

	PRESENTATION
	No suspended contract of employment; Patrick Buffet has a straightforward corporate officer contract
Fixed remuneration	The gross fixed remuneration for P. Buffet is reviewed annually by the Remuneration Committee. The Remuneration Committee assesses the situation and makes recommendations, which are then submitted to the Board of Directors for approval.
Annual variable remuneration	The variable portion is based on certain criteria and specific goals, whose selection and weighting are proposed by the Remuneration Committee and approved by the Board of Directors. These goals are based on:  (i) the Company's trading results (Current Operating profit/loss);  (ii) the Company's financial position (net cash);  (iii) the accomplishment, vis-à-vis the budget and schedule, of major industrial projects or of development activities;  (iv) "managerial" results in terms of team motivation and leadership, strategic proposals, projects and goals in the areas of health, safety, the environment and industrial risk.  The annual performance goals are based on the budgetary targets for the objective in question, and the Remuneration Committee fixes the upper and lower range of these goals.  The level of accomplishment required, for each of these criteria, is precisely established at the start of the financial year but cannot be disclosed to the general public for reasons related to trade secrets and confidentiality.  The variable portion may not exceed 140% of gross annual fixed remuneration for the Chairman and CEO. The variable portion for goals achieved and the maximum variable portion are reviewed each year by the Remuneration Committee in relation to market practice, as part of remuneration surveys conducted annually.  The portion related to quantitative targets represents 60% of maximum annual variable remuneration. The qualitative portion consists of targets corresponding to the completion of specific actions.
Deferred variable remuneration	Patrick Buffet does not receive any deferred variable remuneration.
Multi-year variable remuneration	Patrick Buffet does not receive any multi-year variable remuneration.
Exceptional remuneration	Patrick Buffet does not receive any exceptional remuneration.
Performance shares or stock options, or any other long-term remuneration item	In respect of stock-based compensation plans, Patrick Buffet may benefit from performance share plans or share subscription or purchase option plans, the terms and conditions of which are decided upon by the Board of Directors. In 2010, ERAMET implemented an annual international performance share award programme, in compliance with AFEP-MEDEF recommendations and developed based on the best practices of comparable companies. The objective of this programme is to provide a sustainable link between management and the Group's share performance, as well as to attract and retain talent through a competitive remuneration package. It covers more than 200 of the Group's managers and high-potential employees every year.  This programme is in addition to the worldwide free share policy attributable to all ERAMET group employees, in place since 2009.  In accordance with the free share award plan, the theoretical award value is a percentage of the fixed salary of the beneficiaries, the percentage of which varies by job level. For the Chairman and CEO, this theoretical value is set at 180% of his fixed salary, while for members of the Executive Committee, it is 100%. For beneficiaries at level N-1 relative to the Executive Committee, this value is set at 50%, etc. The value was defined following an analysis of market practices conducted by Mercer. It applies to 100% achievement of performance goals. The number of theoretical shares to be awarded is calculated by dividing the theoretical value of the award by the fair value per share. It should be noted that, for a number of years now, the volume of shares allocated by the General Shareholders' Meeting does not cover the number of shares required based on this calculation. The number of shares awarded to the Chairman and CEO in recent years has been of a theoretical value that is very significantly lower than the 180% of fixed salary mentioned above.  The award of shares is subject to very rigorous performance conditions, calculated over a three-year period, as follows:  the

	PRESENTATION
Directors' fees	In accordance with the rules for the allocation of Directors' fees applicable to all Directors of ERAMET and its subsidiaries, P. Buffet receives a fee for his attendance at the ERAMET, Comilog and SLN Board meetings. Following the recommendation of the AFEP MEDEF Code, the allocation rule includes a substantial variable portion.
Benefits of any kind	Patrick Buffet has a Company car. The calculation of the related benefit is fixed at 12% of the vehicle's catalogue price.
Compensation related to taking up or leaving a post	Following the reappointment of the Chairman and CEO to that role, decided by the Board of Directors on 29 May 2015, and on the recommendation of the Remuneration Committee, on 29 May 2015 the Board of Directors, with the Chairman and CEO abstaining, voted unanimously to retain all elements of the remuneration of the Chairman and CEO and all the provisions of his corporate officer contract dated 20 February 2008 (incorporating all the amendments decided since by the Company's Board of Directors at the recommendation of the Remuneration Committee). However, two changes were made to the severance pay falling due to the Chairman and CEO in the event of his departure from the Company (as a result of forced resignation, cancellation or non-renewal of his term of office or modification of the conditions under which he originally joined the ERAMET group)  The amount of severance pay which may fall due is equal to twice (instead of three times, as it was previously) the last gross annual fixed remuneration plus twice (instead of three times) the average gross annual variable remuneration received in the last three complete years prior to his departure.  The severance pay benefit specified in his corporate officer contract is conditional upon the fulfilment of performance conditions: the total gross variable remuneration amount (itself subject to specific performance conditions) received over the final three full financial years of his term of office must be 35% or more of the total gross annual fixed remuneration received during the same three-year period-instead of 20% as it was previously. Consequently, these arrangements rule out the payment of such a benefit should the Chairman and CEO fail to achieve his targets. In accordance with the provisions of Article L. 225-42-1 of the French Commercial Code, these modified arrangements were approved by the Annual General Shareholders' Meeting of 27 May 2016.
Non-competition compensation	Patrick Buffet is not is not bound by a non-compete clause.
Supplementary pension plan	Patrick Buffet benefits from the existing defined benefit supplementary pension plan for ERAMET executives, entitling him to a supplementary pension that may not exceed 35% of the reference salary defined in the plan's internal rules, with said reference salary being capped at twenty-five times the annual social security ceiling (ASSC). The reference period used to calculate the reference salary is twelve months for the annual fixed portion and the average of the three last variable remunerations, calculated on the basis of full years, for the variable portion.  In Patrick Buffet's case, supplementary pension income is capped at 35% of 25 times the ASSC. This arrangement was authorised by the Board of Directors on 30 July 2008 and approved by the General Shareholders' Meeting of 13 May 2009 (3rd resolution).  A sliding scale is applied to the annual amount paid in the event of an early draw down of pension benefits between 60 and 65 years. For example, for a draw down of pension benefits at 60 years, the supplementary pension income will be capped at 26.75% of 25 times the ASSC, and at 35% for a draw down at 65 years.
Supplementary insurance scheme and healthcare plan	Patrick Buffet benefits from the supplementary healthcare plan and the supplementary disability and life insurance scheme operating within the ERAMET group.  In accordance with the procedures related to regulated agreements and commitments, this commitment was authorised by the Board of Directors on 17 February 2010 and approved by the General Shareholders' Meeting of 20 May 2010 (3rd resolution).
ASSEDIC entitlement	Patrick Buffet does not benefit from this entitlement.
Customary severance pay	Patrick Buffet does not benefit from any customary severance pay, whether upon retirement or upon departure for any other reason.

#### 4.3.3.2 CHRISTEL BORIES, APPOINTED DEPUTY CEO ON 23 FEBRUARY 2017 AND PROPOSED FOR APPOINTMENT AS CHAIRMAN AND CEO AT THE CLOSE OF THE GENERAL SHAREHOLDERS' MEETING

ARTICLE L. 225-37-2 OF THE FRENCH COMMERCIAL CODE-PRINCIPLES AND CRITERIA FOR DETERMINATION, DISTRIBUTION AND ALLOCATION OF THE FIXED, VARIABLE AND EXCEPTIONAL ELEMENTS THAT MAKE UP THE TOTAL REMUNERATION AND BENEFITS OF ANY KIND ATTRIBUTABLE TO CHRISTEL BORIES, APPOINTED DEPUTY CEO ON 23 FEBRUARY 2017 AND PROPOSED FOR APPOINTMENT AS CHAIRMAN AND CEO AT THE CLOSE OF THE GENERAL SHAREHOLDER'S MEETING OF 23 MAY 2017, SUBJECT TO SHAREHOLDER APPROVAL

	PRESENTATION
	No suspended contract of employment; Christel Bories has a straightforward corporate officer contract
Fixed remuneration	The gross fixed remuneration for C. Bories is reviewed annually by the Remuneration Committee. The Remuneration Committee assesses the situation and makes recommendations, which are then submitted to the Board of Directors for approval.
Annual variable remuneration	The variable portion is based on certain criteria and specific goals, whose selection and weighting are proposed by the Remuneration Committee and approved by the Board of Directors. These goals are based on:  (i) the Company's trading results (Current Operating profit/loss);  (ii) the Company's financial position (net cash);  (iii) the accomplishment, vis-à-vis the budget and schedule, of major industrial projects or of development activities;  (iv) "managerial" results in terms of team motivation and leadership, strategic proposals, projects and goals in the areas of health, safety, the environment and industrial risk.  The annual performance goals are based on objectives proposed by the Remuneration Committee and decided upon by the Board of Directors.  The level of accomplishment required, for each of these criteria, is precisely established at the start of the financial year but cannot be disclosed to the general public for reasons related to trade secrets and confidentiality.  The target-based annual variable portion is set at 100% of gross annual fixed remuneration based on the achievement rate of various goals. This remuneration may vary from 0 to 150% of gross annual fixed remuneration, 100% of fixed remuneration corresponding to 100% of goals achieved. It may not exceed 150% of gross annual fixed remuneration. The variable portion for goals achieved and the maximum variable portion are reviewed each year by the Remuneration Committee in relation to market practice, as part of remuneration surveys conducted annually.  The portion related to quantitative targets represents 60% of maximum annual variable remuneration. The qualitative portion consists of targets corresponding to the completion of specific actions.
Deferred variable remuneration	Christel Bories does not receive any deferred variable remuneration.
Multi-year variable remuneration	Christel Bories does not receive any multi-year variable remuneration.
Exceptional remuneration	Christel Bories does not receive any exceptional remuneration.

	PRESENTATION
Performance shares or stock options, or any other long-term remuneration item	In respect of stock-based compensation plans, Christel Bories may benefit from performance share plans or share subscription or purchase option plans, the terms and conditions of which are decided upon by the Board of Directors. In 2010, ERAMET implemented an annual international performance share award programme, in compliance with AFEP-MEDEF recommendations and developed based on the best practices of comparable companies. The objective of this programme is to provide a sustainable link between management and the Group's share performance, as well as to attract and retain talent through a competitive remuneration package. It covers more than 200 of the Group's managers and high-potential employees every year.  This programme is in addition to the worldwide free share policy attributable to all ERAMET group employees, in place since 2009.  In accordance with the free share award plan, the theoretical award value is a percentage of the fixed salary of the beneficiaries, the percentage of which varies by job level.  It is planned to mark the appointment of Ms. Christel Bories as Chairman and CEO with the award of 12,500 performance shares for 2017 under conditions defined by the Board of Directors.  For 2018 and 2019, 15,000 performance shares will be awarded to Christel Bories according to the existing plan for all Group beneficiaries, adopted by the Board of Directors.  The award of shares is subject to very rigorous performance conditions, calculated over a three-year period, as follows:  • the relative performance of ERAMET shares for one-third of the share grant (this involves comparing the change in total shareholder return over a three-year period with that of a panel of around 57 comparable companies on the comparable companies on the Euromoney Global Mining Index; Diversified Metals & Mining, Steel; with the performance conditions being fully achieved if the ERAMET share is ranked among the top 15% of the panel); and  • the intrinsic performance of certain financial indicators achieved in three instalme
Directors' fees	Christel Bories does not receive Directors' fees for the offices she holds at ERAMET and its subsidiaries.
Benefits of any kind	Christel Bories does not have a Company car.
Compensation related to taking up or leaving a post	In case of dismissal (except for gross misconduct) or forced resignation, particularly following a change of control of the Company or substantial imposed changes to the scope of responsibility, Christel Bories will be awarded severance pay equal to one year of her gross fixed and variable remuneration for departure up until 1 January 2019, and two years as from 1 January 2019.  This benefit is subject to the condition that the sum of gross variable remuneration received over the last three complete years of her term of office must be 35% or more of the total gross annual fixed remuneration received during the same three-year period. In the event that the number of full years is less than three, the performance will be assessed based on the actual duration of the term of office, at the discretion of the Board of Directors on the proposal from the Remuneration Committee.
Non-competition compensation	Christel Bories is not bound by a non-compete clause.
Supplementary pension plan	Christel Bories will benefit from a defined contribution supplementary pension plan. A study will be expedited to determine the parameters and exact conditions of this plan. Under the plan, vesting will be effective no later than six months after the start of the term of office.
Supplementary insurance scheme and healthcare plan	Christel Bories benefits from the supplementary healthcare plan and the supplementary disability and life insurance scheme operating within the ERAMET group.  In accordance with the procedures related to regulated agreements and commitments, this commitment was authorised by the Board of Directors on 23 February 2017 and will be submitted to a General Shareholders' Meeting for approval.
ASSEDIC entitlement	Christel Bories does not benefit from this entitlement.
Customary severance pay	Christel Bories does not benefit from any customary severance pay, whether upon retirement or upon departure for any other reason.

The payment of the variable and exceptional remuneration elements related to financial year 2017 is subject to approval by a General Shareholders' Meeting to be held in 2018 of the remuneration elements of the person concerned, in accordance with the new wording of Article L. 225-100 of the French Commercial Code laid down by Law 2016-1691.

### 4.4

### **INFORMATION RELATING TO PENSION COMMITMENTS FOR CORPORATE OFFICERS**

Article R. 225-104-1 of the French Commercial Code laid down by Decree No. 2016-182 of 23 February 2016.

a) Name of the commit- ment concerned	Corporate officers are eligible for the existing defined benefit supplementary pension plan for ERAMET executives
b) Reference to legal provisions identifying the corresponding scheme	Article 39-5° of the French Tax code
<ul> <li>c) Conditions for joining the scheme and other eligibility conditions to benefit from the scheme</li> </ul>	People who have completed at least two years service with the Company and whose annual remuneration (fixed and variable) exceeds five times the annual social security ceiling are eligible for this plan.  Conditions to benefit from the scheme: be at least 60 years old, have ended his/her professional career at ERAMET or one of the ERAMET group companies and fulfil the eligibility criteria for pension benefits under the basic social security pension scheme.
d) Terms and conditions for determining the reference salary determined by the scheme in question and used to calculate the rights of beneficiaries	The reference period used to calculate the reference salary is twelve months for the annual fixed portion and the average of the three last variable remunerations, calculated on the basis of full years, for the variable portion. There is no automatic re-evaluation factor in the scheme.
e) Pattern of vesting of rights	The arrangement does not provide for any specific annual rate of increase of potential pension entitlements
f) Existence of a ceiling and the amount and terms and conditions for determining the ceiling	In the event of settlement of their pension rights vis-à-vis social security, they may be entitled to a supplementary pension that may not exceed 35% of the reference salary defined in the plan's internal rules, with said reference salary being capped, in the same regulations, at twenty-five times the annual social security ceiling. A significant reduction rate applies on the annual amount paid (reduction from 35% to 26.25%) in the event of an early draw down of pension benefits between 60 and 65 years of age.
g) Terms and conditions for funding the benefit	ERAMET has subscribed an insurance plan with an authorised company. Contributions are entirely financed by ERAMET, they are globalised, do not created any individual right prior to eligibility to the supplementary pension plan and are not allocated to an individual account opened in the names of potential beneficiaries.
h) Estimated amount of the annuity as of the end of the period	Estimated gross annual annuity (before taxes and social charges) for each corporate officer:  • P. Buffet: €304,101, which amounts to 20% of his global gross remuneration (annual gross fixed portion and the average of the three last variable remunerations, calculated on the basis of full years including 2016, for the variable portion) for a retirement as of the end of 2016.  • G. Duval: €148,058, which amounts to 33% of his reference salary.  • P. Vecten: €167,694, which amounts to 35% of his reference salary.
i) Related tax and social security charges payable by the Company	The estimated amount as at 31 December 2016 excludes tax and social security charges. ERAMET has opted for a tax on premiums paid to the insurer; no premiums were paid in 2016.

### 4.5 **SHARES HELD BY MEMBERS OF THE BOARD OF DIRECTORS AND GENERAL MANAGEMENT**

Some directors have a material interest in the share capital of the Company.

#### INDIRECT INTEREST

Georges, Édouard and Cyrille Duval are shareholders of SORAME and CEIR and Chairs or CEOs of SORAME and CEIR.

#### DIRECT INTEREST

No director has a direct material interest in any of our subsidiaries.

#### LOANS AND GUARANTEES GRANTED OR PROVIDED

The Company has not granted or provided any loans or guarantees to members of the administrative, management or supervisory bodies.

SHARES HELD AT 31 DECEMBER 2016	SHARES	VOTING RIGHTS
Michel Antsélévé	100	200
Patrick Buffet	19,805	33,532
SORAME	8,051,838	16,103,676
Cyrille Duval	5,876	6,687
Édouard Duval	1,089	1,836
Georges Duval	3,022	4,987
CEIR	1,783,996	3,567,992
Nathalie de La Fournière	100	100
Marie-Axelle Gautier	45	45
Jean-Yves Gilet	100	100
Philippe Gomès	101	101
Manoelle Lepoutre	100	200
Miriam Maës	100	100
Ferdinand Poaouteta	3	3
Pia Olders	13	22
Catherine Ronge	100	100
Sonia Sikorav	20	20
Claude Tendil	100	200
Frédéric Tona	206	412
Antoine Treuille	160	320
FSI Equation	6,810,317	13,620,634
Alexis Zajdenweber	N/A	N/A

### 4.6 **SPECIAL REPORT ON FREE SHARE GRANTS**

#### FY 2016

Dear Shareholders,

Pursuant to the provisions of Article L. 225-197-4 of the French Commercial Code, this report is presented to the General Shareholders' Meeting.

#### A) GRANTS TO CORPORATE OFFICERS OF THE COMPANY

PLAN OF 27 MAY 2016	NUMBER OF SHARES	VALUE
Patrick Buffet	22,405	515,539

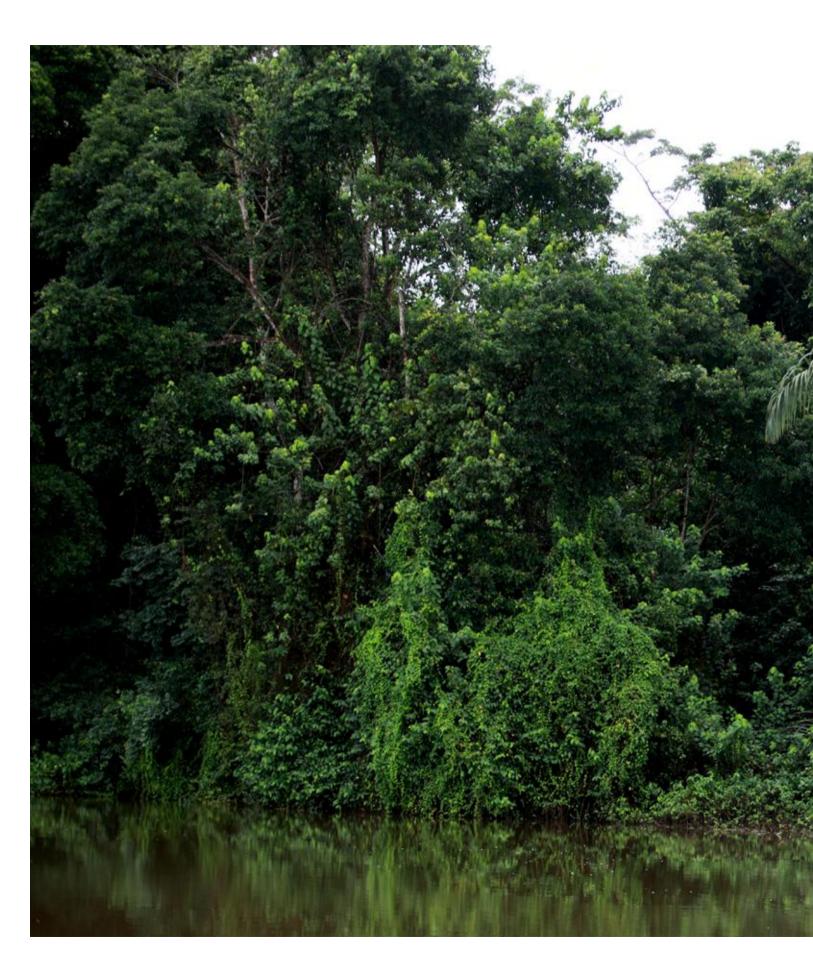
#### B) GRANTS TO NON-CORPORATE OFFICER EMPLOYEES OF THE COMPANY AND ITS SUBSIDIARIES

PLAN OF 27 MAY 2016	NUMBER OF SHARES	VALUE
Philippe Vecten	5,500	126,555
Thomas Devedjian	5,500	126,555
Georges Duval	5,085	117,006
Michel Carnec	4,295	98,828
Denis Hugelmann	4,000	92,040
Catherine Tissot-Colle	3,000	69,030
Philippe Gundermann	2,000	46,020
Jean de L'Hermite	1,500	34,515
Marie-Christine Jaulmes	1,000	23,010
Pietro Amico	1,000	24,010
Martin Cezard	1,000	24,010

#### C) GRANTS TO ALL BENEFICIARY EMPLOYEES

Each employee on the payroll received two bonus shares, subject to length of service conditions, as part of the bonus share plan of 27 May 2016.

The Board of Directors



### Chapter 5

# **SUSTAINABLE DEVELOPMENT**

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cietal information included in the management report, as included in the reference document

### **5.1** SUSTAINABLE DEVELOPMENT **POLICY AND ORGANISATION**

#### 5.1.1 SUSTAINABLE DEVELOPMENT **POLICY**

ERAMET is a mining and metallurgical group that operates roughly forty industrial sites, all while developing projects. Through the nature of its mining and industrial activities, the Group is concerned with all the topics of sustainability and social responsibility (economic and social development, environmental protection, control of industrial risks and risk products, quality of relationships with stakeholders). Aware of its very strong interdependence with the territories in which it operates, ERAMET has long been committed to continuous improvements in order to place Sustainable Development at the heart of its activities. The aim of ERAMET, by permanently conducting its activities in its locations, is to constantly reinforce the acceptability of its operations and to support its development in new territories and in new sectors.

In line with this logic of continuous improvement that creates shared value, the ERAMET Board of Directors adopted a Sustainable Development policy in 2010.

This policy is structured around four priorities:

- the protection and development of the employees of the Group;
- the management of risks and impacts on health and the environment:
- the integration of sustainable development to product policy and innovation;
- and finally, maintaining a relationship of trust with stakeholders.

Its full text is available on the ERAMET website at the following address: http://www.eramet.com/ publications/la-politique-de-developpement-durable.

In 2016, the Communication and Sustainable Development Division teams completed the development of an e-learning module aimed at continuing on a large scale the Group's employees awareness of this policy and the means of its concrete implementation.

The Group's Sustainable Development policy is deployed at all branches and sites and is implemented on a daily basis through multi-annual objectives. The latest version of these objectives was validated by the Group's Executive Committee in November 2016.

Finally, the Group's Ethics Charter, an updated version of which came into force in January 2015, sets out the rules and principles of action and behaviour that bring us together and to which each of us are bound. It oversees the entire ERAMET compliance programme. It is related to the commitments of the Group and its employees in many areas: development, respect and trust with stakeholders, safety of employees and their families, respect for and protection of the environment, safety, respect for clients, social dialogue, the fight against all forms of coercion and harassment, transparency, prevention of corruption, compliance with competition rules, etc.

These two fundamental documents have been translated into the languages of the countries of the Group.

#### **5.1.2 ORGANISATION FOR** SUSTAINABLE DEVELOPMENT

The Group's commitment translates into involvement at the highest level of the Company. The Communication and Sustainable Development Management and Human Resources, both members of the Group's Executive Committee (COMEX), propose, support and monitor these various actions, and where necessary, link them with other functional departments. The Communication and Sustainable Development Division (DC2D) has a Division of Environment, Industrial Risks and Products (DERIP) and a Division of Public Affairs, while the Human Resources Department (DRH) includes a Safety and Prevention Division (SP), a Division of Security and a Medical Consultant, responsible for facilitating the Group's Health Policy.

In order to reinforce its commitment and efficiency, these corporate functions were reorganised in 2015 with a single objective of integrated management structured around processes common to these five pillars: health, safety, the environment, industrial risks and product liability highlighting a strong culture of risk control.

The guidelines and action plans are adapted to each the Branches and operational entities of the Group. Over the past years, ERAMET has created several groups of thematic cross-cutting work (biodiversity, mining environment) to strengthen the coordination between headquarters/branches, or those of the corporate functions between them focused on the objective of risk management. This strengthens the sharing of experience and the proper application of Group rules.

At the same time, the Group pays particular attention to the integration of social, environmental, health and safety, cultural and societal criteria in the design and development of its projects. By referring to the best international standards, the Group aims to build long-lasting, long-term relationships with its stakeholders, wherever it establishes itself, in accordance with specific rules and cultures, and current scientific knowledge. The Communication and Sustainable Development Division is systematically represented for this purpose in the Steering Committees of projects. Section 5.4 of this chapter details the application of these general principles for all the Group's projects.

In 2016, the Group also continued to raise awareness for responsible purchasing, particularly by updating a Responsible Purchasing Charter at the end of the year. The actions related to this theme are detailed in chapter 5.3.4.

Finally, the Group has put in place monitoring and control instruments to measure the concrete implementation of sustainable development objectives throughout its scope of activity. These instruments include dedicated information systems that collect and consolidate associated indicators for the entire scope. Details of the standards and tools used to produce this information are given in the methodological note in paragraph 5.8.

The Group also relies on an internal audit system for the performance of its entities in the areas of Environment, Health, Safety and Energy, which is detailed in paragraph 5.2.1. The data obtained from these audit and control systems enable us to continuously feed the Group's continuous improvement approach.

### 5.2 PRESERVATION OF THE ENVIRONMENT

# 5.2.1 CHALLENGES, OBJECTIVES, ORGANISATION AND MEANS OF PREVENTING ENVIRONMENTAL RISKS.

### 5.2.1.1 ENVIRONMENTAL CONCERNS FOR ERAMET SITES

The Group's industrial and mining sites carry out activities that are sometimes very different from each other in geographical areas that are themselves diverse. Therefore, environmental concerns vary greatly from site to site.

The environmental concerns specific to the Group's mining operations are described in detail in the paragraph dedicated to the mining environment (5.2.6).

The following table aims to give an overview of the major environmental concerns for the major categories of the Group's industrial sites. This summary aims to help the reader in understanding: it is necessarily macroscopic and very schematic and cannot completely reflect the diversity of the concerns for each site taken individually. Some sites also include activities in several of the categories presented here. Moreover, the majority of the industrial sites located in France fall under the ICPE (classified facilities for environmental protection) regime and some are under Seveso status.

#### TABLE SUMMARISING THE ENVIRONMENTAL ISSUES AT ERAMET'S INDUSTRIAL SITES

	PYROMETAL- LURGICAL SITES (FURNACES)	HYDRO SITES METALLURGY	DEVELOPMENT AND TRANSFORMATION METALLURGICAL SITES (ROLLING MILLS, FORGING, STAMPING, HEAT TREATMENT)	COMMENTS
Water consumptions	Notable	Notable	Moderate	Except for the hydrometallurgical sites, the vast majority of the Group's water consumption is linked to industrial equipment cooling loops. The water consumed in these processes does not undergo any transformation or pollution. In addition, the vast majority of sites work in closed loops, which greatly reduces the need. In other cases, water is returned to the natural environment.
Water emissions	Moderate	Notables	Weak	Hydrometallurgical sites are those which present relatively the most significant risks to water pollution, due to the use of chemicals and an aqueous process. All industrial waters are treated before discharge.
Air emissions	Strong	Weak	Moderate	Sites that have metallurgical furnaces are those that amass most of the Group's atmospheric emissions (dust, nitrogen oxides or sulphur). The vast majority of facilities are equipped with emissions capturing equipment, in accordance with applicable regulations and better enforceable technologies.
Energy/greenhouse gas emissions	Strong	Weak	Moderate	Sites which have metallurgical furnaces and/or electricity generation facilities are those that amass the bulk of energy consumption and greenhouse gas emissions.
Production of hazardous waste	Notables	Notables	Moderate	The "chemical" activity of the Manganese branch produces a large volume of production and purification residues (called ore gangue).  The pyrometallurgical activity produces dust, sludge and slag, which, depending on their intrinsic characteristics and locations of operation, can be considered hazardous waste.
Impacts on biodiversity	Weak	Weak	Weak	The Group's industrial sites are mainly located in urban and industrial areas.

Finally, to complete the above table, it should be mentioned that the production sites are generally designed on soil protection slabs and that the storage of hazardous products is equipped with containment systems. However, as industrial practices have evolved, the oldest sites may present risks of historical soil pollution.

Note that the noise does not represent a significant environmental impact. The various sites concerned respect the noise levels stipulated in their operating license, and the subject does not appear as important in the assessment of litigation made by the Group.

#### 5.2.1.2 ENVIRONMENTAL GOALS

The Group's environmental initiatives are enshrined in eight principles of action set out in the Environmental Charter published in 2002, of which the full text is available on the ERAMET website at the following address:

http://www.eramet.com/sites/default/files/ charte environnement 2010 fr.pdf

As described in the introduction (5.1), transverse environmental objectives in direct declination of the sustainable development policy are defined by the CO-MEX, and are updated and monitored quarterly by the Division of Environment, Industrial Risks and Products.

Since 2007, the Group has also set a goal of environmental compliance named ("zero disputes"): it is to strive for formal notices or legal proceedings, that may result from breaches of binding regulatory requirements by Group sites. The information on this system, which was changed greatly in 2015, and its results are detailed in paragraph 3.3.3 Risks Relating to Safety and the Environment.

Finally, the Group pursues the objective of deploying certified environment management systems following the ISO 14001 standard for all industrial and mining sites with significant environmental issues. The results for this objective are detailed in section 5.2.2.

#### 5.2.1.3 ORGANISATION AND INSTRUMENTS FOR THE PREVENTION OF ENVIRONMENTAL RISKS

To implement its objectives, the Group relies on a network of internal experts and on a structured organisation:

- The Division of Environment, Industrial Risks and Products (DERIP) defines the Group's benchmarks and coordinates the many actions relating to respect for the environment and the general dynamic of continuous improvement that has prevailed for several years.
- The Group's three Branches are equipped with a coordination structure for environmental issues.
- The Public Affairs Division (DAP) facilitates and coordinates CSR actions related to relationships with stakeholders and monitors the anticipation of regulatory change.
- More than 90 people make up the network of HSE functions at sites with a reporting line to senior management for the vast majority of them.
- Once a year, the Committee of Occupational Hygiene, Health and Safety (HS&S) and Environment (E) analyses the skills available within the Group with regards to the needs and concerns. This proactive approach is conducted with coordination between the Human Resources Departments of the Group Branches and Departments of Prevention and Safety/Sustainable Development and Environment.

In November 2015, over 80 members of the HSE network and Group managers gathered in Lille, France on the theme of "the involvement of men and women in terms of HSE," resulting in sharing sessions, of feedback and listening with the participation of external experts.

Training and awareness activities on the essentials of environmental responsibility management are developed at sites, in Branches or even at headquarters. In 2014 and 2015, an e-learning support dedicated to chemical risks management, for example, was developed, supplemented in 2016 by an on-site, face-to-face training module.

Monitoring and control systems constitute one of the key strengths of the Group's environmental management.

Thus, a dedicated environmental information system (EraGreen) is fully deployed in all industrial and mining sites, allowing for the collection and consolidation of environmental performance indicators. These indicators are mostly derived from the sampling and analysis plans developed by the sites in full compliance with the requirements of their operating permits.

The Group also relies on a demanding internal audit system for the performance of its entities in the areas of Environment, Health, Safety and Energy The common audit guidelines are structured along three pillars: human involvement, operational control and prevention. It fully takes into account the requirements of ISO 14001, OHSAS 18001 and ISO 50001. Mixed teams of the Group's internal auditors (Corporate Divisions, Branches coordination, and site representatives) trained according to an internal guidelines system, conduct these audits which last several days and make it possible to specify in detail the performance of the sites. This involvement strengthens the cross-functional level of expertise of HSE managers and promotes experience sharing between operational teams. Over the last four years, 37 of 47 sites with significant environmental concerns have been audited according to these terms.

The internal audit process was the subject of a vast improvement project, leading to the adaptation of the procedure governing this system at the end of 2015. This project has allowed a full update of the guidelines and an evolution of reports to more instructive reports. In 2016, emphasis was placed on the mechanism for monitoring action plans resulting from audits.

Other inspections carried out under the insurance programme, which address both industrial and environmental risks, complement the knowledge of the environmental impacts of the sites and the structures and measures put in place to minimize them. These field presences are essential to the full consideration of the many facets of the regulation and issues that apply to various activities.

#### 5.2.1.4 FINANCIAL RESOURCES DEVOTED TO ENVIRONMENTAL PRESERVATION

Total environmental investments for 2016 were estimated at almost €26 million, spread over 45 sites. This figure is generally stable compared to 2015, excluding the exceptional and significant environmental investments made last year at the TiZir TTI site in Norway. This reflects the sustainability of ERAMET's commitments to environmental protection and regulatory compliance in a very challenging climate.

The investments considered here have a strict nature of environmental prevention and protection. For example, they cover the installation of new equipment or work performed in order to minimize impacts. They also cover certain investments made for new activities with an exclusively environmental dimension. In 2016, environmental investments are apportioned at 51% for air pollution control and 30% for water pollution prevention, with the remainder given to waste management, biodiversity, and the prevention of other impacts.

Significant resources have been devoted to the area of water pollution prevention by the mining sites. These investments are mainly aimed at controlling the quality of run-off and associated flows by well-sized decanting structures. Tanks and containments have also been installed or replaced to prevent hydrocarbon pollution. This may well cover the construction of works, the creation of tailings basins, work to improve the descent of water, improvements to filling stations, and the installation and management of piezometers. These examples apply perfectly to the mining sites of the SLN in New Caledonia, to that of Comilog in Gabon or to that of GCO in Senegal.

Processing plants are no exception and have also made significant investments in the prevention of water pollution. We note in particular: containment tanks, double-walled storage, culverts, slabs, sewer upgrades, rainwater collection ponds, recovery of process water, emergency basin for cases of fire or storm... In 2016, the most significant investments were made on the site of Commentry (France) as part of the consolidation of Valdi industrial equipment on this site (see section 5.4.4) for the construction of a storm basin and the commissioning of a new effluent treatment plant.

With regard to the prevention of air pollution, the major investment of 2016 relates to the Marietta pyrometallurgical production site in the USA, where several new facilities to reduce dust emissions from the site have been established.

#### **5.2.2 CERTIFICATIONS ISO 14001**

Significant progress made over the past few years with regard to the progressive implementation of Environmental Management Systems approaches continued in 2016.

It should be noted that since 2013, the Group has been measuring the progress of its ISO 14001 certification target for sites likely to have a significant impact on the environment.

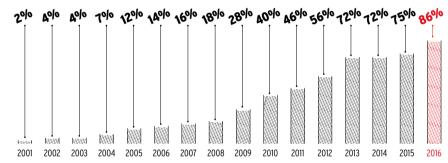
For example, sites with no or no significant environmental risks, such as sites that have ceased operations or distribution centres, are not included in the scope of comparison. At the end of 2016, the sites which have obtained ISO 14001 certification represent 86% of the target goal.

ISO 14001 certification have been awarded for three additional sites in 2016:

- SLN mining site-Kouaoua;
- SLN mining site-Népoui;
- SLN mining site-Thio.

In order to support and evaluate the sites in their environmental approach, the Group carries out internal pre-certification audits, as well as hygiene, health, and safety (HS&S) and environmental monitoring audits, using the internal audit guidelines referred to in 5.1.2.

#### **EVOLUTION OF ISO 14001 CERTIFIED SITES (MINES INCLUDED)**



Note that two sites (Erasteel Commentry and AD-Pamiers) successfully passed the 2015 version of the standard.

#### **5.2.3** EMISSIONS MANAGEMENT

#### 5.2.3.1 AIRBORNE EMISSIONS

AIRBORNE EMISSIONS		2014	2015	2016
Sulphur oxides (SOx)	tonnes	11,021	13,494	14,764
Nitrogen oxides (NOx)	tonnes	6,366	6,045	6,302
Volatile organic compounds (VOCs)	tonnes	377	390	364
Total dust channelled	tonnes	1,355	1,219	1,326
Nickel	tonnes	11.2	13.3	12.8
Manganese:	tonnes	144	149	152

As for energy needs, it is primarily pyrometallurgical activities with their melting plants and heat treatment furnaces that contribute to air emissions channelled.

CO<sub>2</sub> emissions are discussed in paragraph 5.2.5.

Air emissions are a function of the nature of raw materials and minerals used, the transfer and loading technologies in place, the installed capacity of the equipment and especially the level of activity of the sites.

In pyrometallurgy, channelled emissions are generated in the handling of materials, furnaces, grinding and milling operations, as well as those involving molten liquid metal and slag.

In hydrometallurgy, channelled dust emissions most often occur during the handling, grinding, drying or transfer of materials.

The sulphur oxide (SOx) emissions are mainly generated at SLN (thermal power station and Doniambo plant). The increase of approximately 9% recorded in 2016 is related to the increased consumption of fuel by the Doniambo plant during the second half of 2016. The site's power plant also saw increased operation in 2016.

The levels of nitrogen oxides (NOx) are relatively stable over the last three years. The slight increase between 2015 and 2016 (+4%) is due in part to the rise in GCO's mining output, which requires an increase in power generation at its power station, and from the other part to a greater use in 2016 of the SLN power plant.

Atmospheric emissions by volatile organic compounds (VOCs) are generally constant over the last three years.

Channelled dust emissions have been stable over the past three years. This confirms the achievement of an asymptotic level after large reductions in previous years (-30% between 2010 and 2014). Since the majority of sites are state of the art, it will be increasingly difficult to improve this performance while at the same time maintaining it over time.

The Group also pays special attention to diffuse emissions. Efforts continue to develop a deeper understanding of generating sources. The situations are very diverse and the rules and assumptions used to estimate these discharges, on-site or at some of the locations, are highly variable.

As for the atmospheric emissions of nickel and manganese examined over the last three years, the same stability is observed as that observed for channelled dust emissions

#### **5.2.3.2** AOUEOUS EFFLUENTS

AQUEOUS DISCHARGES		2014	2015	2016
Suspended solids (SS)	tonnes	6,159	8,479	10,323
Chemical oxygen demand (COD)	tonnes	151	145	177
Nickel	tonnes	12.2	6.4	7.3
Manganese:	tonnes	62.9	107.0	64.8

As with air emissions, ERAMET has shown its determination to reduce its aqueous effluents. Industrial sites are working to improve treatment processes to ensure a better quality of discharged water.

For the discharge of suspended solids (SS), the overall trend remains highly variable from one year to the next and the SLN in Doniambo, (New Caledonia), accounts for the majority of the Group's releases. As explained in previous years, the variability of the (SS) content of seawater used to cool the plant and for the slag granulation is the primary cause of these variations, but this year the exceptional rainfall in New Caledonia is in relation to the significant increase in this parameter.

Releases in Chemical Oxygen Demand (COD) also increased significantly in 2016 (+20%). Occasional dysfunctions in the effluent treatment plant at the ERAMET Sandouville site (France) and the exceptional rainfall observed at the sites of Doniambo in New Caledonia and at the Aubert & Duval Les Ancizes site (France) partly explain this degradation.

In terms of metal emissions, the nickel emissions are substantially equivalent to last year's levels, which are lower than those more commonly reported in previous years.

Water discharges of manganese showed values close to those of 2014, after a distinctive year in 2015, marked by a spill at the site of Erachem Comilog Tertre (Belgium).

Finally, the Group's sites closely monitor the quality of groundwater and the impact of the activity on soils and subsoils. Several hundred piezometers are distributed throughout the Group's various sites, both within and outside of the Company, to support the initial phases of any new project (characterisation of the initial state) and also to monitor any impacts on ground and surface water

### 5.2.3.3 REHABILITATION/RESTORATION OF SITES

The Group exercised the utmost vigilance against the possibilities of potential impacts on soils and subsoils because of past, current or future activities, both in the area of its industrial and mining activities.

For several years, the Group has developed a policy and expertise in the investigation, identification, monitoring and management of potentially impacted sites through various projects, such as the rehabilitation of industrial sites, the end-of-life of landfills, or old mines.

In addition, the Group pays the highest attention to this type of issue in the context of its internal audits or in the case of acquisitions, divestitures and closure of activities. In 2016, we note the following highlights. On industrial sites first:

Aubert & Duval Gennevilliers (France): The B/C plants ceased operations in 2011, the first decommissioning and refurbishment work was carried out in 2013. Further investigations carried out at the end of this work identified the need for a supplementary management plan which was submitted to the administration in 2015. The final work was undertaken in 2016 and has achieved the targets set by the administration for a future industrial use of these lands. The final closing report was submitted to the government by year's end.

Factory A, which began a similar approach in 2014, filed a management plan for the remediation of its land in 2015, it is currently under instruction by the administration.

- GCMC Freeport (USA): The Freeport GCMC site (USA) values the metals contained in the used oil catalyst. In 2016, the site continued, according to the initial planning, implementing actions resulting from the agreements concluded with the Texas authorities in 2013 and 2014 and related to the environmental compliance of the site. In June 2016, the company was placed under the protection of US bankruptcy law (Chapter 11). In November 2016, GCMC announced its intention to end its operations in 2017.
- Valdi Feurs (France): The site notified its cessation
  of activity in 2014, filed the associated memorandum and proposed a management plan to
  the supervisory administration which resulted
  in a prefectorial order setting the rehabilitation
  targets. The remediation work, begun in 2015, was
  completed in March 2016. The closure report and the
  associated easement application were filed with the
  authorities in July.
- Valdi Le Palais (France): Due to the transfer of its
  waste recovery activities to Erasteel Commentry
  (France), the site notified its supervisory authority
  of the termination of its activities in September
  2016. The site proceeded to secure and evacuate
  all the remaining stocks and products. The environmental diagnosis that started in 2015 was finalised
  in July 2016 and was sent to the DREAL.

- Aubert & Duval Les Ancizes (France): the proposed implementation of an atomisation tower required the construction of a new building. Management of the excavated soil was the subject of an adapted management plan.
- Aubert & Duval Firminy (France): as part of the Ondaine 2020 Project on the industrial re-parcelling of the former Creusot-Loire site, environmental soil investigations were conducted in compliance with the Circular "polluted sites and soils" of 2007, in order to establish a full diagnosis.
- Eurotungstène Powders (France): In the context of the proposed sale of this asset, the company had an expert third-party firm carry out a ground diagnosis that was shared with the potential buyer.
- ERAMET Sandouville (France): The project to process
  a new raw material required the modification of the
  process and the construction of new buildings and
  various works. The management of excavated soil and
  waste generated are subject to a management plan.
- Setrag (Gabon): An Environmental Management and Social Plan (ESMP) was developed as part of the impact assessment study accompanying the voluntary regularisation of the Owendo site, under the legislation on classified installations. Detailed studies of the initial diagnosis have made it possible to take the first steps in safety and control beginning in 2014, and the action plan has been on-going since 2015. Soil reclamation work was completed in 2016 at fuel distribution stations.
- SLN (New Caledonia): As part of the preparatory work for the scheduled platform of a future power plant, a 15 hectare parcel of land has been diagnosed with soil conditions that led to the submission of a management plan to the administration. The case remains under investigation.
- Erachem Comilog Manganese: As part of the disposal of the assets of the five sites concerned (Erachem Baltimore, Erachem New Johnsonville, Erachem Tertre, Erachem Chongzuo and Erachem Mexico), all sites have updated their soil condition diagnosis with the support of external experts. The documents were reviewed by an independent expert firm and shared with the buyer.

Actions have also been taken in the field of mining, they are presented in the Mining Environment chapter (5.2.6) and in chapter 5.2.7 on biodiversity.

It is important to mention the implementation of a policy of systematic characterisation of soil conditions before any new project, in accordance with the Group's Sustainable Development policy.

#### 5.2.4 CIRCULAR ECONOMY

#### 5.2.4.1 PREVENTION AND MANAGEMENT OF WASTE

The implementation of an environmental management system on more than 85% of the Group's sites leads to specific waste management, which respects the following management hierarchy: prevent waste generation/reuse/recycle/recovery or otherwise dispose of safely and in an environmentally friendly manner.

Thus, special efforts are made to reuse the waste when their physical-chemical properties permit; for example, slag from SLN (New Caledonia) and the poor slags from Comilog Dunkergue are homologated and integrated for applications in road technology. The Group's sites are also very active in the areas of waste reclamation into secondary raw materials (see paragraph 5.2.4.2 Raw Material Consumption).

WASTE PRODUCTION		2014	2015	2016
Amount of non-hazardous waste	thousands of tonnes	3,764	4,595	4,010
Amount of hazardous waste	thousands of tonnes	71	77	87

#### NON-HAZARDOUS WASTE

The concepts of hazardous and non-hazardous waste are defined in accordance with the regulations of the host countries. Indeed, to date the statutes of waste are very different from one country to another. Please note that the recognition of non-hazardous waste does not include tonnages of deliberately rich slags that are generated in the pyrometallurgical processing of ferromanganese in order to feed the silicomanganese production furnaces as a secondary raw material, thus contributing to the concept of circular economy.

The mining activities and their related industrial operations are the main sources of non-hazardous waste. There is a significant tonnage of these stored in industrial basins in Gabon. These are the fine fractions of manganese ore collected after the washing step which serves to isolate the grained fraction intended for the market. In terms of nickel activity, the Doniambo plant generates another important tonnage of non-hazardous waste through pyrometallurgical activity in the form of slag. Thus, the three major contributors, the SLN, the Moanda mine and the Moanda Industrial Complex (CIM), account for 98% of the total quantity calculated for 2016.

The decrease in the amount of non-hazardous waste is mainly due to the lower production of the Moanda mine. Also note that the Tiébaghi mine site (New Caledonia) reduced the quantity of waste products by 33 kt, by exporting these by-products.

At much lower tonnages, industrial activities of the steelworks and of the smelting-reduction or of the ferro-alloys production sectors of the Group generate non-hazardous by-products or waste. They are in the form of slags or inert slag mainly stored in an internal landfill or are subject to some external recovery.

Finally, although quantities are still much lower, local initiatives are also being implemented at many sites to reduce food waste: Forecasts of the people present on site every day (absences, holidays, visitors...) in order to inform the catering service or even composting of plant food waste or redistribution to neighbouring farms.

#### DANGEROUS WASTE

The activities that generate hazardous waste are mainly the pyrometallurgical and chemical processes of the Group's Manganese Division.

Thus, the "chemical" activity of the Manganese division produces a significant volume of production and purification residue (called ore gangue). The handling of these by approved technical landfill centres allows management at all points in compliance with the applicable regulations.

The pyrometallurgical activity produces dust, sludge and calcium-sodium slag which, depending on their intrinsic characteristics and locations of operation, can be considered hazardous waste.

The amount of hazardous waste is on the rise in 2016, mainly due to an increase in the activities of the new Moanda Metallurgical Complex (C2M), in Gabon or to more limited operations such as the disposal of waste under the cessation of activity at the Valdi Le Palais site (France).

The wonderful initiative taken at the Sauda site (Norway) should be noted; the installation of a dust recycling system in the smelting furnace, in the form of pellets to reduce waste production.

#### 5.2.4.2 CONSUMPTION OF RAW MATERIALS

The sustainable use of mineral resources is presented within the chapter Mining Environment (see § 5.2.6) and additional information can also be found in the chapter Responsible Purchasing-Tracking supplies in "conflict minerals" (see § 5.3.4).

Approximately 8.8 million tonnes of raw materials consumed by the Group's plants, including about 75% of ore (produced overwhelmingly by the Group's mines) and 7% of reducing agents (coal and coke). The rest of the consumptions consist mainly of metals used in alloy factories, and various adjuvants.

ERAMET is fully committed to promoting a circular economy through the development of the use of secondary raw materials.

For years, ERAMET has committed itself to recycling in its processes certain wastes generated on its sites, but also to valorising in various processes, waste containing metals that result from the manufacture or use of products put on the market by other industrial players.

The Alloys division of the Group is a strong historical player in this material recovery. Indeed, internal metallic residues (machining chips, scraps...) and external (secondary raw materials) are fed into the furnaces of the Group's steel mills. This sector is particularly marked by extremely high recycling rates. The use rate of secondary raw materials is highly variable depending on the site and processes, it can reach almost 90% for some sites.

Recycling by the Alloys division will shortly be extended to aeronautical titanium through the EcoTitanium project for the production of ingots for UKAD from massive scraps and chips, whose economic model implements the principle of circular economy.

In the same way, in the pyrometallurgical factories manufacturing manganese alloys, large quantities of of rich ferromanganese slag are used for the manufacture of silicomanganese.

#### **5.2.4.3 INDUSTRIAL ECOLOGY**

Industrial ecology is a management style which, instead of thinking in terms of end-of-chain pollution reduction in keeping with final waste, aims to reduce the flow of materials and energy by designing industrial ecosystems in which these flows circulate in cycles as much as possible.

Thus, according to this concept, a material flow emitted by a process, instead of being rejected after use, can be reused either internally or by a third party. This stream, which may take the form of electricity, steam, waste or even water can be reused in three different ways:

- reuse internally to power another process or for other uses such, as the heating of a plant's offices, for example;
- reuse externally by other neighbouring companies to supply their own facilities through such flows or re-use of flows from other enterprises;
- reuse always externally but this time by the community (heating of shops or sports facilities for example).

Conscious of the need to control their impacts, the Group's sites have long sought to implement or reinforce this type of approach, as shown by the following examples.

#### REUSE OF INTERNAL FLOWS

Examples of internal recycling are numerous and often historic. Water recycling methods are common practice and are pushed at rates that can go up to 95%. The recovery of rainwater to supply the industrial water circuit of a plant in substitution of groundwater or surface water is also part of the objectives of some sites. This is the case, for example, of the Commentry Erasteel, MKAD, and Varilhes (France) plants, which introduced this practice in 2016

In terms of energy efficiency, the hot gasses generated are often reused internally, such as by Comilog Dunkerque (France) or TiZir Titanium and Iron (Norway), which heat their offices by recovering energy from furnace vapours.

### REUSE OF FLOWS BY OTHER COMPANIES OR FROM OTHER COMPANIES

The synergies between neighbouring businesses are also closely studied by the Group. The Valmet project, carried out by the Erasteel Commentry plant (France), is an industrial ecology initiative, with the aim of recovering industrial waste (recovery of salt alkaline batteries, recycling of scalings and other metal-bearing scrap).

In New Caledonia, SLN collects aluminium cans in and outside of the Company, which partly meets the needs of ferronickel refining. Thermal recovery of waste oils from the region also reduces the consumption of fuel oil from Plant B.

In France, the Sandouville site uses steam as the primary source of energy. 97% of this steam comes mostly from a neighbouring business (Sedibex) which burns chemical waste. The supplement is provided by a wood burning boiler installed on the site.

### REUSE OF FLOW BY NEIGHBOURING COMMUNITIES

Some of the Group's sites offer surplus flows to neighbouring communities free of charge. The Norwegian sites of ERAMET Norway in Sauda and in Kvinesdal use their surplus heat production to heat the subsoil of the streets of the city, which are often icy or snowy, as well as, the arena of the local stadium to prevent the ground from freezing in winter. Similarly, the heat production surplus at the TiZir Titanium and Iron plant in Tyssedal (Norway) is used to heat the neighbouring buildings.

This type of approach is spreading. Thus the level of R&D, the Group's research centre, ERAMET Research (Trappes, France) integrates these requirements as goals in its process development programmes: optimal neutrality of residues, minimising waste and consumption (whether energy, water or consumables...).

#### 5.2.4.4 WATER CONSUMPTION

CONSUMPTION		2014	2015	2016
Total water consumption	millions of cubic metres	33.5	34.9	33.4

Before any comment on the water consumption of ERAMET group's sites, it is important to point out that none of the Group's industrial sites are located in a country confronted with "water stress" according to the definition adopted by the UN, that is to say, whose water resource per inhabitant, for all uses combined, is generally less than 1,700 cubic metres per person. Although this water resource is often substantial or abundant on its sites, the Group attaches real importance to its preservation. Multiple actions are taken to use only the required amount.

Total water consumption breaks down in 2016 as follows:

- 59% of surface water (seawater, river or lake);
- 21% of groundwater;
- 14% of industrial water (industrial grade water supplied from an external network);
- 6% of potable water purchased from a distribution network.

The mining, metallurgy, hydrometallurgy and chemicals trades are water consumers in several ways:

- processes for cooling furnaces and other metallurgical installations;
- washing of ores, raw materials and by-products;
- hydrometallurgical processes: solubilisation and reaction media.

It should also be kept in mind that water resources are essential for the piloting of some of the processes used in the Group. The cooling process of electric furnaces, for example, must be perfectly managed and optimised. In some cases, a lack of water supply may lead to risky situations in which security must be ensured before any other consideration.

As soon as technically possible, the sites:

 promote internal recycling of water consumed. The cooling of furnaces and other metallurgical facilities, as well as, all other high-consumption uses, are mainly done in a closed circuit. The water consumption is then essentially supplemental to compensate for evaporation;

• prefer water from a nearby industrial site such as **ERAMET Norway Porsgrunn.** 

In 2016, total water consumption fell slightly.

Indeed, at the Grande Côte Opérations (GCO) site in Senegal, which alone accounted for 25% of the Group's total consumption in 2015, water needs can vary greatly over time, depending on the characteristics of the deposit encountered during the year by the mobile facility. In 2016, the significant water supply due to exceptional piezometric conditions, as well as, the optimisation of the need through mining planning, greatly reduced the need to pump groundwater in order to maintain the body of water at the planned level.

This reduction is also offset by increases, as done at the Moanda mine where technical problems have limited the effectiveness of internal recycling systems, thus necessitating an addition of pumped water from the river.

#### **5.2.5** ENERGY AND CLIMATE CHANGE

All the issues related to energy purchases and energy efficiency are coordinated by the Group Energy Centre, reporting to the Group's Industrial Affairs Department, which is part of the Group's top Management.

#### 5.2.5.1 ENERGY CONSUMPTION

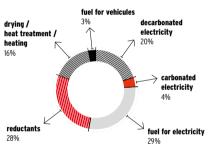
Energy consumption of 16.5 TWh in 2016 was virtually stable compared to 2015 (16.6 TWh) and 2014 (16.5 TWh).

The energy consumed by the Group corresponds to several major types of uses:

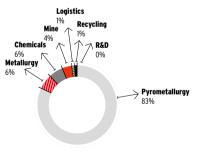
- Extractive metallurgy. In order to convert, through reduction reactions, the oxides contained in the metal alloys that it markets, the Group relies mainly on pyrometallurgical processes.
  - These processes require energy so that the reduction or melting reaction temperatures can be reached. This energy comes from electrical energy and metallurgical reducers, also containing energy. This consumption is directly dependent on the activity.

- Good control of the processes also requires upstream control of the water content of the ores. In this case, energy consumption is directly related to climatic conditions.
- Melting metallurgy and hot forming. The manufacture of alloys, their hot forming, and associated heat treatments are energy-consuming (electricity and gas).
- Processes implemented for nickel and manganese chemical and recycling activities are also energy-consuming (electricity and gas mainly).
- The last use is fuel for mining machines and directly operated rail transports. Consumption depends on activity (ore production volume) and especially on the amount of stripping and preparatory work (total volumes handled).

#### **2016 ENERGY CONSUMPTION**



#### **2016 ENERGY CONSUMPTION PER USES**



ERAMET Group's has seven core activities (pyrometallurgy, metallurgy, chemical, mining, logistics, recycling and R & D). 83% of the energy requirements are consumed by 14 pyrometallurgical Group plants.

It can also be noted that 83% of the electricity purchased in 2016 is produced without the use of fossil fuels, and therefore with a lower carbon footprint (57% hydroelectric and 26% nuclear).

5.2.5.2 ENERGY EFFICIENCY

- Following the validation by COMEX in September 2013 of the Group Energy Policy, which follows the principles of the ISO 50001 standard, the Group's Industrial Affairs Department continued the deployment of its energy efficiency process initiated in 2005.
- The Group has therefore decided to set up a complementary mode of operation between the sites and the corporate functions. Three types of representatives have been defined:
  - the Group coordinator, whose main tasks are to implement the initiative, methodological contribution (the Group coordinator is ISO 50001 AFNOR certified, member of the ISO 50001 expert committee), expertise on several of the Group's businesses and regulatory and technological monitoring;
  - the energy site correspondents, representatives of the site management under the ISO 50001 standard, whose missions are to locally carry out the process of continuous improvement around energies;
  - the site management, whose main role is to show a genuine commitment to an energy management system based on the principles of the ISO 50001 standard and, of course, to allocate the resources adapted to the challenges of each site. Branch management is called upon to support site management.
- As part of the energy efficiency initiative, energy performance indicators are set up at the sites and are integrated into the management of industrial performance.
- The values and developments of these indicators are analysed in relation to each local process. Because of the diversity of jobs and processes,

consolidation of these indicators at the Group level would have no purpose. Consequently, and for reasons of confidentiality and protection of our processes, the Group decided not to communicate more precisely on these indicators.

In 2016, a new site (Comilog Dunkerque) obtained the ISO 50001 certification, bringing the total to five certified sites (three sites ERAMET Norway and ERAMET Sandouville).

#### PARTICIPATION IN THE DEVELOPMENT OF INTERNATIONAL STANDARDS

ERAMET participates in the development work of the ISO 50001 standards among AFNOR experts. The Group is also present on the "ENERGEST" standardisation committee, which aims to standardise and promote energy efficiency practices.

#### 5.2.5.3 CLIMATE CHANGE

#### GREENHOUSE GAS MANAGEMENT AND REDUCTION POLICY

As part of the "consideration of climate change," the energy division created in 2015 has among its missions:

- actively participate to the climate change committees of French and European professional organisations (AFEP, A3M, Eurofer, Euroalliages) which are the industrial partners of the French and European authorities in the drafting of related regulations:
- inform the relevant sites about this regulation and help them for its application;
- contribute to the implementation of the Group's climate change policy, in close collaboration with the Communication and Sustainable Development Department. This policy was adopted in December 2016 by ERAMET COMEX and will be progressively extended to at all sites beginning in 2017;

• manage the accounts of French sites included in the European registry of emission trade system (ETS). The Norwegian sites are managing their own accounts in consultation with the Energy Centre.

#### SITES SUBJECT TO THE GREENHOUSE GAS EMISSION QUOTA SYSTEM UNDER THE EU DIRECTIVE 2009/29 EC OF 23 APRIL 2009. KNOWN AS FTS

The Group actively participated to consultations between the industry, through professional organisations, and the national and European authorities (Commission, Parliament, and Council).

#### **ERAMET** sites covered by the ETS Directive

• Alloys Division: Aubert & Duval: Les Ancizes, Firminy, Pamiers and Interforge.

Erasteel: Commentry:

• Manganese Division: Comilog Dunkerque, ERAMET Norway (Porsgrunn, Sauda, Kvinesdal) and TiZir Titanium & Iron at Tyssedal (Norway).

Under the ETS, these sites receive quotas free allocations.

Note that the forging sites (AD Pamiers INTERFORGE) are not part of the list of the "carbon leakage" list and therefore will finally see their free allocations decrease to zero. On a transitional basis, they nevertheless receive a decreasing number of free allocations (from 80% of historical emissions in 2013 to 30% in 2020).

At the end of 2013, the European Commission approved the free allocations proposed by the French and Norwegian authorities. All of the Group's relevant sites officially received free allocations for the entire period 3.

The sites' emissions in 2016 are in the final phase of verification by bodies approved by the European Commission. They will issue the "reasonable assurance reports" required for the restitution of quotas in the official registers in 2017.

#### IMPACT OF CLIMATE CHANGE

A study has been initiated to assess and anticipate the impact of climate change on the Group's activities. Specific questions are addressed to the sites through the EraGreen environmental reporting tool on their risk assessment and the adaptation measures that are considered.

In 2016, about 40% of the sites indicated they may be affected by the consequences of climate change. The consequences often reported are:

- the possible impact of a rise in sea levels;
- the potential impact of extreme weather events (drought, strong winds, floods...).

With the current knowledge on the possible effects of climate change, the sites have not planned any shortterm adaptation measures. With regard to a possible rise in sea levels, sites located near a coast will refer to the altitude at which they are located, which guarantees an impact considered as minimal to negligible.

At Group level, climate change will lead to higher taxes on energy, and increasing difficulty to obtain funding for investments. Currently, it is difficult to assess these consequences more clearly.

#### CARBON FOOTPRINT

The initial ERAMET carbon footprint carried out in 2007-2008 was established in collaboration with Carbone 4, a company approved by ADEME.

This Group carbon footprint amounted to about:

#### 6.35 million tonnes of CO<sub>2</sub> equivalent By item:

• 87% for the "energy" which includes energy consumption (electricity, gas, oil, coal) and the consumption of reducers required in the process (coke, coal, anthracite...);

#### • 8% for freight;

• 3% for "inputs" CO, emitted, particularly during the production of the scrap consumed in arc furnaces of steelworks.

Following the classification of the "GHG Protocol", emissions of the Group were as follows:

• Scope 1 emissions = 4,742,098 tonnes of CO<sub>2</sub>, or 74% of the total.

- Scope 2 emissions = 797,918 tonnes of CO<sub>2</sub>, or 13% of the total.
- Scope 3 emissions = 810,473 tonnes of CO<sub>2</sub>, or 13% of the total.

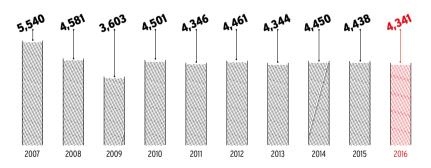
This carbon footprint makes it possible to meet the information requirements introduced by Decree No. 2016-1138 of 19 August, 2016; it shows that emissions related to energy consumption (scopes 1 and 2) are prevailing, consistent with the Group's mining and metallurgical activities, and must be considered as significant. In addition to the follow-up of this item «energy», detailed below, the Group's objective in 2017 and subsequent years is to work on the valuation of other potentially significant items. The freight-related emissions that could be potentially significant, will be studied in particular.

#### Changes in the Group's carbon footprint (scopes 1 and 2)

To follow changes in the carbon footprint over time, only emissions of Scopes 1 and 2 are taken into account (representing 87% of the total) because they are easy to calculate based on the Group's activity. The data used to calculate these emissions come from the Group's system for consolidating environmental data (EraGreen).

The table below shows changes in the Group's emissions from 2007 to 2016.

#### ERAMET GROUP - EMISSIONS EVOLUTION (IN THOUSAND TONNES OF CO2 EMITTED SCOPES 1 ET 2)



Apart from the year 2009, we can observe a stability in this footprint.

The deviation in 2007 is mainly due to differences of scopes between the footprints (China, Norway, etc.).

Moreover, Aubert & Duval (AD) is the only "legal person" of the Group in France to employ more than 500 people and, therefore, to be subject to the application of Article 75 of the Grenelle II Act and Decree No. 2011-829.

With the help of a consultant, a carbon assessment was conducted for this scope in 2011, based on the "guidelines on greenhouse gas emission inventories" issued by the national coordination division (2012 version). According to the regulations, an update of this balance sheet was carried out during the year 2016 on 2015 emissions data. The assessment shows the following emissions in tonnes of CO, equivalent:

YEAR	2011	2015
Direct emissions (scope 1)	85,491	87,943
Indirect emissions (scope 2)	16,504	12,759
Total emissions (scopes 1 and 2)	101,995	100,702

This comparison shows stable emission levels in the Aubert & Duval area between 2011 and 2015.

#### 5.2.6 MINING ENVIRONMENT

This chapter is devoted to environmental protection actions deployed at the mining sites in production (with the exception of measures concerning the biodiversity, which are detailed in Chapter 5.2.7). Provisions for developing mining projects are included in Chapter 5.4 Industrial and Mining Projects.

The Group's mining operations do not include underground mines.

The mine operated by Comilog in Gabon on the Bangombé plateau is one of the richest manganese deposits in the world covered by a layer of 4 to 5 meters of waste rock. The characteristics of the deposit and the ore make this operation produce very little mine tailings.

The SLN operates 15 nickel mines in New Caledonia; the seven largest are operated directly by the SLN and the others are subcontracted to local operators. The mines are located in rugged terrain at altitudes between 250 and 1,000 metres. In this type of deposit, it is necessary to move about 7-9 tonnes of tailings to produce 1 ton of mineable ore. Storing these tailings in conditions that guarantee safety and protection of the environment is, therefore, a key issue.

The Grande Côte mineral sands mine in Senegal produces zircon, ilmenite, rutile and leucoxene. The mining operations follow an optimised route to exploit the deposit in the sand dunes near the coastline to the North-East of Dakar. The extraction operations take place in an artificial mobile basin of 12 hectares and about 6 metres deep. The mining pro-

cess involves a dredge with a capacity of 7000 tonnes per hour, connected to a floating concentration plant, where minerals are separated from the sand by a grading and granulometric process. After extracting the recoverable fractions (around 1.7% of the treated sand), the sand is directly put back at the rear of the facilities to reform the dune. The resulting heavy mineral concentrate is transferred to separation plants located on land, which make it possible to obtain the commercial products by granulometric, gravimetric, electrostatic and magnetic separation. The small quantities of products not valorised at this stage are reincorporated into the reconstituted dunes. The water needed to run operations is pumped into a deep aquifer and recycled to the maximum. The mine uses no chemicals.

#### SUMMARY TABLE OF ENVIRONMENTAL ISSUES AT ERAMET MINING SITES

	SLN MINES OF NEW CALEDONIA	MINE COMILOG IN GABON	GCO MINE IN Senegal	COMMENTS
Pressure on water resources (quantity)	Low sensitivity	Low sensitivity	High sensitivity	The high levels of rainfall of the sites of New Caledonia and Gabon make the issue of water consumption relatively insensitive. Conversely, in Senegal, the two aquifers solicited by the mine are important reserves for local residents and for the country.
Erosion	High sensitivity	Average sensitivity	Average sensitivity	The nature of the soils and rocks, the topography of deposits and the presence of fragile receptive environments make the subject of erosion very significant to New Caledonia. In Senegal, the dunes reconstituted after passage of the dredge are not very sensitive to wind and water erosion. In Gabon, the recent extension of the deposit into a sloping area has relatively strengthened the acuity of the issue which remains insignificant to the rest of the mine.
Acid drainage	No acid drainage	Low risk of acid drainage	Low risk of acid drainage	Generally, ERAMET mining sites are not really concerned by the risk of acid mine drainage. In Gabon, only one horizon of tailings located in the current extension of the deposit is likely to present this risk in a localised way. In Senegal, a sandy horizon containing intercalated peat lenses can be encountered during mining operations and can potentially generate low acidification.
Production of tailings	High sensitivity	Low Sensitivity	Low Sensitivity	The tailings from the Moanda mine is largely relocated immediately into mining pits. In Senegal, the sand is returned directly to the environment after extracting the recoverable fraction which represents less than 2%. By contrast, in New Caledonia, the production of tailings is much more important. The SLN's methods of exploitation are increasingly moving from heap stockpiles to filling pits with tailings.
Production of residues	Low sensitivity	Average sensitivity	Low sensitivity	Only the Comilog mine and the Tiébaghi and Népoui mining sites produce significant quantities of mine tailings resulting from concentration steps by mechanical means. These residues are chemically stable and are not hazardous to the environment. In New Caledonia, residues from processing plants are, moreover, commercially valued as mining by-products. The characteristics of the small quantities of residues produced in Senegal allow their return to the natural environment during the reconstitution of the dune.
Biodiversity	High sensitivity	Average sensitivity	Low sensitivity	The biodiversity of the New Caledonian sites is recognised as remarkable due, in particular, to its very high endemicity. Studies based on international standards have shown that the mining sites in Gabon and Senegal do not have this level of sensitivity. However, the Senegal mine is adjacent to important vegetable production areas.

#### **5.2.6.1 MANAGEMENT STRUCTURES OF THE** MINING ENVIRONMENT

Teams dedicated to the consideration of the environment in mining are present at the sites and in the relevant subsidiaries such as in Gabon, in Senegal and in New Caledonia.

In the last few years, as part of its Sustainable Development policy, ERAMET has strengthened the structuring, formalisation, and international coordination of environmental mine management tools. With this in mind, the following actions have been carried out:

- All mining subsidiaries have formalised a Mining Environment plan of action; the progress of these action plans is reviewed regularly with the Division of Environment, Industrial Risks and Products Group.
- A community of experts on the mining environment has been set up and meets regularly. Its role is to formalise good practices guidelines applicable throughout the Group and to encourage the exchange of expertise between sites. A compendium of good practices in Mining Environment was published in November 2015.
- Management of the Environment System compatible with the requirements of ISO 14001 have been deployed by mining subsidiaries. In March 2016, SLN became the first mining and metallurgical company to obtain ISO 14001 certification in New Caledonia. The certificate covers the mining activities of the seven main mines, which are operated directly by SLN. At the same time, in April 2016, Comilog obtained the renewal of its certification initially obtained in 2012 for an area covering the operations of the Moanda mine, the storage, the shipping of ore, the agglomerate activities in Owendo, as well as equipment maintenance. In Senegal, significant

improvements are underway in the implementation of environmental management systems in the various functional units of GCO in collaboration with the Group's environmental team.

- All SLN mining sites have updated their environmental impact assessments in recent years as part of the reform of the Mining Code of New Caledonia. This considerable work allows each site to have comprehensive studies on the environment and the ecosystems in which they are located, and effective environmental management plans adapted to their specific characteristics.
- At the same time, for the Comilog mine in Gabon, a major effort in environmental studies has been undertaken since 2012 to improve the level of knowledge of the environmental characteristics of the site with the aim to of pursuing the development of a relevant rehabilitation strategy for the site. These studies focus on soils, hydrology and hydrogeology, as well as on biodiversity.
- Finally, in consultation with the authorities, Comilog chose to make a full environmental impact study, beyond the regulatory requirements applicable, to extend the operation of the Moanda mine to the edges of the deposit (part of the sloping deposit located in the Comilog granted concession).
- In Senegal, the Grande Côte mining site, following the audit of its Environmental Management and Social Plan (EMSP) received its environmental compliance certificate on 24 October 2016 from the supervisory authorities.

#### 5.2.6.2 RESPONSIBLE RESOURCE RECOVERY

Mining recovery is one of the core trades of the Group. The mineral resource is mined in a responsible way, i.e. by minimising the impacts during the exploration and extraction stages and by optimising the recovery of the deposits. In New Caledonia, geologists limit the opening of access tracks, favouring indirect geophysical methods, non-environmental impacts, and the helicoptering of equipment during exploration campaigns. They also make use of modelling tools to complement their knowledge of the deposits and to better evaluate resources. The data is relayed to miners who optimise the extraction steps by reducing the volumes of tailings to be handled, precisely mapping, minimising cleared areas, and maximising the recovery of the mineral profile. Improved recovery can be translated on the ground by the introduction of GPS devices on the buckets and shovels, and the display of loading plans in the cabins.

At the same time, ERAMET research teams are working to recover tailings and minerals at lower and lower levels. This commitment was demonstrated in Moanda, Gabon, where Comilog made an investment of €12 million. The sand treatment workshop enables the recovery of finer ore fractions according to a magnetic separation process developed in-house.

SLN has developed techniques for recovering minerals initially considered marginal, thus extending the life of the deposits significantly while reducing the final environmental impact. These results have been obtained with the construction of ore washing plants (Mineral Processing Plants) which allow the ore to be concentrated without adding any chemicals. Since mid-2010, SLN has been recovering by-products from the ore washing plants, as well as selectively stored products (laterites and low-grade saprolites) in stockpiles. In six years, more than 2 million tonnes of low-grade saprolites and by-products from ore washing plants were recovered.

Finally, Trappes research centre is working on the development of innovative, high value-added, geo-metallurgical methods for the non-destructive characterisation and modelling, which make it possible to define the complex horizons of geological profiles.

#### 5.2.6.3 WATER MANAGEMENT

At mining sites in New Caledonia, and to a lesser extent in Gabon, the major concern of water management is to prevent the entry of suspended solids (SS) into the receiving environment through run-off caused by erosion due to surface stripping.

To avoid this, SLN has long equipped its sites with sedimentation ponds that trap suspended matter in order to prevent their transport into the natural environment. Upstream of these works, many precautions are taken to minimise erosion: keeping

water out of the sites, minimisation of cleared areas, conservation of natural embankments at the edges of stripping sites, organisation of run-offs to reduce speed, implementation of hydraulic locks, etc. These measures are documented for each SLN mining site in a water management plan that meets the regulatory requirements of New Caledonia. The implementation of these Water Management Plans as mining progressively evolves represents an ongoing commitment and considerable investment. Finally, as of the end of 2014 and before the implementation of the new regulations, SLN mining sites began a programme of progressive equipment for water management works, using probes and sampling instruments to better assess the performance of environmental protection measures. In total, investments dedicated to water management for these sites exceed €16 million over the last four years.

The special expertise of SLN on the topic of erosion prevention was compiled in a technical guide (the "Blue Guide"), published in 2005 and revised in 2012, which serves as an industry reference in New Caledonia and beyond for the Group.

In Gabon, the subject of erosion is less significant given the topography of the plateau deposit and the draining characteristics of the upper geological layers of the plateau. This was confirmed by the study carried out in 2012-2013 to define the water bodies and hydrology of the site. Nevertheless, operators are aware of the measures to be taken to limit erosion. This theme, however, attracts attention for the current extension of the deposit into the sloping part. A specific Water Management Plan has been defined in the impact study associated with this extension. Its implementation started at the same time as the operation and is the subject of a specific environmental monitoring system, which has, so far, confirmed the effectiveness of the environmental protection measures taken.

In addition, in recent years, major advances have been made at the Moanda site for the management of aqueous effluents from the ore mill. Since 2010, discharges to the Moulili river were stopped with the commissioning of tailings ponds (ultrafine). These basins were constructed in such a way as to be able to recover the overflow waters and to redirect them to the concentration facility, thus eliminating any direct discharge to the river.

In Senegal, the subject of water management is important as the operation of the mine uses two aguifers, one of which is very important to the people and the country, in general. Given this situation, every precaution is taken to ensure that the impact of the mine is as low as possible. The company GCO has an expert team fully dedicated to hydrogeology. The latter makes monthly calls upon the services of the Ministry of Water, which thus monitors it systematically.

The water management system was designed and authorised by the competent department of the Senegalese government to avoid additional pressure on the superficial water table used to supply the agricultural crops for local residents. All mining installations are controlled to ensure minimal variations in the level of this ground water table. This aguifer is subject to twice-daily monitoring. More than 80% of the mine's net water consumption is used to ensure a constant water level in the basin in which the facilities float. For this, the mine uses a deeper aguifer, for which limits on pumping rates have been set by the authorities and respected by GCO since the start of production. The water from this aguifer is recycled to the maximum extent possible. In addition, this aguifer is also subject to continuous monitoring. As such, nine piezometers were installed in 2015 to control the deep aquifer (maastrichtian).

Monitoring and "water policing" operations are carried out internally and continuously by the GCO Environment Department. Monthly reports on this matter are sent to the relevant authorities. Since the start of the operations, monitoring has demonstrated the effectiveness of the measures taken and the absence of damaging consequences on water resources.

#### 5.2.6.4 TAILINGS AND ROCK WASTE MANAGEMENT

Given the considerable volume of tailings being handled at SLN operations, the storage of tailings in appropriate structures and their revegetation is an important environmental issue to minimise erosion and impacts on the ecosystem and landscape.

Through its long experience, SLN has developed effective techniques, one of which is to create tailings stockpiles. The works are carried out according to professional standards and their stability is guaranteed in the long term, even during exceptional cyclonic rains. These stockpiles are subject to continuous monitoring (internal auscultation) and regular audits by an external third party. As for water management techniques, SLN has published a technical guide, updated in 2012, which explains the modalities of tailings stockpile construction and their design rules. This guide applies to all SLN mining sites operated directly or by outsourcing. In order to minimise land clearing and promote site rehabilitation, SLN has undertaken remediation efforts for several years in old mining pits.

In Gabon, the problem is again less sensitive since, on the one hand, the volumes of tailings being handled are much less, and on the other hand because the technique of exploiting by the successive opening/ closing of compartments allows the majority of tailings to be placed directly into the compartments after extraction.

This is less of an issue at the Senegal mine, since the sand dune is reconstituted after passing the dredge and extracting the recoverable part.

Mining residues (tailings), which are produced in the mining facilities at mines in Gabon or at the Népoui and Tiébaghi sites in New Caledonia, are chemically stable and therefore are not hazardous wastes within the definition of the regulations. In New Caledonia, all processing residues from enrichment plants (Népoui and Tiébaghi) are also commercially valued as by-products of the mine. In Gabon, tailings from the mine are stored in seven basins of about one million cubic meters of capacity, consisting of closed dykes with a maximum height of 16 meters. The residues of the metallurgical enrichment plant are stored in a retaining dyke with a maximum capacity of 6 million cubic meters. These structures are continuously monitored for their stability. Furthermore, in 2016, in the framework of its risk prevention initiative, a specific audit of these dykes was commissioned by geotechnical and environmental experts of the Group. The audit found a good level of risk control by respecting the design and operation standards of these structures. While these are still modest in size compared to those elsewhere in the world, an action plan to further strengthen this level of control has been established and is being implemented.

Despite the very small quantity of residues produced by the mills in Senegal, GCO was able to upgrade a large proportion of its residues in 2016 to "Zircon by-products". The residual products have characteristics which allow their return to the natural environment during the reconstitution of the dune. These residues may contain small volumes of naturally occurring low-level radioactive minerals that are naturally managed to minimise exposure to the environment

#### 5.2.6.5 MINE REHABILITATION

#### IN NEW CALEDONIA

SLN mining sites all practice continuous rehabilitation. This work includes land remodelling operations and revegetation operations, whose methods and results are described in Section 5.2.7 Preservation of biodiversity.

As part of the implementation of the environmental management system for mines, SLN has led, over the past three years, a comprehensive review of its internal procedures and rehabilitation instructions and a formalisation of expertise developed over the past ten years. The objective is to share best practices, ensuring greater consistency between sites, as well as better integration of rehabilitation operations in mine planning in the short and medium term. In this context, two Technical Guide references were published by SLN, one dedicated to the optimal management of top soil (2015) and the other devoted to principles and techniques of mining rehabilitation in 2016.

Of the five SLN mining centres, four have a formalised rehabilitation master plan, the latter being in the process of being finalised.

Finally, in recent years, major rehabilitation works, allowing a final rehabilitation, were taken, pursued or completed:

- At the Thio Plateau, where SLN teams complete the remodelling of a very old tailings pit. This gigantic project (more than 200,000 cubic metres of land movement) will end in 2017 with the connection of the water drain pipes, while landscaping remodelling is now complete.
- A large revegetation operation was carried out on the flanks of the Dothio mine with the implementation of 16 hectares of hydraulic seeding on steep and rugged terrain.

Downstream of the mining sites, SLN has cleared several rivers on the outskirts of the Kouaoua and Thio mines

#### IN GABON

Revegetation is much easier than in the Caledonian environment because vegetation recolonisation occurs naturally. The challenge of rehabilitating the sites is also landscaping with the need to remodel the tailings stockpiles of a few metres in size created by exploitation.

- Since 2010, the mining procedure has been revised to incorporate land remodelling as and when operation progress. An effort to remodel the areas disturbed before this date was undertaken in parallel and is subject to an annual target in the mine's environmental management system. The results are detailed in the following chapter 5.2.7 Preservation of biodiversity. Beyond these concrete actions, preliminary studies for the definition of a comprehensive rehabilitation strategy of the Bangombé mine plateau continued in 2016.
- In addition, operations to rehabilitate the Moulili River by extracting the ultra-fine deposits downstream from the mine's ore washing plant have continued since 2010. At the end of 2016, approximately 10 million tonnes of manganiferous sediments were excavated. These operations are carried out in strict compliance with the Environmental Management and Social Plan prepared after the impact assessment of this work. In a spirit of transparency and dialogue, Comilog also organised, in June 2014, a seminar devoted to the rehabilitation of the downstream segment of the river. The seminar brought together all relevant stakeholders (government, civil society, NGOs, scientists...). It

helped define a consensus and recommendations for the downstream segment, which were then proposed to the supervisory authorities. Such a consultation process is a first in Gabon. In 2016, the engineering studies and the preliminary impact study for the work agreed upon at the end of the seminar were completed in accordance with the principles of transparency and dialogue with the stakeholders who chaired the seminar.

#### IN SENEGAL

The particular exploitation mode of this mine, with an enrichment plant moving progressively along the deposit, involves the clearing of vegetation consisting of grasses and thinly distributed trees in the area. The revegetation of reconstructed dunes at the rear of the mobile mining facilities is a strong expectation of the resident populations, as much as it is a challenge in the context of rainfall limited to a short rainy season. After consulting the relevant authorities, the populations and their representatives, a participatory rehabilitation strategy with strong involvement of communities and local authorities was formalised in late 2013. The implementation of rehabilitation is accompanied by the creation of income-generating activities for the host populations participating in the emergence of a local entrepreneurial culture. Regular monitoring of rehabilitation work is carried out through a dedicated formalised consultation framework, set up in 2015 by the Méouane Sub-Prefect, and consultations with residents on their expectations of rehabilitation have been renewed since 2016. The success of the rehabilitation operations and the rigorous application of the rehabilitation strategy was confirmed by an audit by the Water and Forests inspection and resulted in the issuance of a certificate of conformity dated October 2015 for rehabilitative operations carried out since the start of production in 2014. In 2016, the rehabilitation methods were adapted to increase the rate of rehabilitation, thus increasing the production rate of the installation while optimising the related costs. The results obtained are detailed in the following chapter 5.2.7 Preservation of biodiversity. Note that the technical studies for the establishment of a pilot farm (solar pump, solar power, bio culture) were carried out on a poor savannah. The implementation has begun and should be completed during 2017.

#### **5.2.7 PRESERVATION OF BIODIVERSITY**

The plurality and location of ERAMET's mining and metallurgical activities have enabled it to acquire

a solid experience on the subjects of biodiversity. Thanks to this feedback on preserving biodiversity and mitigating the impacts of its activities, ERAMET decided to formalize its actions through the adoption of a Biodiversity Policy, disseminated and communicated to Group employees in 2015.

This policy is based on three axes:

- 1. Better awareness and understanding of biodiversity and its features.
- 2. Act to preserve biodiversity.
- 3. Raise awareness, exchange and share.

It aims to bring together the Group's sites practices-as diverse as they are-under one commitment. The principles are to be adapted at sites in a manner proportionate to local issues. The full text is directly accessible on the ERAMET website at the following address:

http://www.eramet.com/sites/default/files/ eramet\_politique\_biodiversite\_fr.pdf

In recent years, the Group has seized the opportunity of its experiences:

- to participate in ad hoc discussions on the local, national, and international scenes;
- to develop a competence within ERAMET with the establishing and running of an internal working group dedicated to Biodiversity since 2012;
- to develop methodological tools for coordinated management of biodiversity on ERAMET sites.

The aim is to reduce the impact of the Group's activities, in a manner proportionate to the issues and throughout the life of the sites.

At the international level, ERAMET is very involved in the Business and Biodiversity Offsets Programme (BBOP), a recognised think tank in terms of biodiversity offset that the Group joined in 2011. Since 2015, ERAMET has participated in the annual seminar and is the Chairman of the executive committee of the think-tank.

At the French level, ERAMET participated both in discussions leading up to the promulgation of the Law for the Recovery of Biodiversity on 8 August 2016 and in the continuing reflections on its implementation, notably through the chairmanship of the Working Group on Biodiversity in MEDEF.(1)

(1) MEDEF: Movement of Enterprises in France.

#### 5.2.7.1 THE CHALLENGES OF BIODIVERSITY

ERAMET, through its mining and metallurgical activities, can impact ecosystem species, habitats and services, whether ordinary or remarkable biodiversity, depending on the location. As illustrated in the table below, the Group's most important biodiversity issues currently focus on New Caledonia. The data recorded for Gabon and Indonesia correspond respectively to species inventoried at the sites of the Maboumine and Weda Bay Nickel projects, both of which were suspended. Senegal, despite a low to moderate sensitivity to biodiversity at the site of implantation, is also the subject of particular attention given the important rehabilitation and revegetation issues.

ON SITES	NEW Caledonia	GABON	INDONESIA	OTHER
Number of species (flora and fauna) classified Critically Endangered (CR) <sup>(1)</sup> on the IUCN Red List <sup>(2)</sup>	4	2(*)	0(*)	0
Number of species (flora and fauna <sup>(3)</sup> classified Endangered (EN) on the IUCN Red List	24	4(*)	14(*)	0

- (\*) These values are derived from the results of the characterisation studies developed at the Weda Bay Nickel and Maboumine projects.
- (1) CR: IUCN classification for Critically Endangered Species.
- (2) IUCN: International Union for Conservation of Nature.
- (3) EN: IUCN classification for Endangered Species.

The Group does not have a mining or metallurgical site in operation in a protected area. There is, however, the case of Setrag, the Gabonese trains company, whose route crosses the Ramsar<sup>(1)</sup> site of Bas-Ogooué (for 56 km), the Ramsar site of Mboungou Badouma and of the Doume rapids (over 30 km) as well as the National Park of Lopé (for 62 km), a UNESCO World Heritage Site. (2) The Ramsar sites and the National Park were created between 2007 and 2009, that is to say, 30 years after the construction of the Trans-Gabon railroad. Setrag is also engaged with the Gabonese Ministry of Water and Forests and the National Agency of National Parks in the fight against poaching by raising awareness of its staff and its policy prohibiting the transport of protected species. The protocol agreement was renewed in 2016.

Number of sites within 10 km of a protected area	21
Average distance of these sites with protected areas	2 km
Types of protected area	Nature Reserve, National Parks, ZNIEFF <sup>(1)</sup> , ZICO <sup>(2)</sup> , Natura Zone 2000 <sup>(3)</sup> , Ramsar Zone, UNESCO World Heritage

- (1) ZNIEFF: Natural Zone of Ecological, Faunistic and Floristic Interest.
- (2) ZICO: Important Zone for Bird Conservation.
- (3) The Natura 2000 network is a European ecological network made up of Special Protection Zones and Special Conservation Zones designated by the Member States.

#### 5.2.7.2 IN NEW CALEDONIA

Société Le Nickel (SLN) exploits nickel deposits on various sites in the heart of a region renowned for its rich biodiversity and a high rate of endemism among its flora and fauna species.

For more than 35 years, SLN has developed reliable and environmentally friendly rehabilitation methods. The revegetation work made it possible to treat, by hydraulic seeding and plantations, more than 265 hectares. The low natural fertility of soils, rich in metals and poor in organic elements, makes this work very complex and difficult in addition to extreme rainfall conditions, leading to results that are not always readily visible in the short term.

Since 2010, SLN has been carrying out a major task of reorganising this "revegetation" activity and has thus been able to significantly increase the surface areas treated, while continuing to improve more and more the quality of the projects. Rehabilitation efforts in 2016 have focused mainly sub-contracted sites. There are more than 19 hectares that have been rehabilitated and revegetated. The following table shows the areas affected and rehabilitated over the last four years of operation for its five mining centres.

SURFACES (IN HECTARES)	2013	2014	2015	2016
Area affected during the year	60	48	52	24
Surface rehabilitated during the year	13	26	26	19 <sup>(*)</sup>
Area revegetated during the year	21	21	26	19 <sup>(*)</sup>

(\*) Taking into account the 16 hectares rehabilitated and revegetated on sub-contracted sites.

Since 1 January 2013, SLN Management has taken part in a Biodiversity Strategy to follow international standards for biodiversity conservation. Through this, in 2016, SLN continued the operational implementation of its plan for the comprehensive management of biodiversity.

In this dynamic and since 2014, SLN is working on the reintroduction of rare and threatened plant species through their identification at the mining centres and the creation of reproduction records, with the support of the New Caledonian Agronomic Institute (IAC). Today, 10 production records have been produced and are now available for nurserymen. The ultimate goal is to reintroduce them to their natural environment. The work and methods are shared and pooled in an ad hoc working group established within the Union of Industries of the Mine of New Caledonia (SIM).

In 2016, SLN also continued monitoring the sensitive flora of the marine environment and its mining creeks. The monitoring of the fauna is carried out every two years and will therefore be for 2017.

In addition, SLN is continuing its work on compensation at its two pilot sites to assess the feasibility of achieving no net biodiversity loss in New Caledonia respecting an offset-type approach in a biodiversity hotspot . To do this, SLN develops tools for

<sup>(1)</sup> The Ramsar List refers to wetlands of international importance.

<sup>(2)</sup> UNESCO: The United Nations Educational, Scientific and Cultural Organisation.

calculating losses and gains in biodiversity with the support of its scientific partners and the firm MICA Environment. The first results and challenges encountered at the two pilot sites were presented at the BBOP meeting in London in November 2016.

At the same time, SLN continues to participate in the ongoing reflections on the territory, and relating to the compensation and implementation tools, with the SIM and the North and South Provinces, as well as the specialised firms that accompany them.

#### 5.2.7.3 IN GABON

The Ogooué Mining Company (Comilog) has been exploiting manganese ore on the Bangombé Plateau in Moanda, Gabon for more than 50 years.

Although the manganese reserves of this plateau are still considerable and make it possible to envisage more than 10 or even 20 years of exploitation, part of the plateau has already been rehabilitated. The mining procedure has been revised to incorporate a remodelling step and the progressive upgrading of the topsoil. Since 2010, the gradual reshaping of historically disturbed surfaces has also been achieved.

In 2014, a mining environment brigade was created, which contributed to the significant increase in rehabilitated areas: 355 hectares in three years.

AREAS (IN HECTARES)	2013	2014	2015	2016
Area affected during the year	64	67	52	75
Area rehabilitated during the year	31	95	119	141

At the same time, Comilog continues to improve its rehabilitation strategy, taking into account the results of the latest environmental studies developed for the Bangombé plateau and the exploitation of its edges.

In addition to the Comilog mining activities, the *Parc de la Lékédi* (subsidiary of Comilog), located 5 km from Bakoumba, in the south-east of the Gabonese Republic, covers 14,000 hectares of savannahs, gallery forests, and bodies of water.

The park is dedicated to the preservation of protected species, the observation of animals and the reception of young orphans of poaching (mainly primates). It also conducts research on biodiversity and combating poaching in partnership with Gabonese and international scientists and organisations.

The Mandrillus Project, carried out in partnership with the CNRS since 2011, continues. Researchers and field assistants are studying a population of mandrills in the wild to answer fundamental questions in evolutionary ecology, anthropology, food ecology, animal communication (etc.), but also to more applied questions of conservation and epidemiology.

As part of the protection of gorillas, the Park collaborates with the Aspinall Foundation. In 2015, they initiated a project to reintroduce orphaned gorillas into the Park. They should see its culmination from 2017 with the release of the group formed in the Batéké Plateau National Park. At the same time, the park serves as an acclimatisation area for gorillas from English zoos before their reintroduction.

The park is also associated with:

- a reintroduction programme for threatened or extirpated species in Gabon (e.g.: Defassa Waterbuck) in collaboration with the Agency of National Parks and the International Union for the Conservation of Nature since 2014. The first reintroductions should take place in 2017:
- a study on the reintroduction of other endangered species in Gabon (Hippos) was launched in 2016:
- a project to restock buffalo in the Batéké Plateau National Park with the goal of strengthening the population of large carnivores (lions).

Since 2013, the Park has also been involved with the NGO Conservation Justice and the Haut-Ogooué Regional Water and Forest Administration to carry out mutual awareness-raising and anti-poaching campaigns with very positive results in terms of seizure and confiscation of illegal weapons.

In February 2016, the Park also co-organised the event "A Week in the Heart of the Gabonese Forest" which was held in Libreville.

Finally, the Park remains the leading producer of Gabonese tilapia which is a popular alternative to the consumption of bushmeat by the local populations.

#### **5.2.7.4 IN SENEGAL**

In Senegal, the Grande Côte operations began in 2014. Exploitation of mineralised sands involves the clearing of vegetation as a floating dredge moves along the deposit.

Biodiversity is not highly sensitive. The issues are mainly rehabilitation and revegetation to be implemented over large areas.

After reprofiling the sterile sands to best reflect the original landscape (dunes), revegetation includes the following steps: Covering relevant areas with manure and topsoil, which promotes the growth of seeds and seedlings, and then sowing/planting endemic pioneer species that stabilise the dunes in the short term and then facilitate recolonisation by other species in the medium and long term.

In 2014, the first revegetation tests were conducted in the field and were successful with two methods:

- planting from seed harvested on site;
- planting seedlings of nursery-grown local species.

The success of the rehabilitation methods was confirmed in 2015 and the area treated had greatly increased. In 2016, good availability of areas to be rehabilitated and the success of rehabilitation method independent from the rainy season (July to September) has allowed an area twice as large to be rehabilitated and revegetated.

SURFACES (IN HECTARES)	2014	2015	2016
Area affected during the year	150	188	149
Area rehabilitated during the year	2	45	90
Area revegetated during the year	2	45	90

Simultaneously, GCO has commissioned the biodiversity and soil characterisation studies of the mining area for the next five years, in addition to awareness and training on biodiversity management for staff.

#### 5.2.7.5 IN ARGENTINA

In November 2016, the Argentine lithium recovery project submitted an application for authorisation to operate. In accordance with the ERAMET Biodiversity Policy, the dossier includes characterisation studies of the initial state, ecosystem services and community uses of biodiversity, as well as, the analysis of the potential impacts on the biological environment.

The studies at this stage concluded at limited issues on biodiversity. None of flora and fauna species inventoried is considered threatened at the international level, according to the Red List of the International Union for Conservation of Nature (IUCN). In this desert environment of the Andean highlands, vegetation is mainly composed of shrubs that grow in a very dispersed manner, leaving large areas of bare soil between them. Habitats are mainly occupied by birds (especially by the Puna miner and the Golden-spotted ground dove), foxes and vicunas.

### **5.3 INFORMATION ON SOCIETAL COMMITMENTS** IN FAVOUR OF **SUSTAINABLE** DEVELOPMENT

#### **5.3.1 TERRITORIAL, SOCIAL AND ECONOMIC IMPACTS OF THE** COMPANY'S ACTIVITY

#### 5.3.1.1 EMPLOYMENT AND REGIONAL DEVELOPMENT

As of 2016, the ERAMET group is present in over 20 countries worldwide and actively participates in the economic and social development of countries and regions in which it operates. This results in the creation of direct and indirect jobs (in particular through the emergence of companies linked to the activities of the Group's sites), the construction of local infrastructures important for development, the involvement of sites in major national or regional sustainable development initiatives or even raising awareness of sustainable development among local populations.

#### JOB CREATION AND LOCAL SUBCONTRACTING

The major subsidiaries of the Group contribute significantly to job creation in the areas where they operate. This is particularly true of SLN, the first private employer in New Caledonia, and also of Comilog, first private employer in the province of Haut-Ogooué in Gabon. In Senegal, Grande Côte Opérations (GCO) signed an agreement with the local prefecture and created a recruitment commission with the municipal authorities in order to foster the dynamism of a local employment cluster.

In addition, many sites are working to develop local skills over the long term in order to increase job creation. In Senegal, the Grande Côte Opérations (GCO) signed a partnership agreement with the National Centre for Professional Qualification in 2016, aimed in particular at a collaboration for setting up training programmes in the field of new extractive industry trades. In Gabon, a public-private partnership between the Gabonese state and the ERAMET group, initiated in 2012, resulted in the opening of the Moanda School of Mines and Metallurgy (E3MG) in 2016. This school, which aims to train young Gabonese people in the fields of geoscience, process engineering, mining research and mining, received its first group of 29 students in three curricula in 2016.

The activities of the Group's sites also encourage the emergence of local companies, as they often require a significant amount of subcontracting. This is the case in particular with the SLN in New Caledonia, whose mines, plant, and support services subcontract activities and draw from the network of local businesses. Overall, it is about 8,000 indirect and induced jobs that are generated by the SLN in this way. The SLN also contributed a portion of the capital of two Mixed Economy Companies (Grand Nord and Sud Minier), set up by the Northern Province, to develop in particular subcontracting companies in the mining sector. At Comilog, 80% of the operating purchases are made in Gabon, nearly 20% of which are directly purchased in the Province in which Moanda is located (Haut-Ogooué).

#### CONSTRUCTION OF LOCAL INFRASTRUCTURES

In 2016, all of the Group's mining sites continued their participation in the construction of local infrastructures, benefiting the territorial and economic development of their geographical areas.

In Senegal, Grande Côte Opérations (GCO) funded the construction and furnishing of primary schools in four neighbouring municipalities as part of its mining social programme, which was developed in consultation with local populations and authorities. GCO has also built a community market with fifty spaces available to the populations of a neighbouring village in order to stimulate the economic development of that area.

In New Caledonia, as part of several partnerships or agreements with the mining towns and Provinces, the SLN continued in 2016 its contribution to the financing of municipal facilities (housing development, nursery schools) and repair, restoration or construction of public infrastructures (bridges, roads, water supply, etc.).

In Gabon in 2016, Comilog also achieved the rehabilitation of public schools in the city of Moanda and funded the reconstruction of the road connecting the city to the train station.

#### INITIATIVES RELATED TO SUSTAINABLE DEVELOPMENT

Aware of the impacts they can have on their environment and communities, sites are increasingly engaged in regional or national initiatives related to sustainable development.

Site representatives contribute to local or national reflections on subjects such as energy savings, "clean production", climate plans or water conservation, through their participation in working groups on these topics. For example, in 2016, GCO participated in a conference on Sustainable Development organised by the Ministry of the Environment and Sustainable Development, as well as in the Economic, Social and Environmental Forum organised by one of the localities in which the site is established. The company also participated in the national exchanges for the implementation of the Senegalese SENBIO-INFOS programme. The project aims to centralise, digitise and manage national biodiversity data collected by various stakeholders, including companies such as GCO.

Some sites are also involved in national or European research programmes to work on topics such as, for example, energy efficiency in industry. This is the case of ERAMET Engineering, a member of the innovation platform for the circular economy TEAM<sup>2</sup> and Comilog Dunkerque, participating in the filtration dust recovery project supported by this same platform.

More generally, the initiatives implemented by Comilog in Gabon and by GCO in Senegal are in line with the two national programmes called "Gabon Emergent" and "Senegal Emergent", aimed at the sustainable development of these two countries' potential in human, natural and mineral resources.

#### RAISING PUBLIC AWARENESS OF SUSTAINABLE **DEVELOPMENT**

The involvement of ERAMET group companies in the territories also involves public awareness campaigns on sustainable development issues, in particular those related to the Group's activities.

For example, the site of Erasteel Commentry, which is preparing to accommodate alkaline and salt batteries recycling activities, conducted awareness-raising sessions on collecting batteries and presentations of circular economy in Commentry schools. At several sites, events were also held with the eco-agency, Corepile, on European battery recycling day on 9 September 2016. Aubert & Duval, through the School of Sciences of Clermont-Ferrand (France), has renewed its interventions in local primary schools, focused this year on the theme of waste.

#### 5.3.1.2 INFORMATION AND CONSULTATION WITH RESIDENT OR LOCAL POPULATIONS

Aware of its responsibility towards society and more specifically towards neighbouring and local populations, the Group is committed to keeping its stakeholders informed of its activities through the establishment or participation in local committees or meetings for information and consultation.

Throughout the Group, nearly half of the sites (including all mining sites) participated in information committees or organised information meetings for local residents. These, organised one to five times a year for the majority of sites concerned, have sometimes gathered several hundred residents.

For projects or sites developing new activities, these information meetings are essential for explaining the progress and presenting the measures implemented to manage the impacts. In Argentina, for example, Eramine Sudamerica holds public meetings on a quarterly basis to inform the communities closest to the project to exploit the lithium deposit of the progress of the

The sites in operation also have the opportunity to regularly inform their neighbours, specifically regarding industrial risks or the management of specific environmental and social impacts, for which residents have a particular interest. In the United States, for example, the GCMC Freeport site is a member of the "Community Awareness Panel", which provides monthly information to local residents on the site's activities, including projects to improve the management of environmental impacts. In Norway, as every year, ERAMET Norway's three sites have informed local residents about the status and plans of the company. These meetings also provided an opportunity to discuss issues related to air emissions. The SLN, in New Caledonia, participates in the Local Information Committee and is also a member of the SCAL'AIR Association, alongside local authorities and other associations. SCAL'AIR provides the population with general information on the issue of air quality and its measures are available on its website. In Sweden, the Langshyttan site of the Erasteel Kloster AB subsidiary has also set up a dialogue with local residents on the measures taken to reduce the noise generated by the plant.

In addition to the exchanges carried out at such meetings, more and more sites are setting up systems to receive and respond to concerns, questions or complaints from neighbouring populations. By the end of 2016, more than one third of the sites have set up a procedure or mechanism for managing these subjects. In Norway for example, ERAMET Norway's three sites have adopted the joint "Synergy System" mechanism by providing residents with a phone number, for which calls are handled according to a common procedure.

#### **5.3.2** DIALOGUE WITH OTHER STAKEHOLDERS

ERAMET sites, whether mining or metallurgical, interact daily with a wide variety of stakeholders, neighbours, schools, clients, public authorities, associations, etc. From participating in local forums, to setting up partnerships and organising open days, each of the Group's sites operates according to its activities and resources, in line with the Group's sustainable development policy.

#### 5.3.2.1 OPERATIONS CONDUCIVE TO DIALOGUE

#### OPENING THE SITES TO THE PUBLIC

ITo ensure transparency and better communication, the Group's sites regularly open their doors to all categories of stakeholders, employees' families, neighbouring residents, local authorities, customers, etc. These visits can host from a few tens of people to a few hundred people and aim to introduce them to the facilities and the activities of the sites.

At the SLN, the Doniambo site continued to organise monthly open days for residents of neighbouring districts, enabling them to witness a metal or slag casting. At the Thio mining centre, the mines were opened for visits, in connection with the local tourist office. This is also the case at Tiébaghi. Open days were also organised at the Söderfors site of the Erasteel Kloster AB subsidiary in Sweden, Erasteel Champagnole in France, and Comilog in Gabon.

#### **CELEBRATING EVENTS**

Industrial and mining sites also regularly celebrate important events for themselves and their stakeholders. For example, in October 2016, the Erasteel site in Champagnole (France) celebrated its centenary in the presence of employees, their families, neighbouring residents, as well as local elected representatives and partners. More than 300 people were able to interact with the employees and visit the forging, rolling, heat treatment and finishing workshops of the site.

#### 5.3.2.2 DIALOGUE WITH EDUCATIONAL INSTITUTIONS AND SUPPORT FOR EDUCATION AND TRAINING

The Group is committed to a policy of active support to education and training of local people and young people, in particular. This support takes many forms on the sites, at the head office, and in the Group's projects.

#### DIALOGUE WITH EDUCATIONAL INSTITUTIONS

Numerous sites and subsidiaries maintain close relations with educational institutions. This includes:

- site visits organised for classes of all levels, as was the case in 2016 for more than 60% of the Group's sites, following the example of the Aubert & Duval sites in France:
- partnership initiatives with educational institutions, in the form of interventions by employees in institutions or skills-based sponsorship, as done by almost half of the sites in 2016. The Aubert & Duval site of Les Ancizes is a good example: it has formed partnerships with five high schools, two engineering schools, and the Association for the Training of Industry Professionals;
- a participation in the articulation of training programmes of educational institutions. At ERAMET Marietta, the environmental engineer is, for example, Special Advisor Ohio University's Occupational and Environmental Health Programs.

In addition, sites or Group representatives regularly share their expertise within specialised masters or graduate schools, notably at INSA (National Institute of Applied Sciences, France) on energy efficiency or at Mines ParisTech on the environment and societal issues in mining and industrial projects.

#### HOSTING STUDENTS

Each year, more than 80% of the Group's sites host interns, apprentices, or PhD students for a few weeks or months. The Group's sites, which host several hundred students or apprentices each year, thus play an important role, locally, in the transmission of knowledge.

#### 5.3.2.3 DIALOGUE WITH THE AUTHORITIES

All the Group's sites maintain regular relations with their authorities. Beyond regulatory requirements, the organisation of site visits for the authorities is a welcomed opportunity to present the investments made or future projects, as well as the main issues. More than one third of the Group's sites opened its doors to representatives of the administration or elected representatives in 2016. This is the case, for example, with the TiZir Titanium and Iron site in Norway, which this year organised several factory visits for local senators and parliamentarians.

As part of the creation of the new MKAD plant in Varilhes (France), a partnership between Aubert & Duval and Mecachrome, several visits were organised for representatives of the prefecture, the community of communes, and the deputies of the constituency. They also attended the inauguration of the plant in October, along with customers, suppliers, and site employees.

In April, the SLN received a special visitor at its Doniambo site in Nouméa, namely the Prime Minister of the French Republic, Manuel Valls, accompanied by the Minister for Overseas France, Ms. George Pau-Langevin. They were accompanied by New Caledonian deputies and senators, the President of the New Caledonian government, the Chairman of the SLN Board of Directors. and the CEO of the ERAMET group. The President of the Senate, Mr. Gérard Larcher, also visited the Tiébaghi mine. Relations with the authorities are also fostered by the Group's head office. The various entities of the ERAMET group meet with ministerial offices and departments to present the Group's activities and concerns, participate in working groups, organise visits of our facilities, or simply answer their queries. Similar exchanges take place with the European authorities in Brussels.

#### 5.3.2.4 STRONG INVOLVEMENT IN PROFESSIONAL BODIES

Whether at national, European or international level, ERAMET is actively involved in professional bodies, which represent its own activities or sectors and, more generally, contribute to the promotion and development of companies and their industrial and commercial activities.

The Group is involved at different levels. Several members of the Comex and Directors represent the Group in the governance or management bodies: This is the case for the Alliance des Minerais, Minéraux et Métaux (A3M), the Extractive Industries and Primary Processing Strategy Committee, the MEDEF, EuroAlliages, the European Powder Metallurgy Association, The International Manganese Institute, and the Nickel Institute. Furthermore, several Group experts participate in the various committees or thematic working groups set up by these professional bodies.

#### 5.3.2.5 PARTNERSHIPS AND SPONSORSHIPS

The ERAMET group is committed at various levels in partnership or sponsorship activities contributing to the development of local life. In 2016, more than half of the Group's sites undertook such actions.

#### LOCAL PARTNERSHIPS AND SPONSORSHIPS

The majority of these partnerships or local sponsorship activities have been made in the field of education. In Norway, the site of Porsgrunn, for example, maintains its financial support to the DuVerden Sciences centre, which aims to awaken the pupils of the town to the sciences. The Interforge site has supported a group of secondary-school pupils in their participation in a robot programming contest, involving as many young girls as possible, who are still under-represented in this sector.

Many sites encourage the development of cultural initiatives in various forms: support for dance and music festivals (Erachem Comilog Tertre, Belgium, the Aubert & Duval site in Pamiers, France, and Brown Europe in France) or theatre (Porsgrunn site in Norway, which once again sponsored the town's international theatre festival). Sporting activities are also sponsored by many sites.

Some sites are also active in the field of health. This is the case, for example, of the partnership between Grande Côte Opérations (GCO) and AFRIVAC who work together to implement vaccination campaigns for Senegalese children and raise parents' awareness on the subject. In Gabon, Comilog works with two NGOs specialising in HIV awareness.

More than ten programmes were also implemented for local economic development. In Argentina, for example, Eramine Sudamerica has continued its project to reintroduce quinoa crop in its zone of activity. Finally, some sites provide financial support for environmental protection actions, often in partnership with specialised NGOs. For many years, the four Norwegian sites, TiZir Titanium & Iron in Tyssedal and ERAMET Norway (Kvinesdal, Porsgrunn and Sauda), have partnered with the NGO Bellona, which provides them with advice and expertise on environmental issues.

#### **FOUNDATIONS**

The Aubert & Duval Foundation, created in 2010, aims to develop initiatives that contribute to the vitality

of the French regions in which Aubert & Duval sites operate and to support local micro-economic projects and associations. The Foundation collects applications from the French Aubert & Duval sites for sponsorships funding, studies the projects, and then arbitrates. The Foundation's Executive Committee then grants budgets to the sites for their sports, cultural, or charity sponsorships. Among the significant achievements of the Foundation in 2016, the *Maison de l'alternant des Combrailles* (Puy-de-Dôme) opened its doors in September. This facility, which complements the system created in 2015 with the Combrailles Training Centre, allows young people who have chosen apprenticeship in the area to find housing.

The Saloi Foundation, also founded in 2010 and sponsored by the WBN project in Indonesia, concentrated in 2016 on supporting the French cultural centre of Ternate, of which it is also a founding member, and which offers free French lessons in particular.

In the context of a difficult market environment, ERAMET and MDL, shareholders of TiZir, decided to terminate the activities of the African Foundation for Resource and Industry (AFFRI), which they had set up in the United Kingdom. ERAMET, MDL and TiZir remain convinced of the role that industrial players must fulfil in helping rural populations of Senegal, particularly in terms of access to sustainable energy. They will, therefore, continue to support projects to this extent, through the community development programmes of the Senegalese subsidiary Grande Côte Opérations (GCO).

programme was proposed by the Group's Ethics Officer. This has been validated by the Group's Ethics Committee, created by the ERAMET Executive Committee.

This programme, which aims to strengthen the existing system, is based on the following key lines:

- strengthening of the compliance structure with the creation of an "Ethical Compliance Committee" consisting of representatives of the main functions of the Group;
- establishment of a network of "ethical compliance officers" at the level of the divisions and major subsidiaries who ensure the correct application of procedures in the field;
- adaptation of risk mapping and audit procedures to the prevention and detection of corruption and trading in influence;
- development of a training programme for employees in the form of an e-learning course on the topic of the Code of Ethics;
- development of procedural terms and conditions for business partners, suppliers, subcontractors, intermediaries and customers, based on the ethical principles of the Group and monitoring their good practice.

During 2016, the whistle blowing system of the Code of Ethics continued to operate under the authority of the Group's Ethics Officer. Each alert was investigated and treated confidentially.

#### **5.3.3** RESPONSIBLE GOVERNANCE

#### 5.3.3.1 CODE OF ETHICS AND TRANSPARENCY

In line with the values of the ERAMET group and to better respond to the global challenges it faces, the Group adopted a new Code of Ethics on 1 January 2015, translated into the languages used within the Group. It is available on the Group's website at the following address:

http://www.eramet.com/sites/default/files/charte\_ ethique\_groupe\_eramet\_francais.pdf

In 2016, in order to fully implement the principles of the Code, the outline of an ethics compliance

### 5.3.3.2 EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE (EITI)

ERAMET has adhered to the EITI (Extractive Industries Transparency Initiative) since 2011. Based on a set of principles and rules, as well as a coalition made up of governments, companies, civil society groups, investors and international organisations, EITI promotes transparency on local revenues. In signing up to these principles, ERAMET demonstrates its intention to exploit natural resources responsibly and be transparent on financial flows between companies and host countries, but also to report regularly to its stakeholders.

ERAMET has sites in three EITI member or candidate countries: Senegal, Indonesia and Norway. In Senegal, the joint venture Grande Cote Operations (GCO) provided all the information needed to produce the second EITI report of this candidate country, covering 2014. In Indonesia, ERAMET has not mining activities yet, and in Norway ERAMET has only industrial sites. These subsidiaries were not required to contribute to the EITI reports of these two countries. ERAMET has also followed the developments of the EITI governance and standard reform that took place in 2016.

#### 5.3.3.3 CUSTOMER RELATIONS - PRODUCT INFORMATION

The Group's sites implement product traceability, which includes information covering all steps taken between receiving the raw materials and manufacturing the finished product before it is delivered to the customer.

When compulsory, sites produce safety data sheets (SDS) used to circulate information on chemicals. However, when it is not compulsory to draw up a SDS, but the Group considers it important for external and internal stakeholders to have sufficient information on products and substances, sites draw up RMISs (Risk Management Information Sheets), which are nearly the same as SDS.

Moreover, the Group's entities and sites only sell their products to other industrial operators ("Business to Business" relationship). In this context, the Group produces full information on the product and its downstream use and distributes it to its customers. Numerous information and discussion forums are also organised for actors involved in upstream and downstream sectors of the metal and metal processing industry.

Product traceability is mainly carried out upstream to identify the supply source of raw material. The users of our products attach great importance to traceability, which must allow to track the raw materials used to make a particular part and to identify all the stages that led to the production of the finished product from this material.

#### 5.3.4 RESPONSIBLE PURCHASING

#### 5.3.4.1 THE GROUP'S RESPONSIBLE PURCHASING CHARTER

ERAMET group's activities involve purchasing and subcontracting. However, the use of subcontracting remains limited, as the amount of subcontracting purchases represents less than 10% of the Group's turnover. In particular, it should be noted that subcontracting of the mining activity does not apply to the sites in Gabon or Senegal, but only to eight mining sites of a smaller size in New Caledonia, in a context of social and environmental law similar to that of mainland France.

Due to the issues associated with the Group's activities and also to the strong expectations of stakeholders on this issue, purchases are the subject of particular attention. ERAMET aims to favour suppliers offering products or services that respect environmental and social criteria while maintaining a high level of competitiveness.

This Group's Responsible Purchasing approach is guided in particular by the ERAMET Responsible Purchasing Charter, in force since 2013, and updated in 2016. This charter formalises the Group's desire to strengthen the integration of sustainable development issues related to procurement, and promotes a dynamic of continuous improvement. ERAMET's expectations with regard to its suppliers, subcontractors and service providers primarily target three main areas: human rights and working conditions, environment and products, and good business practices.

Updating the charter in 2016 made it possible to clarify ERAMET's requirements for responsible purchasing and reflect the Group's developments in the field of CSR, as well as, the increasing expectations of stakeholders on this topic. In-house information and awareness measures have been deployed for this new version. It is also available on the ERAMET website at the following

http://www.eramet.com/system/files/publications/pdf/ eramet\_charte\_achats\_responsables.pdf

In 2016, approximately 40% of the Group's industrial and mining sites attach the Responsible Purchasing Charter to contracts with their subcontractors and suppliers. As part of the Group's ethical compliance programme, all ERAMET sites will gradually have to do so from 2017 onwards. Some sites have also formalised more specifically a responsible purchasing process. This is the case for Comilog in Gabon which has drawn up a "Supplier Guide" in which the Group's Responsible Purchasing Charter is stated, as well as, the values on which it is based.

#### 5.3.4.2 RFI ATIONS WITH SUBCONTRACTORS AND SUPPLIERS

In line with the principles set out in the Responsible Purchasing Charter, an increasing number of sites are integrating CSR criteria into the assessment of their subcontractors and suppliers.

In order to reinforce these existing practices, ERAMET, at the end of 2016, committed to launching a comprehensive and progressive approach to assessing the CSR performance of its suppliers. Initially, this will consist in sending a self-assessment questionnaire verified by an external third party to suppliers selected thanks to an initial risk analysis carried out at Group level. The guestionnaires focus on CSR criteria such as respect for the environment, the management of the value chain, respect for human rights and labour relations, and business ethics.

Furthermore, certain subsidiaries of ERAMET participate in other programmes related to their suppliers. In particular, Aubert & Duval is a signatory of the "Responsible Supplier Relations Charter" (formerly the "Charter for Inter-Business Relations"), which was jointly developed in 2010 by the Mediator of Enterprises and the Corporate Leaders and Purchasers of France (CDAF). This promotes equitable relationships between buyers and suppliers with respect to everyone's rights and duties, with particular attention on the relationship between major contractors and SMEs.

#### 5.3.4.3 MONITORING SUPPLIES OF "CONFLICT MINERALS"

Some of the Group's sites use tungsten or tin in their production process. These two minerals are considered as "conflict" minerals as their exploitation can be used to finance armed groups and fuel civil wars in some

parts of the world. Eurotungstène pays close attention to the conditions in which these resources are mined and, specifically to the compliance with the "Conflict Mineral Trade Act", more commonly known as the Dodd Frank Act, and the OECD guidelines for multinational corporations. Eurotungstène is also a member of TI-CMC (Tungsten Industry - Conflict Minerals Council) and as such, is listed as a company which procures tungsten from compliant suppliers ("conflict free smelters").

In 2014, the subsidiaries of ERAMET Alloys, Aubert & Duval and Erasteel, adopted a "Conflict Minerals Policy Statement" specifying that ERAMET Alloys refrains from sourcing minerals from conflict zones and requires its suppliers to systematically give information on the supply source of these metals.

Lastly, in 2016, the Group's Public Affairs Department closely monitored the progress of the draft European Regulation on conflict minerals, in conjunction with the French and European professional federations.

## **INDUSTRIAL AND MINING PROJECTS**

All the projects carried out by the Group are developed in line with the Group's Sustainable Development policy adopted in 2010, the Code of ethics, and the environmental, health and safety policies, as well as international reference standards. The aim is to establish a long-term trusting, relationship with the communities present in the regions where the Group operates and to prevent any risk of violation of the basic rights of these communities, particularly, where appropriate, native communities. This is achieved by implementing mechanisms for dialogue with the representatives of relevant stakeholders.

Environmental, social, corporate, and health aspects are taken into account from the most upstream phases of projects. Sustainable development experts and specialists are integrated into the industrial, technical, legal and financial teams, and participate in the various steering committees, righ from the project brief, feasibility and pre-construction stages. Likewise, they participate in acquisition audits in the case of merger or acquisition projects, as well as, in due diligence related to assets disposal. Lastly, the environmental and social aspects for which the Group can be held liable are integrated into the risk assessment and management process for these capital expenditures.

The following paragraphs detail the consideration of sustainable development factors in the main projects undertaken by the Group in 2016. Compared to previous years, it is worth recalling that the Board of Directors meeting of 14 October 2015 suspended the Group's major projects, which explains the lack of developments concerning the Weda Bay Nickel project in Indonesia and the Maboumine project in Gabon.

#### **5.4.1 PROJECT TO IMPROVE THE** RELIABILITY AND SECURITY OF THE RAILWAY IN GABON

The Trans-Gabonese railway crosses Gabon, from Libreville to Franceville, over a distance of 710 km and has 52 engineering structures and 22 stations. In addition to transporting the ore from Comilog to the port of Owendo, it plays a strategic role in the country's economic development.

The Setrag company (Société d'Exploitation du Transgabonais) operates the railway under a Concession Agreement established in 2005 and updated in 2015. Setrag manages the infrastructure, traffic, and railway operations (passengers, timber, ore and other goods).

For several years, Setrag has stepped up the pace of maintenance and restoration work on the Trans-Gabonese railway. These efforts go beyond normal maintenance.

Despite these efforts, the overall condition of the road continues to penalise the network operations. Setrag has decided to intensify the infrastructure renovation programme. This requires a heavy capital investment that cannot be financed solely from its own funds. So, the company turned to the International Financial Corporation and Proparco to study the possibility of funding for this programme. Financing arrangements have been agreed upon between the parties.

The concession contract provides for a contribution from the concession grantor, the State, to certain works,

in particular those associated with the reinforcement of infrastructures, the rehabilitation of engineering structures, the securing of level crossings and the renovation of "employee" housing developments. In this context, the State has taken steps similar to Setrag to obtain financing from the French Development Agency, whose terms were finalised in December 2016.

For the proper management of the risks and impacts associated with this programme. Setrag developed. between 2014 and 2015, an environmental and social diagnosis, as well as dedicated management and action plans. They were completed in 2016 by an impact notice dedicated to a concrete-steel sleepers manufacturing unit under construction in the commune of Booué.

2016 also saw the renewal of the Memorandum of Understanding with the Water and Forests and the ANPN (National Agency for National Parks) for the fight against the transport of bushmeat, the clean-up and refurbishment of the fuel stations of the three maintenance workshops in Owendo, Booué and Franceville, as well as the first work in the workers' housing development with the rehabilitation of housing and the establishment of waste collection. An authorisation request was also filed for the creation of a landfill in Booué and was obtained in October 2016.

#### 5.4.2 THE LITHIUM PROJECT IN ARGENTINA

Lithium is one of the metals with high growth potential, particularly for the development of energy storage for portable equipment and electric vehicles. ERAMET teams have developed an innovative extraction process for the production of lithium salts used in the manufacture of cathodes of lithium-ion batteries.

The manufacture of lithium salts from brines is an alternative process which differs fundamentally from the traditional process of the natural evaporation of brines. The environmental impact of this new process is significantly reduced compared to the traditional method. This process was developed in partnership with IFPEN (IFP Énergies Nouvelles) and has been the subject of patent filings.

In 2012, the Argentinean subsidiary, Eramine Sudamerica SA, discovered a lithium deposit in the Province of Salta, in northern Argentina: the "Salar de Centenario-Ratones". Since then, it has conducted

an exploration programme which has considerable potential resources, sufficient to develop a large-scale industrial project (see resources chapter - Reserves).

In 2014, the government of Salta endorsed the agreement signed between REMSA, a public company of the Province of Salta, and Eramine Sudamerica, which allows ERAMET to become the owner of the mining titles of the deposit covering nearly 500 sq.km.

In 2015 and 2016, the exploration programme was continued to confirm the extent of the deposit and enhance the reliability of its lithium resource estimates. Meanwhile, engineering studies and pre-industrial pilot testing of lithium carbonate production were conducted in 2016. Social and environmental studies required for the development of the project have been completed. These include the environmental and social baseline study and the environmental and social impact assessment, and involved more than 25 external experts, local teams, and ERAMET's corporate support functions. Pumping tests, drilling, hydrodynamic modelling and engineering studies, as well as social and environmental studies were carried out in accordance with the Group's Sustainable Development policy, that is to say, in compliance with Argentinean regulations and international standards. Eramine Sudamerica has regular exchanges with the communities neighbouring the project site, and has launched several development projects with them. These include the revitalisation of the quinoa crop for the purpose of economic development and the fight against malnutrition, or an initiative in partnership with the Ministry of Health to develop access to health services for the inhabitants of the Altiplano.

#### **5.4.3** THE EXTENSION OF TITANIUM **ACTIVITIES IN VARILHES, FRANCE** (MKAD) AND THE AERONAUTICAL TITANIUM RECYCLING PROJECT (ECOTITANIUM)

In order to provide a complete offering to its customers, the MKAD project, a joint venture between Mecachrome and Aubert & Duval, located close to the current Pamiers site, in the town of Varilhes, aims to develop a unit specialising in finishing aviation-grade titanium parts and to consolidate the Group's position in closed die-forged parts. The plant was inaugurated in October 2016 and a second phase of development is underway.

In October 2016, MKAD obtained its operating permit for the second phase (surface treatment) in order to start this activity in 2017.

Furthermore, on the Saint-Georges-de-Mons site, work continued in 2016 for the construction of the EcoTitanium project, which is the first French aeronautical-grade titanium recycling sector. As of April 2016, the assembly of the plasma furnace began and ended at the end of the year. After cold tests, the period of the first fusion trials started on 3 February 2017.

Moreover, EcoTitanium has invested in a line dedicated to the preparation of titanium chip briquettes during the last quarter of 2016 and in a vacuum reflow furnace intended for the remelting of electrodes which should begin very soon.

#### **5.4.4** THE PRODUCTION OF HIGH-SPEED STEELS AND RECYCLING OF BATTERIES, CATALYSTS AND METAL OXIDES ON THE SAME SITE IN FRANCE

In 2015, ERAMET decided to combine the activities of three plants on the site of Erasteel Commentry:

- the recycling of alkaline and saline batteries from Valdi Feurs (operations discontinued in 2011);
- the recycling of oil catalysts and metal oxides from Valdi Le Palais-sur-Vienne;
- the production of high-speed steels from Erasteel Commentry, which uses some metals recycled by Valdi.

This project has strong industrial synergies and a value chain approach based on innovation and resource efficiency. It is at the heart of the circular economy via the recyclability of Molybdenum, Nickel, Cobalt, Zinc, and Manganese metals in the areas of high-speed steels, stainless steels or the Zinc industry. It is located in the heart of the town with activities of a "Seveso high threshold" status due to the storage of a significant amount of used catalysts. This project shows the evolution from steel making to waste recycling using the process historically used by Valdi together with many environmental, technical and industrial improvements, and based on the metallurgical experience of the site.

Environment, safety, and stakeholder consultation were taken into account from the scoping study, the operating permit was obtained in January 2016.

The relocation of industrial equipment from Valdi Le Palais to Commentry is complete. The construction and installation of the new equipment, including those dedicated to emissions management, particularly extensive air filtration, took place throughout 2016. Work on the development and management of water is finalised. Production will increase in 2017.

Particular attention was paid to safety aspects and management of industrial risks.

At the European level, this project represents a concrete response to the recycling of batteries and accumulators with the aim of zero landfill and 100% recovery. Valdi will offer the highest processing capacity in Europe based on pyrometallurgical technology, ensuring 100% recovery of metals from used batteries and accumulators.

#### 5.4.5 THE TRANSFORMATION OF SANDOUVILLE'S HYDROMETALLURGICAL PROCESS FOR TREATING A NEW RAW MATERIAL

Since 1978, the Sandouville hydrometallurgical plant exercises its nickel salt production activities and high purity nickel metal in the Le Havre port area. The supply of raw materials (Nickel matte) has been done so far via Société Le Nickel (SLN), subsidiary of ERAMET in New Caledonia. Changes in the commodities market have changed the value of this model. The project therefore consists in replacing this supply with a new European raw material and in adapting the process of the Sandouville plant to treat these new nickel mattes.

The research work began in 2014 and ended with the completion of an industrialisation pilot in 2016. The design of the installations integrates the environment, energy management, safety and management of industrial risks at the heart of the project. The modification of the prefectoral decree of operating permit is currently being examined.

# 5.5 RESPONSIBILITY FOR CHEMICALS

#### **5.5.1 ISSUES**

ERAMET is one of the world's leading producers of alloys, super alloys and high-performance steels operating globally, also generating a series of chemicals that result from various hydrometallurgical, pyrometallurgical or recycling processes. The Group pays particular attention to the management of the chemical substances and mixtures it uses or produces, so as to substitute as far as possible the most dangerous substances and to ensure a high level of risk control, protection of human health and the environment.

Due to the diversity of its activities, the ERAMET group is characterised by its dual role as both a user and producer of chemical substances and mixtures. Indeed, the development of these products requires the use of ores, minerals, recycled secondary materials and a series of metal inputs to adjust the right compositions of the desired grades. The use of chemicals as "commodities" (acids, bases, salts, etc.) is also important. It is also necessary to manage the numerous products used at the laboratory level, as well as maintenance of installations, and also for other specific purposes such as water treatment or the capture of vapours and aerial particles.

All this requires an important involvement in the improvement of knowledge about their intrinsic properties, their impacts, and the definition of risk management measures. This approach involves both analysing the danger of the metal elements constituting certain products and taking into account their physical shape depending on whether they are marketed in a massive form or not. The Group's mining activities are also included in this management.

The Group's involvement is reflected in its involvement in professional bodies devoted to the development of robust scientific knowledge and also in the role of the main declarant assumed by certain subsidiaries in order to meet the requirements of the European

regulation REACh (Registration, Evaluation and Authorisation of Chemicals).

At the European level, special attention is always paid to monitoring the selection of substances of very high concern by the authorities and to the process which may result from their inclusion in the list of candidate substances for authorisation. The REACh Regulation includes an authorisation procedure whose purpose is the progressive substitution of substances of very high concern with less dangerous substances. The selection of these substances involves the Member States, the European Commission and the European Chemicals Agency (ECHA), as well as the producers, importers, and users of these substances, and other interested stakeholders. This selection process continued during 2016. The Group has participated in some of this work and has actively contributed to exchanges between producers and users, in particular, within the professional organisations concerned.

#### **5.5.2** THE ERAMET ORGANISATION

In 2016, the management of chemicals was organised around a centralised structure, at the level of the Group's management, oriented towards the Branches and site service, in order to provide support and service focused on four objectives:

- increase the efficiency of our transverse expertise on complex subjects;
- provide support and information to our internal and external clients;
- improve the technical and scientific knowledge of our products;
- harmonise our chemical risk management methods on our sites.

# 5.5.2.1 INCREASING THE EFFICIENCY OF OUR TRANSVERSE EXPERTISE ON COMPLEX SUBJECTS

The knowledge accumulated in the various sectors of activity and the diversity and complexity of the

subjects concerned for each of the constituents we handle are so important that ERAMET has decided to centralise, for better efficiency, cutting-edge skills, information, the tools and studies issued for each of the activities (nickel, cobalt, manganese, titanium...) in order to describe the toxicological and ecotoxicological properties of the Group's products.

In this way, it was the management effectiveness of these themes, which was improved through the harmonisation of Group tools and processes, as well as by the limitation of the number of interlocutors.

# 5.5.2.2 PROVIDING SUPPORT AND INFORMATION FOR OUR INTERNAL AND EXTERNAL CLIENTS

A fundamental mission of the expertise on chemicals is to be in support of the internal clients that are the commercial, logistic, or industrial functions. This involved, in particular, for the year 2016, answering more than a hundred requests from our internal clients. Applications ranging from the establishment of a RoHS certificate of compliance for the electronics and electrical industry, to clarify information on SDS (Safety Data Sheets) for clients in the chemical industry, or for the assignment of the UN number and the hazard class adapted to the multimodal transport of dangerous goods.

A centralised organisation of the chemical risk expertise also makes it possible to intervene more readily in the Group's projects (see paragraph 5.4) and to provide the necessary expertise to organise the tests which will allow the best characterisation of future products in order to register them in REACh, to establish their classification of hazards, and to write their SDS. As part of the ERAMET Sandouville industrial development project, new REACh registrations were made to enable the production in Europe of new Group products.

Similarly, this centralisation of the structure facilitates relations and exchanges to prepare asset sales and to have a clear and precise view of the recordings that the Group will keep or conversely of the files that it will no longer carry. This organisation also helps prepare upstream documents (SDS, toxicological studies) to pass to the buyer to accelerate and facilitate the transition without a loss of information.

#### 5.5.2.3 IMPROVING THE TECHNICAL AND SCIENTIFIC KNOWLEDGE OF OUR PRODUCTS

Year after year, the evolution of the various regulations requires scientific tests to better understand the products and to classify them in a fair and proportionate way with respect to these regulatory references.

Since June 2015, the classification of hazards, resulting from the CLP ("Classification, Labelling, Packaging") regulation, applies to mixtures and therefore to alloys. ERAMET accumulates knowledge and tests to demonstrate that alloys are not mixtures whose toxicological properties are simply derived from the sum of the elements composing it, but that the specific structure sought and the process used give the alloys specific and very different properties.

In 2016, the tests showed that the corrosion-resistant alloys, and in particular, those containing nickel, cobalt and chromium, have a degree of toxicity to the environment and animals, well below their components. Therefore, the results of this scientific research make it possible to precisely adapt the prevention efforts to the hazards identified and to assign the appropriate classifications to the products.

This approach to hazard characterisation also applies to ores. Nickel ore has already been the subject of scientific studies which concluded that it was not dangerous. Similar studies have been carried out for manganese ore in 2015, with almost the same finding of no danger, with the exception of a minor eye irritation property. This result led to the revision of the classification of manganese ore with the addition of the note "Eyes irritant 2" and the provision of an SDS. In 2016, and in connection with bulk shipping regulations, a

study on the liquefaction capacity of manganese ores was carried out. The results demonstrated the lack of liquefaction capacity of these ores and confirmed the safety of the transport conditions applied for several years.

#### 5.5.2.4 HARMONISE OUR METHODS OF CHEMICAL RISK MANAGEMENT ON OUR SITES

ERAMET group production sites are found on five continents, and they must, therefore, follow and respect various regulations concerning hygiene and controls of chemical exposures in the workplace. In this area of regulation, the differences may be significant from one country to another for the same substance. Harmonisation and communication between sites on these subjects is therefore important for exchanging, explaining, and recommending practices and references ensuring a corresponding protection or a level higher than the regulations in force in the relevant country. Concretely, a steering committee has been set up, bringing together the Group's Director of Prevention and Safety, the Group's consulting physician, the Group's Division of Environment, Industrial Risks and Products and the Hygiene, Health, and Safety Coordinators of the Branches. Thus four practical toxicological sheets were written, validated, and disseminated during the

Important work has also been done to identify the chemical risk and burden assessment tools used by the sites. This inventory, followed by critical exchanges and analyses of the tools used, resulted in the development of a unified chemical risk assessment methodology, which will be deployed on sites as of 2017.

## **5.6** SAFETY, **HYGIENE AND** HEALTH

#### 5.6.1 HEALTH/SAFETY STRUCTURE AND FUNCTIONING

The Group's commitment to the field of health and safety at work is elevated to the highest level by the Group's Executive Committee. ERAMET's Human Resources Director provides leadership for the dedicated actions

This commitment is embodied in a Safety charter, revised in 2015, and a Group Health policy from 2007. The Group's Health policy will be reviewed in 2017 with new objectives and indicators for implementation.

The Director of Prevention and Safety, and the Group's Medical Advisor report directly to the Director of Human Resources. Together, they establish and propose to the Executive Committee the Group's safety and health policies and guidelines. Once validated, these guidelines are defined in the branches by the Deputy General Managers, assisted by Health and Safety coordinators, and then by the Site Managers, who are themselves assisted by a site Health/Safety coordinator.

In order to safeguard employees' health and safety, as well as that of the subcontractors working on the sites, prevention at the workplace is at the heart of the system. It aims, among others things, to ensure their ability to work, to prevent accidents and occupational diseases.

Each site monitors the health of its employees through the services of occupational health professionals. The main French sites of the Group (Les Ancizes, Pamiers, Commentry, Interforge, Issoire, La Pardieu, Clermont and Gennevilliers) for Aubert & Duval, ERAMET Sandouville, Comilog Dunkerque, all employees of the Montparnasse tower, Trappes and ERAMET Ingénierie) are now grouped together under the autonomous department of Occupational Health, the approval of which is pending under the DIRECCTE IDF. This service consists of three centres:

- North Centre: one Occupational Doctor and two Occupational Health Nurses;
- Auvergne Centre: two Occupational Doctors and six Occupational Health Nurses;
- South Centre: one Occupational Doctor and two Occupational Health Nurses.

The SLN site of Doniambo (New Caledonia), the Coming site of Moanda (Gabon), the Setrag site of Owendo (Gabon) for their part, have an Occupational Health Service with one or more occupational physicians and nurses.

This operation was revised in 2016 to improve efficiency: new management routines have been defined and implemented, expert teams on hazardous substances exposure issues (CMR, dust...) have been grouped together at the Group level, and new standards have been formalised. This makes it possible to maximise the synergies between the Safety/Health, Environment functions, but also the Audit Group and Risk Management, and to strive towards a common culture of risk management.

# 5.6.2 HEALTH AND SAFETY GUIDELINES AND ACHIEVEMENTS FOR THE YEAR 2016

The Group's health and safety guidelines include:

• improve the Group's Safety Culture;

- help the management of safety issues with self-diagnosis tools (risk mapping);
- secure Critical Activities through Essential Requirements;
- improve control over the human factor by a more effective presence during field interactions.

The embodiments described below are selected examples which illustrate these guidelines:

## 5.6.2.1 FORMALISATION OF PREVENTION STRATEGIES

The analysis of the Group's accidentology to enable clarification of the risk segmentation generated by its activities. Three families of risks emerge:

- Technological risks associated with processes and facilities present the most severe potentials. They are supported by the technical expertise of the teams and their ability to identify and respond to weak signals. Prevention is based on studies and the reliability of barriers (passive, active, organisational, human).
- Critical activities are the most dangerous tasks that are carried out daily to operate our facilities. It includes machine guarding, working at heights, circulations, confined spaces, liquid metal... The risks associated with these activities are too great to leave to the choice of the operating mode. Also these activities should be strongly framed by known rules and implemented by all. Compiled under the name "Essential Requirements", ERAMET has adopted a set of unavoidable rules that correspond, while respecting the national laws of each country, to the required minimum of each site, once one of these activities is implemented. Limited in number, simply communicable and easily memorable and auditable, they rely on rigour and discipline to identify and deal immediately with any deviation.
- Finally, many activities cannot be reasonably framed by simple rules. For all these work situations,
   ERAMET develops the situational intelligence of its
   teams so that the first criterion of decision is safety.
   Team awareness, feedback, visits and interactions
   with the chain of command in the field are all
   systematically used to avoid uncontrolled risks.

## 5.6.2.2 RECONFIGURING SAFETY MANAGEMENT TRAINING PROGRAMMES

The above risk segmentation clarifies managerial stances on different work situations. This message is disseminated to all employees in charge of management in the Group through a safety training module deployed within the ERAMET Management Institute (IMagE). Employees were trained to deliver this highly interactive one-day module that allows learners to be successively put into position (on the principle of action-training), and observer-coach of his/her colleagues (for a better take-away and understanding of the impacts). More than 260 supervisors were trained in 2016.

#### 5.6.2.3 MAPPING RISK SAFETY AND MANAGEMENT PRACTICES FOR SELF-ASSESSMENTS

Risk assessment is at the core of prevention. It is carried out with a superfine granularity at the level of the operations via task analyses piloted by the proximity supervisors and compiled in the risks registry which serves as source of continuous improvement to the operations. However, the level of detail, still too fine in these registries, does not allow an easy view of the Safety situation for the site management committees. In order to improve this key diagnostic phase in the appropriation of safety issues by management teams, the Group has developed and deployed in 2016 a simple tool for self-assessment of safety-related risks on one side, and of managerial practices on the other. Formatted over a half-day, led by a branch or Group coordinator, a "seminar" of the management committee allows for exchange and the alignment of team outlooks around a simple assessment of the main Safety issues of the site: the risks themselves, but also the managerial practices to control these risks.

Simple, pragmatic, gradually deployed on all the Group's sites, this approach makes it possible to involve and align the management team of a site around its major security challenges, both operational and managerial. In 2016, 28 on-site management teams established their own mapping.

#### 5.6.2.4 SYSTEMATISATION OF FIELD SAFETY INTERACTIONS

In order to improve managerial proximity, the Group deploys and trains its supervisors, regardless of level, to interact with operators in the field of safety.

The objective of this approach is threefold:

- mark commitment and requirement of the entire managerial line:
- enhance pragmatic knowledge of the dangers on the ground thanks to a benevolent approach for operators;
- supervisors gain a better knowledge of the problems actually encountered by the teams in the field in order to better help them.

Deployed by the COMEX members during their site visits, these interactions are an essential element in improving the safety culture of the Group.

#### 5.6.2.5 TAKING INTO ACCOUNT THE QUALITY OF LIFE AT WORK AND THE PSYCHOSOCIAL RISK IN THE REORGANISATION OF HEADQUARTERS FUNCTIONS AND SUPPORT **FUNCTIONS**

Significant changes in the organisation of headquarters functions and support functions have been identified as likely to generate psychosocial risks and have been reduced through several initiatives beyond institutional social dialogue:

- A participatory approach to the development of cost reduction measures, involving 70 managers in workshops in order to generate ideas which are then submitted for consideration by the COMEX Group. This phase of preparation-reflection has put managers in control of the changes they have deemed useful and necessary.
- A human impact study was conducted to measure the risks associated with the requested changes, and risk management actions were defined and implemented.
- The project was carried out with the maximum possible transparency, different targeted communication tools for each of the categories of personnel have come to relay information to the

social partners: "Optimum cafés", periodical letters, information meetings...

• Specific support for each category of impacted staff was proposed: "Manager workshops" focus on supervisors so to enable them to train themselves in change management tools and to share their difficulties with their peers. The "Info Advice Point" confidential and personal consultation open to all, has supported the employees affected by the plans to build a professional project outside of ERAMET. Finally, a permanent work psychologist was proposed on a fixed schedule for anyone wishing to consult anonymously.

All of these measures have enabled employees to overcome the difficulties of such a reorganisation.

In 2016, the measures put in place to prevent the psychosocial risks associated with the reorganisations were maintained (Psychologist consultant, RPS commission group, individual measures).

In 2017, within the framework of the Health Policy, actions will focus on a Toolkit for Managers through training to address the Quality of Life at Work on the two sites of the Montparnasse Tower and Trappes, Preventionists (on the basis of voluntary service) will be trained and made responsible for tackling difficult situations with the Management and the Health Professionals.

#### 5.6.2.6 ESTABLISHMENT OF PILOT HEALTH **INDICATORS**

The Pamiers Health Unit (Aubert & Duval) is experimenting with a set of health indicators to trace the impact of occupational health prevention measures. These indicators include awareness-raising actions, actions on job retention, chemical risk and quality of life at work. They are deployed gradually, starting with the Alloys branch.

#### 5.6.2.7 OCCUPATIONAL DISEASES

In France, ODs are grouped together in tabular form. There are currently 98. Each table has three criteria,

designation of pathology;

- care time limit (maximum time between the cessation of risk exposure and the first medical diagnosis of the disease). For example:
  - For carpal tunnel syndrome (TMS) this period is seven days.
  - For deafness, it is one year.
  - For lung cancer linked to asbestos, it is 40 years;
- indicative or limitative list (according to the table) of work likely to cause the disease.

Excluding exceptions, occupational disease is recognised by the CPAM when three criteria are met. In 2016, for the ERAMET group, the distribution of recognised ODs are as follows:

- Tables No. 30 (asbestos) and No. 30 bis (lung cancer linked to asbestos): 10 for ERAMET France in 2016;
- Table 57 A-B-C: Musculoskeletal Disorders of the upper extremities (MSDs): 6 for ERAMET France in 2016.

For other ERAMET sites outside of France, a collection process will be set up in 2017 based on the Group Health policy and taking into account national regulations.

#### 5.6.2.8 EPIDEMIOLOGICAL STUDY OF MOANDA

The 8th EDF SYSMIN resulted in several recommendations, one of them was conducting an epidemiological study. In Moanda, Comilog carried out a series of environmental and health studies to assess the potential impacts of its mining and industrial activities on the health of the surrounding populations, which lasted more than two years.

Exposure of populations to fine dust and Mn dust by inhalation and ingestion was evaluated. At the same time, surveys of local populations and a case-control study were conducted. The results were presented to the General Management of the Ministry of Health in Gabon, to the Comilog Steering Committee and to the Formalised Consultation Framework and to the population (meeting at Moanda Town Hall).

The main findings show that health risks linked to the mining and industrial activities of Comilog are not a concern for local residents. The complete dossier (six reports) is being validated by the Gabonese Ministry of Health.

The recommendations resulting from these studies will continue to be discussed and decided upon at meetings of the Formalised Consultation Framework as part of the continuation of its activities.

The recommendations of these reports were presented and discussed at COMEX 2016 and the dossier was forwarded to the Ministry of Public Health in Libreville.

#### 5.6.2.9 MANAGEMENT OF ASBESTOS RISK

For the Group, the asbestos risk is divided into environmental asbestos at Nickel mines and also the management of asbestos products at industrial sites.

In New Caledonia, specific operating procedures exist to control veins of asbestos-containing ores in the event that mining activity uncovers them. The operators are trained in the precautions to be taken, and special medical monitoring has been set up, in consultation with the authorities, social partners, and other mining operators.

No industrial site of the Group has ever produced or processed asbestos, nor marketed composite materials made up entirely or partially of asbestos. This material has never been used as a raw material by ERAMET but rather only as a component of certain materials of heat transfer equipment. As an example, refractory materials containing asbestos, used in the past at Les Ancizes sites, represented less than 1% of all refractory materials used at the site.

In accordance with applicable regulations, particularly in France, the Group has carried out asbestos technical diagnostics (DTA) on its industrial sites, by authorised firms, the conclusions and recommendations of which are then translated into detailed action plans.

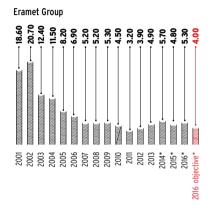
#### 5.6.2.10 AGREEMENT SIGNED IN 2016

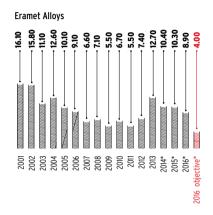
In 2016, in connection with the previously mentioned structure, an agreement on the functioning and implementation of an independent Work Health Services was signed.

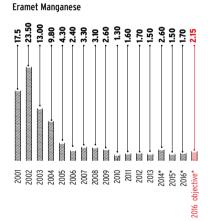
#### **5.6.3** HEALTH AND SAFETY PERFORMANCE

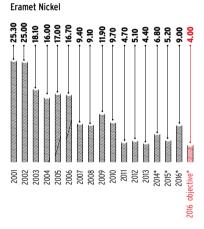
The Group monitors the accidentology of its sites continuously, and the results are reviewed formally every month. The indicators monitored relate to the frequency of accidents with leave and accidents without leave, both for ERAMET staff and for temporary workers, and the accident severity rate for ERAMET staff. The developments of these indicators are shown below.

#### TRENDS IN THE FREQUENCY RATE (FR) SINCE 2001









\* Since 2014, the FR of the Group and the various branches includes temporary employees.

This year, the Group counted 127 accidents with leave (employees and temporary workers), up 4% from 2015. The associated frequency rate reached 5.3. The Group had set a target rate of less than 4. The severity rate for 2016 is 0.38. No fatalities were reported for these categories of personnel

These results with a slight downturn mask some points of progress. Thus, over the period 15 September-15 December, the Group experienced a historically low period of accidentology: the manganese branch reached more than three months without an accident with leave and the three-month rolling severity rate dropped to 2.8 from September to November.

Since 2016, the ERAMET group has also sought to enhance the safety results of sites by exceeding one million hours worked or two consecutive years without an accident with leave. As such, three entities were rewarded: ERAMET Research (France–May 2016), Sauda (Norway–June 2016) and Népoui (New Caledonia–October 2016).

Therefore, the selected areas of work begin to bear fruit; the progress recorded is still fragile. In 2017, the Group will continue to promote the mobilisation of all staff on the ground on safety topics.

## **5.7** HUMAN **RESOURCES**

#### 5.7.1 THE GROUP'S HUMAN **RESOURCES POLICY**

The ERAMET group considers that the women and men who make up its community are the main drivers of performance. Dependent upon them is the quality of client relations which are at the heart of the Group's business plan. Dependent upon them are future developments based on enhanced technical leadership and the fullest possible expression of their managerial and technical skills. Dependent upon them is the proficiency of management and the operational excellence of each of their fields.

The ERAMET group's Human Resources strategy is a reflection of the Group's strategy to face the issues facing the Group. It revolves around six strong strategic axes:

1. Identify, attract, retain and develop talent that translates into the desire to diversify our talent pool in order to make it more international, with a better representation of women at the managerial level, develop local talent, anticipate skills needs, develop transversality, versatility and mobility to

- staff our projects and absorb cycles, prepare the leaders of tomorrow, develop and transmit skills.
- 2. Develop and recognise value-creating performance by ensuring the implementation and management of the performance cycle, accompanying employee performance and strengthening the link between compensation and performance: Base, variable, and long-term remuneration.
- 3. Strengthen managerial skills, define and promote the role of managers, by associating them and training them to manage their teams.
- 4. Participate in the implementation of a work environment that is respectful of employees and of the Group's values by aiming at 'zero accidents', through the promotion of well-being at work illustrated by fairness, transparency and exemplary management, ethics and respect for the Group's values, active management of Occupational Health issues, application of national regulations and ILO directives at all Group sites, while ensuring social protection for all of our employees to cover the major risks while preserving our competitiveness.
- 5. Develop and promote a constructive relationship with our social partners by ensuring the implementation of a decentralised but coordinated approach, anchored in the economic realities of companies and sites, by facilitating a transparent and continuous dialogue, by ensuring that structures and organisations evolve and are exemplary in their social treatment.

6. Develop the operational excellence of the HR function, by acquiring efficient and adapted tools, by displaying a clear and readable organisation serving its internal clients, putting the HR function at the heart of strategic and business challenges.

The ERAMET group, while having a very strong international dimension (approximately 60% of the Group's workforce works outside Metropolitan France), also relies on subsidiary companies which have a significant presence and local awareness. The Group's human resources management is thus decentralised while relying on unifying principles and tools common to all of the Group's companies and sites

Social policy of the ERAMET group is based on the clear desire:

- to strongly involve the Group's management (information and exchange seminars, development paths, meetings with the Group's management and the companies that comprise it, mobility and intra and inter-branch career development);
- to connect employees with the life of their Company and the Group through clear and regular information (regular and corporate newspapers, Group intranet, integration days for new hires);
- to communicate with social partners, both formally (remuneration, training, social protection, and employment management policy) and on a daily basis at the sites.

#### **5.7.2** EMPLOYMENT

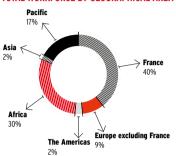
#### 5.7.2.1 TOTAL WORKFORCE AND BREAKDOWN BY GEOGRAPHICAL AREA

As of 31 December, 2016, the Group employed **12,777** employees in **19** countries, compared to 13,938 employees in 31 December of the previous year. The Group's HR reporting in force concerns the consolidated workforce and the workforce under management.

#### NUMBER OF EMPLOYEES AS OF 31 DECEMBER (CDI AND CDD)

	2014	2015	2016	2010 21011112011011
France	5,171	5,159	5,136	40%
Europe outside of France	1,345	1,316	1,165	9%
Americas	665	666	325	3%
Africa	3,747	3,771	3,789	30%
Asia	854	822	245	2%
Pacific	2,210	2,204	2,117	17%
Total	13,992	13,938	12,777	100%

#### TOTAL WORKFORCE BY GEOGRAPHICAL AREA



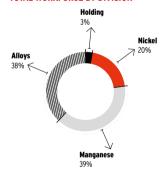
#### 5.7.2.2 BREAKDOWN OF TOTAL WORKFORCE BY DIVISION

Enrolment decreased by 8% between 2015 and 2016: it is stable for the Holding and the Alloys divisions but it drops for the Nickel and Manganese divisions. The decline in staff numbers is largely due to the disposal of the Erachem sites (-566 employees) on 30 December 2016 and the sale of Bear Metallurgical and Somivab in the fall of 2016.

#### **EMPLOYEES BY DIVISION**

	2014	2015	2016	2016 DISTRIBUTION
Holding	455	439	441	3%
Nickel Division	2,809	2,777	2,534	20%
Manganese Division	5,982	5,898	4,962	39%
Alloys Division	4,746	4,824	4,840	38%
Total	13,992	13,938	12,777	100%

#### TOTAL WORKFORCE BY DIVISION



#### 5.7.2.3 BREAKDOWN OF TOTAL WORKFORCE BY CONTRACT TYPE

As of 31 December 2016, **96%** of the Group employees benefit from contracts of indefinite durations.

The technical nature of the mining and metallurgy professions requires a long professional training period, the use of short-term employment contracts remains very minor.

Employees on fixed-term contracts within the Group have the same rights and benefits (pension systems, health care schemes, profit sharing...) as employees under open-ended contracts.

#### **WORKFORCE BY TYPE OF CONTRACT**

	2014	2015	2016	2016 DISTRIBUTION
CDI	12,763	12,812	12,285	96%
CDD	1,229	1,126	492	4%
Total	13,992	13,938	12,777	100%
Temporary workers (in full time equivalent)	1,137	934	680	

#### 5.7.2.4 BREAKDOWN OF THE TOTAL WORKFORCE BY SOCIO-PROFESSIONAL CATEGORY

ERAMET extended the French notion of socio-professional category to all its entities, which share the following definitions:

Workers	workers (blue collars)
Supervisory staff	clerks, technicians, foremen (white collars)
Managements	executives, managers, post-graduate staff, civil engineers (white collars)

#### **BREAKDOWN OF WORKFORCE BY SOCIO-PROFESSIO-NAL CATEGORY**

	2014	2015	2016
Workers	54%	53%	52%
Supervisory staff	32%	33%	34%
Managements	14%	14%	14%

#### 5.7.2.5 AVERAGE AGE AND AGE DISTRIBUTION

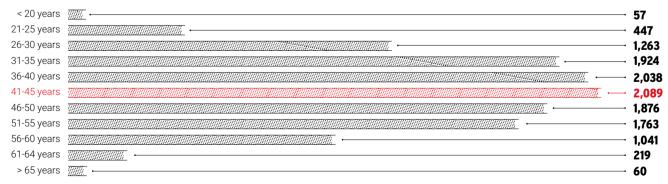
The average age of Group employees totalled 43.2 years as of 31 December 2016.

WORKERS	ETAM	EXECUTIVES	
39.5	41.8	45.2	

Employees aged 50 and over represent 27% of the total, those aged 30 and under represent 14% of the total workforce.

ERAMET carefully monitors the evolution of the age distribution of its executives, in particular, to anticipate the retirement of its key employees. Since the implementation of the People Review process at the local, division, and Group level, ERAMET has succession plans updated every year for all its key positions.

#### AGE DISTRIBUTION OF THE GROUP



#### **5.7.2.6 RECRUITMENTS**

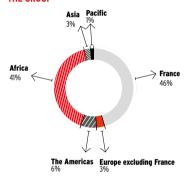
Group companies have recruited, excluding transfers between Group companies, **1,269** employees in 2016,

up to **9.8%** compared to 2015. Since the summer of 2013, the Group has frozen external recruitment at management level and is actively encouraging the use of internal mobility.

#### **ENTRIES (EXCLUDING TRANSFERS BETWEEN GROUP COMPANIES) BY REGION**

	2014	2015	2016
France	362	387	579
Europe excluding France	127	153	42
Americas	136	176	81
Africa	654	258	519
Asia	74	95	32
Pacific	52	87	16
Total	1,405	1,156	1,269

### NEW RECRUITS EXCLUDING TRANSFERS WITHIN THE GROUP



Permanent contract recruitment, 717 people, half of which was recruited in Senegal for the Grande Côte site, are divided into the following occupational categories:

### RECRUITMENT OF STAFF ON OPEN-ENDED CONTRACTS EXCLUDING TRANSFER WITHIN THE GROUP



Since 1 January 2013, ERAMET follows in particular the recruitment of permanent employees under the age of 30 and over 55.

	PERMANENT CONTRACT RECRUITMENTS 2016		
	< 30 YEARS > 55 YEA		
Total	233	20	
% of total permanent	32%	3%	

#### **5.7.2.7 DEPARTURES**

In 2016, the total number of departures (this concept includes resignations, redundancies, retirements, conventional breaks but does not include Group transfers) reached 2,399, of which 237 resignations (10% of departures), 561 redundancies (23% of departures), and 298 retirements (13% of departures). Other reasons for leaving (54% of departures) mainly consist of end of fixed-term contracts and the disposal of Erachem sites representing 566 employees.

#### **DEPARTURE BY REGION (EXCLUDING TRANSFER WITHIN THE GROUP)**

	2014	2015	2016
France	540	381	570
Europe excluding France	149	151	206
Americas	168	177	419
Africa	221	232	495
Asia	265	129	603
Pacific	67	94	106
Total	1,410	1,169	2,399

#### **BREAKDOWN OF DEPARTURES BY REASON**



#### 5.7.3 LABOUR ORGANISATION

#### **5.7.3.1 WORK TIME**

The organisation of working time depends on the companies, the nature of their activities and their location and are defined in order to best meet the requirements of the activity and the wishes of the employees. Wherever it operates, the ERAMET group complies with legislation on working time regulations. As an indication, the working hours are:

- in France: 35 hours per week;
- in Norway: 37.5 hours per week;
- in New Caledonia: 38 hours per week;
- in China, Gabon, the United States, and Sweden: 40 hours per week over five days.

#### 5.7.3.2 PART-TIME WORKERS

Part-time employment contracts exist in many countries where the Group operates. The number of staff covered by this modality represents **1.7%** of the total number of staff.

As of 31 December 2016 **213** people were part-time, two thirds were women.

**71%** of part-time employees, or **152** people, work in France and account for **3%** of the total workforce in Metropolitan France.

#### 5.7.3.3 ORGANISATION OF WORK

In 2016, 56% of employees are enrolled on a daily basis, while 44% are on posted schedules.

#### 5.7.3.4 ABSENTEEISM (DATA FROM THE CSR SURVEY)

The reasons for absence taken into account here are random and unplanned absences such as sickness. maternity, accidents at work, commuting, unjustified absences.

The average absenteeism rate for the Group was 2.9% in 2016. Of the 28 sites in France, seven have absenteeism rates below 1.5%, with the national average being **3.5%.** For the rest of Europe, the average rate is 4.3% with variations from 0% to 16%. The Americas region has a rate close to 1.8%. The Africa region has an average rate of 1.1%; Asia 1.4%. The average rate observed in the Pacific region is 5.1%.

#### **5.7.4** A FAIR AND COMPETITIVE REMUNERATION POLICY

The skills and level of responsibility of the employees are remunerated by a fixed salary in line with the experience gained and the practices observed for each trade on the market. The Group's remuneration policy aims to be equitable and competitive but also tailored to the specific local factors of host countries.

One out of two managers benefits from remuneration schemes based on quantitative and qualitative annual targets. The Group makes available a common framework for setting and assessing annual objectives.

Collective performance remuneration schemes may exist in certain countries, whether they are mandatory, legal schemes (profit sharing in France...) or voluntarily implemented by the Group in accordance with local practices (profit-sharing calculated in the light of the Company's results, collective savings plans). The profit-sharing plans are often based on negotiated criteria related to safety, environment, and the activity of the Company. Depending on the arrangements in force, these premiums may be invested in saving schemes on advantageous terms.

We conduct compensation surveys every year to ensure our remuneration packages are competitive relative to practices in other companies operating in the same sectors.

In each country in which the Group operates, the remuneration policy implemented aims to reward performance, while adapting to the local context.

#### 5.7.4.1 PERSONNEL COSTS-SOCIAL COSTS (SOCIAL CONTRIBUTIONS)

Salaries represent the main part of staff remuneration.

In 2016, personnel costs for the ERAMET group amounted to €675 million, compared with €682 million in 2015. down 1%.

More than 8,300 employees, or 65% of the workforce, benefited from a revaluation of their fixed salary in 2016, whether through a general increase or an individual increase in merit. In 2016, the Group companies in France implemented a freeze on management pay in view of the difficult economic situation.

guarantee allowing the employees concerned to have access to a solution of listening, assistance and advice from professionals.

Provisions are set aside for retirement benefits, severance payments, medical coverage, pension plans, and other commitments vis-à-vis active or retired employees in accordance with the conventions in force in each country.

The portion not covered by insurance companies or pension funds, in particular for US and Norwegian companies, is also provided for (defined benefit plans in general). The specific commitments for these schemes are in the United States, Norway, New Caledonia, and in France. Other plans are defined contribution plans where employer contributions are recognised as an expense in the period for which they are related. The main quantitative assumptions used to calculate these commitments are detailed in the consolidated financial statements.

Finally, an additional pension plan (Article 39) for a group of managers is also fully funded. The estimated actuarial value of the plan for active beneficiaries is 51.3 million as of 31 December 2016.

#### 5.7.4.2 SOCIAL ADVANTAGES

In line with the Group's agreements relating to the provision of insurance against major risks and the uncertainties of life, the ERAMET group wanted to benefit all its employees in Metropolitan France with additional health insurance. In France, a new collective agreement was signed in December 2016 by all the organisations representing staff. This agreement ensures that social protection is brought into line with legislation on responsible contracts, but also improves the handling of certain expenses, such as pharmacy, dental implants, alternative medicine and laser surgery for eyes.

In the area of death and disability insurance, a new agreement was signed for France in June 2016. It provides for a 10% reduction in employee and employer contributions and a 10-month moratorium on contributions in view of the excellent results of the scheme, but also the improvement of the death benefits, the introduction of a "Caregiver Assistance"

#### 5.7.4.3 EMPLOYEE STOCK OWNERSHIP PLAN

In order to build Group membership through the world where it operates, and share the created value, the ERAMET group has opted, since 2009, for the deployment of global free share plans. This programme, baptised EraShare, originally consisted of allocating five free shares to each of the Group's employees, regardless of the country of activity, branch, occupation or level of responsibility.

Since July 2011, in France and Italy, and since July 2013 in other countries, employees benefit from all the rights attached to the ERAMET shares: voting and dividend rights. An informational brochure on EraShare was also prepared in the nine languages used within the Group to support the worldwide implementation of the plan.

Seven new free share plans were implemented from 2010 to 2016 on the same scope, and allowed the allocation of two additional shares each year to more than 12,000 employees.

#### 5.7.4.4 EMPLOYEE INCENTIVE PLANS

In Metropolitan France and New Caledonia, profit-sharing agreements are regularly negotiated and signed with the social partners. They complement, where they exist, the regulations governing participation. The incentive is paid with a uniform distribution to staff members with more than three months of service as of 31 December, and partly as a function of gross annual compensation. In 2014, the Group's Human Resources management specified in a framework memorandum, the three components that the ERAMET group wishes to find in the new agreements renewed from 2014

- financial result of the Group;
- financial result of the entity;
- operational criteria specific to the entity (safety criterion, service rate, reject rate, variation in WCR, etc.)

In 2016, the Group's companies in France paid the profit-sharing plan for the year 2015. It is thus 5.3 million EUR that was paid to the beneficiaries concerned (gross). SLN in New Caledonia, has in turn, paid over 4 million EUR in profit-sharing to the employees concerned.

#### 5.7.4.5 EMPLOYEE SAVINGS PLAN

In Metropolitan France and in New Caledonia, ERAMET group employees can sign up to a Company Savings Plan to build up their savings. The Savings Plan may receive the incentive bonus and profit sharing, as well as voluntary payments made monthly or periodically by the employees. Group companies participate in the savings plan through a system of matching the sums paid by employees (the methods for paying the matching contribution vary from company).

A range of diversified FCPE (Corporate Mutual Funds) is offered to Group employees. A collective retirement scheme also exists in the form of a PERCO (Collective Retirement Savings Plan).

As of 31 December 2016, 6,988 employees and former employees of ERAMET in France subscribe to an

Employee Savings Plan, for a total asset value of approximately €77 million, or €11,000 per investor. Total assets are divided between the FCPE of the PEE/PEG (87% of the assets) and the PERCO (13%). In 2016, the Group's French companies paid approximately €4.7 million in contributions (gross value) to the Group Savings Plan (PEG) and the PERCO (€567 per employee on average). Exceptionally in 2016, the Group's French companies paid to all employees a unilateral employer contribution of €390 to the PERCO.

# 5.7.5 MEANINGFUL AND DYNAMIC SOCIAL DIALOGUE TO DEAL WITH PROFOUND ORGANISATIONAL CHANGES

## 5.7.5.1 SOCIAL DECLINATION OF THE ERAMET STRATEGY

In 2016, the strategy of the ERAMET group was socially marked by the practical consequences of restructuring plans and cost reduction, as in recent years.

However, the new strategic choices that have led to plans to sell and discontinue activities that have become non-strategic have accentuated the density of social relations.

The dialogue with the Representative Institutions of Personnel was therefore largely devoted to the presentation and explanation of the social declination of the strategic orientations.

These major organisational transformations were deemed socially critical, as they had the effect of modifying, for the first time in more than 15 years, the Group's geographic scope and geography.

This is why the choice has been made to proceed with multiple thorough and didactic exchanges on strategic issues with the social partners in the organisations and countries concerned.

Furthermore, in France, Works Councils have been informed and consulted on the strategic orientations

of each company concerned, in line with recent developments in labour law in the framework of social dialogue.

## 5.7.5.2 ASSET DISPOSAL PROJECTS AND CLOSURE OF NON-STRATEGIC ACTIVITIES

The proposed sale of Erachem, whose teams are present in France, Belgium, the USA, Mexico and China, gave rise to local informational meetings with American, Mexican, Belgian and French staff representatives, also at the central level with the European Works Council

Moreover, in France, the Eurotungstène Company Committee was openly associated with this business transfer project from the upstream phase of the process.

At the central level, the Group Committee and the European Works Council were informed and had the opportunity to express their views on the above-mentioned transfer projects, but also on the sale of Bear Metallurgical in the USA, the end of GCMC activity in the USA and at the Guilin plant in China.

## 5.7.5.3 THE ESTABLISHMENT OF NEW ORGANISATIONS

The stages of social dialogue were key during the formation of the new company, ERAMET Sandouville, (subsidiary as of 1 January 2017), simultaneously with the launch of a transformative investment project. The social partners were consulted on the objectives and subsidiarisation methods of the Sandouville plant, as well as, on the adaptation of the organisation and the working conditions for the implementation of the investment allowing the treatment of a new raw material.

A new company, ERAMET Services, was set up in Clermont Ferrand. On this occasion, a new Employee Representation Body was organised and the Trade Union Organisations participated in several negotiations aimed at endowing this company with a corpus of fundamental collective agreements (profit-sharing, working time, etc.).

#### 5.7.5.4 DYNAMIC UNION RELATIONS, SUCCESSFUL COLLECTIVE BARGAINING AND IMPACTFUL SOCIAL EVENTS

The year 2016 generated significant social events France: deployment of the Rebsamen Act, adoption of the Labour Act.

In our companies, Managers and Representatives of the staff have, therefore, initiated reflections and even negotiations on recent or new themes: Equality between Men and Women, Quality of Work Life, Expanded Single Delegation, etc.

French social events have also led to difficulties due to exogenous factors. Thus, during the parliamentary debates on the draft labour law, several work stoppages were generated by trade union protests against this bill.

However, these situational difficulties have not affected the dynamism of collective bargaining within the Group.

SLN Management and Trade Unions have carefully examined the objectives and conditions for the implementation of the SLN Competitiveness Plan.

In Metropolitan France, it is important to note that an agreement on healthcare benefits has been signed, which has enabled the new obligations of the so-called "responsible" contract to be complied with, while preserving the costs and improving the guarantees of this health insurance scheme.

Other collective negotiations have yielded favourable results: Implementation of a Group occupational health system, creation of an inter-enterprise committee for the management of cultural and social works.

Finally, the Group Management and the Trade Union Organisations have agreed to work together to regulate the social dialogue processes at Group level, which could lead to the conclusion of a collective agreement in 2017.

The Group is currently considering how to implement the recent regulatory provisions on the impact of collective agreements on economic performance and on the working conditions of employees and undertakes to appropriately communicate on these matters in the future.

#### 5.7.6 EMPLOYEE DEVELOPMENT AND CAREER MANAGEMENT

#### 5.7.6.1 CAREER MANAGEMENT PROCESS

The development of talent is a key value of the Group, and the first axis of its HR Strategy.

The internal mobility and career development processes have, in fact, been strengthened in recent years as part of the restructuring and demobilisation of project teams, thus encouraging internal reclassifications.

The Group's Career Development and Mobility Charter defines the roles and responsibilities of each (employee, Manager and HR) so that the development and career paths of the Group's men and women can be promoted and encouraged within a clear framework, defined and shared, and with the help of tools and processes.

It places particular emphasis on promoting the initiative and the pro-activity of the employee in his own career development.

In order to optimally implement these career developments, management processes are set up and piloted throughout the year.

The APAs (Annual Performance Appraisals) make it possible to identify mobility objectives and to take them into account at both monthly HRD network meetings and during the People Reviews. These frameworks reviews are organised at site, Business Unit, entity or even country level. They allow the identification of the people to be developed, their potential...

Other meetings are organised mid-year by profession (Technical Leadership or Business Committees) to review these development needs in a cross-functional way, to assess medium-term needs and available business resources by profession.

These exchanges are consolidated at each division level during the division management reviews, at the end of the year, thus enabling APAs to be tackled with concrete development elements to be submitted.

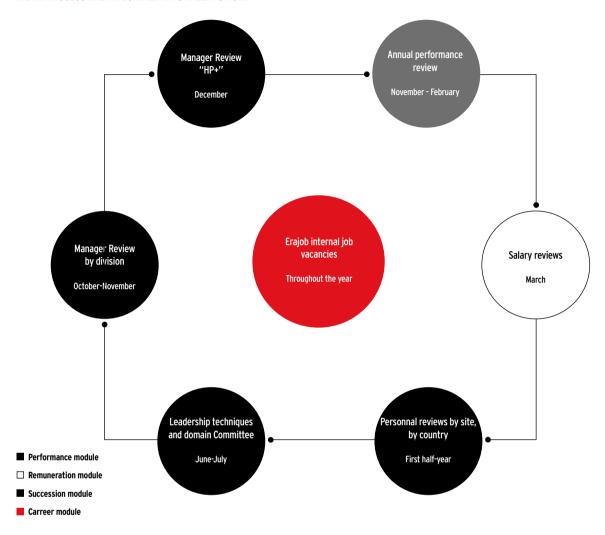
A review of the Group's senior executives and key positions takes place at the end of the year with COMEX.

Reports are made and the Succession module of Talent@Work is used to record these outlooks.

A review of succession plans for key positions in the organisation is carried out by Selection Committees, and remuneration by the Boards of Directors of ERAMET or its subsidiaries.

Lastly, Professional Interview (set up in the framework of the application of the Act of 5 March 2014 on vocational training, employment and social democracy-Article L. 6315-1 of the Labour Code) for all employees in Metropolitan France has been deployed since 2015. It is devoted to the prospects of professional development, in particular, in terms of qualification and employment. It focuses on the employee's career path, career development, and training needs.

#### THE HR PROCESS ARE INTEGRATED INTO TALENT@WORK



#### 5.7.6.2 EVALUATION OF PERFORMANCE

Successful mobility or career development is the combination of three elements:

- performance;
- existence of an opportunity;
- willingness to demonstrate functional and/or geographical mobility.

As the cornerstone of operational improvement plans, performance is assessed individually in the context of

APAs based on objective evidence, with each assessment based on factual evidence.

In 2016, **3,667 employees,** executives and non-executives, benefited from an annual appraisal interview Many sites have extended the benefit of this scheme to non-management populations.

The support for the Annual Performance Appraisal (APA) has been modified to take account of performance appraisal in the context of the performance of the position, the assessment of professional behavioural competencies and in particular aspects related to the implementation of the ethics charter and finally, the attainment of the objectives.

Following on from the desire to better monitor and evaluate performance, the implementation of this new format, led by a working group, as well as the objective monitoring module (Goal Management) allows the manager to evaluate the performance of his/her employees, to initiate actions with him/her to develop and to follow throughout the year, the progress of the objectives set for the team, to adjust these if necessary, to rely on this tool for mid-year interviews, etc.

The now widespread use of the APA form in Talent@ Work provides a significant improvement in access to information on expressed mobility wishes, better consideration of those in career management and people review, and an optimised follow-up

#### 5.7.6.3 ERAJOB AND CAREER MODULE

The job offers are published on ERAJOB, the Group's job market and are also available via the Career module of the HRIS, now making it possible to apply online, to share job offers with others, to create alerts on specific positions, etc.

The Recruitment module, developed in HRIS, enables HR and managers in charge of recruitment, through internal or external mobility, to be able to follow the progress of the process, from the job description to the filling of the position.

In order to support Managers in their role as career managers, a training module on recruitment and mobility is available as part of IMaGE.

This module enables managers and HR staff to be trained in the same tools of selection interviews, to make their choices in an objective and transparent way, to ensure quality returns to internal and external candidates, and to educate their participants on the subject of non-discrimination.

Moreover, the use of a personality test by appropriately trained and authorised personnel within the HR teams makes it possible to complete candidate evaluations in the context of recruitments or certain mobilities.

#### **5.7.6.4 TRAINING**

IMaGE (ERAMET group Management Institute) designs training courses for Group employees:

- to facilitate their integration by giving them the keys to understanding the organisation and management processes of the Group;
- to develop their skills by giving them access to business and management programmes;
- to promote exchanges of best practices among participants;
- to build development paths.

Integrate, improve know-how, raise awareness of specific risks, share experience and best practices, develop transversality at the Group level, foster the deployment of managerial methods, further strengthen the Group's expertise and technical leadership; these are the points of the training programmes and of the training effort initiated by the Group, each year, on all its sites and locations.

Programmes designed to improve executives' managerial skills ("Fundamentals of Management" and "Performance Driven") are part of a broader managerial training path that also integrates key competencies in Safety, Project Management, Change Management, Continuous Performance Improvement or Communication.

In the field of vocational training for its employees, the ERAMET group also gives priority to safety training and also to business skill development aimed, in particular, to provide better control of processes and their environment

In 2016, IMaGE (ERAMET group Management Institute) provided close to **7,400 training hours.** 1,216 people have followed its various programmes. This institute now offers a compilation of 50 training courses designed to integrate and develop our employees.

The development programme for Group executives started in 2015 and continued in 2016 with the third promotion. ERAMET EXECUTIVE DEVELOPMENT PROGRAMME is a 12-day programme given in English, developed in partnership with Duke Corporate Education, designed to strengthen the leadership of the participants and prepare them for their advancement within the Group. This third promotion, after the first session in Paris in 2015 (five days of academic contributions), carried out its "Learning Trip" in India (seven days) in 2016.

New training modules were disseminated in 2016 (such as the "Discovery of Sustainable Development" programme at ERAMET or the new "Fundamentals for Safety Managers" programme) and have been added to the IMaGE training catalogue.

Emphasis was placed on the digitalisation of the training offered ("Blended" Learning, E-learning, Visio-training...) to reach a rate of 25% in 2016.

Overall, in 2016, ERAMET employees received more than 302,236 training hours(1), approximately 24 hours per employee for the year. Thus, almost 8,721 employees(1), or 68% of the total workforce, benefited from training in 2016 (compared to 317,500 hours in 2015, which corresponded to 27 hours per employee and almost 11,200 employees were trained last year).

#### **5.7.7 EQUAL OPPORTUNITIES**-**MEASURES TO PROMOTE NON-**DISCRIMINATION AND PROMOTE **DIVERSITY**

#### 5.7.7.1 RESPECT FOR GENDER EQUALITY

Women now account for 16% of the total workforce of the Group, specifically: 6% of the operators workforce, 21% of the supervisors, technicians and employees workforce, and 21% of the management workforce).

% of women in the total workforce	16%
% of women in management	21%
% of women in the 2016 CDI recruitments	11%
% of women in the 2016 CDI management recruitments	18%

All of the Group's entities are mobilising to take action to promote the employment of women, including in jobs traditionally held by a rather masculine workforce.

Efforts are thus made locally to promote the technical professions to state school children, high school students, and students, to adapt the facilities to accommodate female staff (changing rooms and social areas set up, for example, in 2016 at Aubert & Duval Imphy and Issoire and at Comilog Dunkerque) and to promote the provisions set out in the collective agreements for gender equality signed on numerous metropolitan sites (agreements or specific action plans implemented or renewed in 2016 for the ERAMET sites ERAMET Comilog Manganese, Erasteel Commentry and Comilog Dunkerque). The Alloys division is also working to recruit women in machining trades.

(1) Data from the annual HR questionnaire completed by the Group entities on a declarative basis.

Discrimination prevention is also addressed in the United States, for example, on the ERAMET Marietta Inc. site, on the occasion of annual anti-harassment awareness training.

In Gabon, during the recruitment campaign for the new CMM industrial facilities, an effort was made to recruit women, who represent almost 25% of this unit's workforce. The Imphy site also participated in a Forum on Women's careers in Nièvre.

#### 5.7.7.2 WORK/LIFE BALANCE

The Group has continued the effort devoted over the last four years to sensitising teams on Psycho-Social Risks within the framework of the ZEPHYR Programme, in Metropolitan France.

Attention is also given to this subject at the Annual Performance Appraisal. Indeed, part of the exchange between the employee and his/her chain of command is devoted, at this privileged annual meeting, to the organisation of work, workload, and work-life balance.

In this area too, the Group promotes a number of local initiatives of a different nature but intended to promote this necessary balance: sabbatical leave was granted to employees wishing to invest in a personal project, teleworking measures were granted to employees facing personal difficulties, measures favouring parenthood were also put in place at certain sites: Organisation of working time, allocation of CESU cheques (Cheques for Universal Employment Services) for the employment of domestic help (child care, tutoring, housework, etc.), inter-company nursery for ERAMET Sandouville.

#### 5.7.7.3 EMPLOYMENT AND INTEGRATION OF PERSONS WITH DISABILITIES

The ERAMET group is paying attention to the employment and integration of people with disabilities.

The Group has 184 employees with disabilities (data from the CSR survey). This count is probably underestimated, as the regulations of certain states do not permit the accounting of employees with disabilities.

On most Group sites, different actions are undertaken to promote the employment of people with disabilities: adapting premises, accesses, and workstations, awareness campaigns, financing of hearing aids, contributing to organisations or associations dedicated to helping people with disabilities, or the two days a month presence on the site of Les Ancizes (Aubert & Duval) of a firm designed to support the employment of employees with disabilities.

Subcontracting activities are also carried out by work centres or associations employing persons with disabilities. The accessibility of the premises is also a topic discussed at many of the Group's sites.

Each year, the Mission Handicap, which is comprised of representatives of the entities present in Paris and Trappes (ERAMET TMM (Holding and Nickel), ECM, Erasteel, Aubert & Duval, ERAMET Research, ERAMET Engineering, ERAMET International) during the "Employment for Disabled People Week". Thus, from 14 to 18 November 2016, the HR departments of the various entities based in TMM, in collaboration with the members of IC-HSCT and in association with ADAPT (Association for the Social and Professional Integration of Persons with Disabilities), events were held to raise employees' awareness of visual impairment and other conditions of disability.

The Handicap Mission of the ERAMET group entities based in Paris (Tour Maine-Montparnasse) and Trappes complies with the provisions of the Act of 11 February 2005 on Equal Rights and Opportunities, Participation and Citizenship. It was created in 2012 with the aim of raising the Group's employees' awareness of disabilities. It is comprised of representatives of different departments, within each entity (Health/Safety, HR, Communication, among its objectives, it aims to develop relevant partnerships with companies in the adapted sector (food services and meal trays, flower decorations, etc.).

The ERAMET group is a partner of the Officiel du handicap, an organisation made up of public and private stakeholders committed to promoting better integration of people with disabilities in France (employment, subcontracting, accessibility, technology, etc.).

During the creation of ERAMET Services based in Clermont-Ferrand, ERAMET paid attention to people with disabilities in the context of recruitment.

#### 5.7.7.4 EMPLOYMENT OF YOUTH AND SENIORS

In signing an action plan in France for the Generation Contract, the Group's management has made a commitment to develop intergenerational synergies. This plan is especially marked by the desire to integrate and advance youth and enhance and sustain the experience of older workers. For the Group as a whole, 38 people who were 10 years below statutory retirement age were recruited on a permanent or fixed-term contract.

In 2016, the Group welcomed more than 1,165 young people on a work-study contract (apprenticeship or professional training) or an internship.

Since 2013, ERAMET has been involved with 60 major groups, and within the framework of the AFEP (French Association of Private Enterprises), for the employment of young people. The Group is a signatory to an initiative known as "Young people and Enterprises".

ERAMET is also heavily invested in the national or local plan regarding education. This results in different actions or partnerships: In particular, students from local secondary schools and colleges, students from local universities or prestigious universities, and teachers and professors visited more than 41 Group entities.

With a strong commitment from the Trappes research centre (ERAMET Research) and its teams, ERAMET participates in numerous forums for schools in Metropolitan France or in its countries of operation. This is an opportunity to introduce the Group and its businesses, to exchange ideas with young people and to advise them on their career directions. Many of the Group's employees also volunteer, for the most part in teaching curricula, to present the Company or to deliver specialised technical courses. Some of these experts are also involved in school guidance councils or their Board of Directors. Scientific exchanges are also carried out on certain projects with the laboratories of major schools, universities, and teachers.

The Group is also very involved in partnering with major schools through the payment of grants (graduation trips, etc.), the apprenticeship tax, in particular, to the National Chemical Engineering Institute in Paris (Chimie ParisTech), the National School of Geology (ENSG), the School of Mines in Alès (Geology), the Mines ParisTech (ENSMP Soil and subsoil specialisation), the Central School of Paris (Energy specialisation)...

SLN ensures a partnership with the preparatory classes of the Jules-Garnier high school in Nouméa. The SLN competition is valuable for these young Caledonians, who will continue their scientific studies in Metropolitan France.

#### 5.7.7.5 COMPLIANCE WITH THE FUNDAMENTAL CONVENTIONS OF THE INTERNATIONAL LABOUR ORGANISATION AND HUMAN RIGHTS

ERAMET is in compliance with applicable regulations in the countries where the Group operates.

As the Group points out in the Ethics Charter, ERAMET respects the international standards of the International Labour Organisation and, more generally, complies with the principles of international law relating to human rights. In particular, the Group refrains from using any form of forced labour or child labour, either directly or through its suppliers or partners, and respects the right of association.

The Group also ensures equitable treatment of all its employees in the area of professional equality by combating employment and occupational discrimination, ensuring the integrity of those present at each site, and respecting the moral integrity of each employee. The Group ensures the quality of human relations within work teams. In particular, it engages in the fight against all forms of violence and helps promote respect for others and fellowship in industrial relations.

During the annual feedback to the Group's sites on extra-financial items, the Group's various sites are asked whether they comply with the provisions relating to the fundamental ILO Conventions (freedom of association or the right to collective bargaining, the abolition of child labour, the fight against illegal employment, the elimination of discrimination in employment or occupation) and it is important to note the excellent return

(95% Positive on 69 sites surveyed) demonstrating the attention paid to this subject.

Following the dissemination of the Group's new Ethical Charter in 2015, a programme of various actions aimed at increasing the awareness of the various internal and external stakeholders was conducted under the quidance of the Group's ethics officer and the Monitoring Committee. Thus, an e-learning programme has been designed and will be deployed in the first quarter of 2017 within the Group.

## **5.8 METHODOLOGI-CAL NOTE**

#### **5.8.1 BENCHMARK INDICATORS**

Chapter 5 is intended to inform stakeholders about ERAMET's actions in the vein of Sustainable Development. The indicator framework used for this purpose has been designed to provide the most accurate picture of the significant issues facing the Group given its activities. It primarily includes the list of information required by Article R. 225-101-1 of the French Commercial Code. In addition, and in order to report on the follow-up of the Group policies and performance monitoring, other indicators were chosen based on those proposed by the Global Reporting Initiative and its declination dedicated to the Mines & Metallurgy.

#### 5.8.2 SCOPE OF REPORTING

The non-financial reporting of the ERAMET group covers:

• For its Corporate part: all companies consolidated from an accounting point of view (full consolidation), and also those accounted for by the equity method. In addition, for certain indicators (reported in the text by the term "CSR data"), the reporting includes five additional companies (Sodepal, Metallied Irun, ERAMET Alloys UK, Erasteel GMBH, Erasteel India) which totals 77 people, and therefore, covers 100.6% of the consolidated staff according to the financial consolidation rules.

- For its Safety part: (Consolidated companies) as well as companies accounted for under the equity method, as well as EcoTitanium, Sodepal and Metallied Irun, but excluding commercial offices (which represent less than 1% of Group's workforce). Recent entities in the Group (acquisitions, new projects) may be excluded from the scope of consolidation if their reporting is unreliable or if the project does not yet represent a significant Group activity (for 2016: Maboumine and Mukulu, representing less than 1% of the total workforce). The initial scope of safety reporting in 2016 is similar to that of 2015, with the addition of ERAMET Services, the Shared Services Centre in Clermont-Ferrand (France).
- For its Environment and Energy part: All of the Group's sites as long as these sites meet the following criteria:
  - ERAMET has a control percentage in the financial sense of at least 50%:
  - Sites are subject to environmental regulations (permit, code, national regulations).

On this basis, it does not apply to sites:

- whose activity is solely administrative (ex: commercial offices);
- in project or closure phase, where no commercial production is carried out (seven entities);
- since 2016, to the sites whose activity is limited to distribution, it being understood that their cumulative impact is less than 0.1% of the total Group on the main indicators concerned (six sites whose non-significant impact aspect is followed).

The Erachem sites, which were sold on 30 December 2016, remain part of the extra-financial reporting perimeter for the year 2016 and thus contribute to the Group's environmental, energy, safety, or social indicators with the exception of the consolidated headcount indicators at 31 December 2016, reflecting the Group's policies and initiatives covering this period from 1 January to 30 December 2016.

SOMIVAB and Bear Metallurgical Corp., which were sold in the fall of 2016, or SUPA, which was incorporated into the Joint Venture MKAD, are excluded from the scope of the Environment and Energy reporting, but contribute up to their date of sale to the consolidated social or safety indicators.

The following table summarizes the entities covered by the various reporting areas.

COUNTRY	LEGAL ENTITIES	SITES	AREAS DATA Social	AREA SAFETY	ENVIRONMENT— ENERGY SCOPE
Germany	Aubert & Duval Special Steels GmbH-Stahlschmitt & AD Deutschland	Mönchengladbach	х	Х	
,	ERAMET International	Francfort	х		
Argentina	Eramine	Salta	х	Х	
Belgium	Erachem Comilog	Tertre	х	Х	х
Brazil	ERAMET Latin America	Sao Paulo	х		
	Aubert & Duval Moulds & Die Technology (ADMDT)	Wuxi	х	Х	
	Erasteel Trading Co. Ltd	Tianjin	х		
	Comilog Far East Development (CFED)	Hong Kong	x		
China	ERAMET China Guilin Comilog Ferro Alloys Ltd	Guilin	х	Х	
	ERAMET Comilog Shanghai Trading (ECST) & ERAMET Comilog Shanghai Consultancy Services (ECSCS)	Shanghai	x		
	Guangxi ERAMET Comilog Chemical (GECC)	Chongzuo	х	Х	х
Korea	ERAMET International	Seoul	x		
Spain	Metallied Powder Solutions	Irun		Х	
	_ , , ,	Boonton	х	Х	Х
	Erasteel Inc.	Romeoville	х	Х	
	ERAMET North America	Pittsburgh	х		
	Bear Metallurgical Corp.	Butler	x	Х	
United States		Baltimore	х	Х	х
	Erachem Comilog	New Johnsonville	х	Х	х
	ERAMET Marietta	Marietta	х	X	х
	Gulf Chemical & Metallurgical (GCMC)	Freeport	х	X	Х
	Aubert & Duval USA	Charlotte	х		
	EcoTitanium			Х	
		Les Ancizes	х	Х	Х
		Clermont-Ferrand La Pardieu	х	х	
		Issoire	х	X	х
	Aubert & Duval	Heyrieux	Х	X	•
	Addert a Bavar	Imphy	х	Х	Х
		Gennevilliers	х		
		Pamiers	х	Х	Х
		Firminy	Х	X	Х
	Aubert & Duval TAF	Gennevilliers	х	X	Х
France	Brown Europe	Laval-de-Cère	Х	X	X
Trance	Construction of Metal Moulds (CMM)	Landévant	Х	X	
	ERAMET Alloys and Aubert & Duval TMM	Paris		X	
		Commentry	Х	X	Х
	Erasteel	Champagnole	X	X	X
		Paris & Chalon	X	X	, , , , , , , , , , , , , , , , , , ,
	Forges of Monplaisir	Saint-Priest	X	X	X
	Interforge	Issoire	X	X	X
	SUPA	Varilhes	X	X	^
	UKAD	Les Ancizes	X	X	X
		Feurs	^	X	^
	Valdi	Le Palais-sur-Vienne	х	X	X

COUNTRY	LEGAL ENTITIES	SITES	AREAS DATA SOCIAL	AREA SAFETY	ENVIRONMENT— ENERGY SCOPE
	ERAMET Holding	Paris and Trappes	х	Х	
	ERAMET Engineering	Trappes	х	Х	
	ERAMET Research	Trappes	х	Х	х
	Comilog Dunkerque	Dunkerque	Х	Х	х
F	ERAMET Comilog Manganese	Paris and Trappes	Х	Х	
France	Comilog International	Paris	Х		
	EDAMET Nickel	Sandouville	Х	Х	х
	ERAMET Nickel	Paris and Trappes	Х	Х	
	Eurotungstène Powders	Grenoble	Х	Х	х
	ERAMET Services	Clermont-Ferrand	х	Х	
		Moanda Complexe C2M	х	x	х
	Comilog SA	Moanda Complexe CIM	х	х	х
		Owendo Mineral Port	Х	Х	х
Gabon		Moanda Mine	Х	Х	х
	Maboumine	Lambaréné	х		
	Setrag	Owendo	х	Х	х
	SODEPAL	Bakoumba		Х	
	SOMIVAB	Libreville, Biliba, Essassa	х	х	
India	ERAMET India Private Limited	Mumbai	х	Х	
Indonesia	Pt Weda Bay Nickel	Jakarta, Halmahera	х	Х	
14 - 1 -	ADES	Ferrara	х	Х	
Italy	ERAMET International	Trezzano	х		
Japan	ERAMET International	Tokyo	х		
Mexico	Erachem Mexico	Tampico	х	Х	х
	ERAMET Norway	Kvinesdal	Х	Х	х
		Sauda	Х	Х	х
Norway		Porsgrunn	Х	Х	х
	ERAMET Titanium & Iron (ETI)	Tyssedal	Х	Х	х
	Eralloys Holding		Х		
		Nouméa (Doniambo)	Х	Х	х
		Kouaoua	Х	Х	х
New Caladania	CLN	Népoui	Х	Х	х
New Caledonia	SLN	Poum	Х	Х	х
		Tiébaghi	Х	Х	х
		Thio	Х	Х	х
1.117	Erasteel Stubs	Warrington	х	Х	х
UK	TiZir Ltd	London	х		
Senegal	Grande Côte Opérations–TiZir	Diogo	х	Х	х
		Söderfors	х	Х	Х
Sweden	Erasteel Kloster	Långshyttan	х	Х	Х
		Vikmanshyttan	х	Х	Х
Taiwan	ERAMET International	Taipei	Х		

## 5.8.3 COLLECTION, CONSOLIDATION AND DATA CHECK

Social reporting (including safety reporting) is based on the dedicated Era-Link acquisition and consolidation tool and on a qualitative questionnaire, sent in parallel, to the entities concerned (which also provides information on the societal commitment of the sites). Comparing the figures from these two tools for some common indicators allows for data verification.

The procedure "Safety and Information Reporting in case of personal accident" is the reference in terms of security reporting. The applicable version was revised in 2016.

Data relating to occupational accidents are crosschecked with the monthly declarations made by the sites to the Directorate of Prevention and Safety via the SharePoint HSSE of the Group.

The process of environmental and energy reporting is subject to an updated procedure in 2016, which clearly defines the responsibilities and operating procedures.

Environmental and energy reporting is based on a dedicated information system, called EraGreen, deployed at all relevant sites, since 2011. All the quantitative information provided in this report (environmental indicators) is extracted from EraGreen and comes exclusively from the data entered by each of the Group's sites and validated by each site manager.

EraGreen contains automatic data check devices compared to previous years. In addition, the annual reports of EraGreen sites are systematically checked

for consistency by experts from the branches of the Group or by the Group.

## 5.8.4 SPECIFICITIES AND METHODOLOGICAL LIMITATIONS

- Since 2015, the frequency<sup>(1)</sup> and severity rates<sup>(2)</sup> of occupational accidents are calculated by including temporary workers in the workforce.
- Due to planning constraints, some monthly environmental data may not be available for the last month of the year. In this case, the missing data are estimated as accurately as possible, based on the historical site data and correlated, where appropriate, to production, in accordance with the Group's standards.
- When an environmental measure is deemed to be faulty or is unavailable, an estimate based on historical ratios is used, adjusted according to the level of production of the site. This situation may arise in particular for nitrogen oxides (NOx) and channelled dust parameters, for which the quantities reported are based on a limited number of measurements during the year.
- COD (Chemical Oxygen Demand): the measurement of this parameter is difficult and can be disturbed by various chemical elements, in particular the presence of chlorides. The Eurotungstène site in Grenoble (France) presents this imperfect situation regarding the relevance of the measurement of this indicator. Since the COD measure is prescribed according to the conditions and method of analysis

- defined by the prefectorial decree of the site, this data is included in the consolidated reporting despite this difficulty, which leads to a significant overestimation of the indicator.
- Waste: the waste is reported in the environmental reporting by the sites according to the national regulations applicable to them. The reported quantities corresponding to the quantities of waste discharged into the treatment systems during the year. The criteria that lead to the identification of hazardous or non-hazardous waste are variable, according to the regulations of the different countries, the reporting cannot be completely homogeneous in this respect.
- Water consumption: the quantities of seawater used for the cooling of the thermal power plant and for the granulation of SLN slag (New Caledonia), and water used for the cooling of the facilities at the Marietta site (USA) are not accounted for as the water is directly returned to the natural environment without undergoing transformation.
- Emissions of greenhouse gases: reporting is done in accordance with the rules of the GHG Protocol (WRI). The emission factors used are those most recently published by ADEME (in its Carbon Base), and by the International Energy Agency for electricity.
- Enrolled workforce: employees with a contract of employment with the Company (fixed-term contract "CDD", permanent contract "CDI") and entered in the personnel records on the last day of the period concerned. This information corresponds to the number of people regardless of their working time (full or part time). Each employee is counted as 1.

<sup>(1)</sup> The **frequency** of occupational accidents is the number of occupational accidents occurring during a given period, in relation to one million hours worked.

TF = (number of occupational accidents x 1,000,000) / number of hours worked.

<sup>(2)</sup> The severity rate of occupational accidents is the number of calendar days not worked after an occupational accident, occurring during a given period, based on one thousand hours worked.

TG = (number of days not worked due to occupational accident x 1,000) / number of hours worked.

## **5.9** REPORT OF ONE OF THE STATUTORY AUDITORS, DESIGNATED AS AN INDEPENDENT THIRD-PARTY BODY, ON THE CONSOLIDATED SOCIAL, ENVIRONMENTAL AND SOCIETAL INFORMATION INCLUDED IN THE MANAGEMENT REPORT, AS INCLUDED IN THE REFERENCE DOCUMENT

This is a free English translation of the Statutory Auditors' report issued in French and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

#### For the year ended 31 December 2016

To the Shareholders.

In our capacity as Statutory Auditor of ERAMET S.A. Company, (the "Company"), appointed as independent third party and certified by COFRAC under number 3-1049<sup>(1)</sup>, we hereby report to you on the consolidated human resources, environmental and social information for the year ended 31 December 2016, included in the management report (hereinafter named "CSR Information"), pursuant to Article L. 225-102-1 of the French Commercial Code (Code de commerce).

#### COMPANY'S RESPONSIBILITY

The Board of Directors is responsible for preparing a Company's management report including the CSR Information required by Article R. 225-105-1 of the French Commercial Code in accordance with the procedures used by the Company (hereinafter the "Guidelines"), summarised in the management report and available on request from the Company's head office.

#### INDEPENDENCE AND QUALITY CONTROL

Our independence is defined by regulatory texts, the French Code of ethics (Code de déontologie) of our profession and the requirements of Article L. 822-11-3 of the French Commercial Code. In addition, we have implemented a system of quality control including documented policies and procedures regarding compliance with the ethical requirements and applicable legal and regulatory requirements.

#### STATUTORY AUDITOR'S RESPONSIBILITY

On the basis of our work, our responsibility is to:

- attest that the required CSR Information is included in the management report or, in the event of non-disclosure of a part or all of the CSR Information, that an explanation is provided in accordance with the third paragraph of Article R. 225-105 of the French Commercial Code (Attestation regarding the completeness of CSR Information);
- express a limited assurance conclusion that the CSR Information taken as a whole is, in all material respects, fairly presented in accordance with the Guidelines (Conclusion on the fairness of CSR Information).

(1) Whose scope is available at www.cofrac.fr.

Our work involved five persons and was conducted between November 2016 and February 2017 during a six week period. We were assisted in our work by our CSR experts.

We performed our work in accordance with the order dated 13 May 2013 defining the conditions under which the independent third party performs its engagement and with the professional guidance issued by the French Institute of statutory auditors (Compagnie nationale des commissaires aux comptes) relating to this engagement and with ISAE 3000<sup>(2)</sup> concerning our conclusion on the fairness of CSR Information.

#### 1. ATTESTATION REGARDING THE COMPLETENESS OF CSR INFORMATION

#### NATURE AND SCOPE OF OUR WORK

On the basis of interviews with the individuals in charge of the relevant departments, we obtained an understanding of the Company's sustainability strategy regarding human resources and environmental impacts of its activities and its social commitments and, where applicable, any actions or programmes arising from them.

We compared the CSR Information presented in the management report with the list provided in Article R. 225-105-1 of the French Commercial Code.

For any consolidated information that is not disclosed, we verified that explanations were provided in accordance with Article R. 225-105, paragraph 3 of the French Commercial Code.

We verified that the CSR Information covers the scope of consolidation, i.e., the Company, its subsidiaries as defined by Article L. 233-1 and the controlled entities as defined by Article L. 233-3 of the French Commercial Code within the limitations set out in the methodological note, presented in section 5.8 of the management report.

#### CONCLUSION

Based on the work performed and given the limitations mentioned above, we attest that the required CSR Information has been disclosed in the management report.

#### 2. CONCLUSION ON THE FAIRNESS OF CSR INFORMATION

#### NATURE AND SCOPE OF OUR WORK

We conducted a dozen interviews with the persons responsible for preparing the CSR Information in the departments in charge of collecting the information and, where appropriate, responsible for internal control and risk management procedures, in order to:

- assess the suitability of the Guidelines in terms of their relevance, completeness, reliability, neutrality and understandability, and taking into account industry best practices where appropriate;
- verify the implementation of data-collection, compilation, processing and control process to reach completeness and consistency of the CSR Information and obtain an understanding of the internal control and risk management procedures used to prepare the CSR Information.

We determined the nature and scope of our tests and procedures based on the nature and importance of the CSR Information with respect to the characteristics of the Company, the human resources and environmental challenges of its activities, its sustainability strategy and industry best practices.

(2) ISAE 3000-Assurance engagements other than audits or reviews of historical financial information.

Regarding the CSR Information that we considered to be the most important<sup>(3)</sup>:

- at parent entity level, we referred to documentary sources and conducted interviews to corroborate the qualitative information (organisation, policies, actions), performed analytical procedures on the quantitative information and verified, using sampling techniques, the calculations and the consolidation of the data. We also verified that the information was consistent and in agreement with the other information in the management report;
- at the level of a representative sample of sites selected by us(4) on the basis of their activity, their contribution to the consolidated indicators, their location and a risk analysis, we conducted interviews to verify that procedures are properly applied and to identify potential undisclosed data, and we performed tests of details, using sampling techniques, in order to verify the calculations and reconcile the data with the supporting documents. The selected sample represents 23% of headcount considered as material data of social issues and between 9% and 28% of environmental data considered as material data(5) of environmental issues.

For the remaining consolidated CSR Information, we assessed its consistency based on our understanding of the Company.

We also assessed the relevance of explanations provided for any information that was not disclosed, either in whole or in part.

We believe that the sampling methods and sample sizes we have used, based on our professional judgement, are sufficient to provide a basis for our limited assurance conclusion; a higher level of assurance would have required us to carry out more extensive procedures. Due to the use of sampling techniques and other limitations inherent to information and internal control systems, the risk of not detecting a material misstatement in the CSR information cannot be totally eliminated.

#### CONCLUSION

Based on the work performed, no material misstatement has come to our attention that causes us to believe that the CSR Information, taken as a whole, is not presented fairly in accordance with the Guidelines.

Free translation for information purposes. The original French version of this report has been signed. Please refer to the French version of this registration document for signature.

(3) Quantitative social information: Workforce on 31 December 2016, Workforce by type of employment contract, Workforce by socio professional category, New recruits, Departures, Number of resignations, Number of dismissals, Percentage of women in managerial positions, Number of training hours held during the exercise, Lost time injury frequency rate, Accident severity rate.

Quantitative environmental information: Total energy consumption, CO, emission related to energy, Total canalised dust, Chemical oxygen demand (COD), Quantity of hazardous waste, Total water consumption

Qualitative information: Occupational health and safety conditions, Organization of social dialogue including information procedures, consultation and negotiation with the employees, Summary of collective agreements signed with trade unions or worker representatives on work place health and safety, The organization of the Company to integrate environmental issues and, if appropriate, the assessments and certification process regarding environmental issues, Measures of prevention, recycling, reuse, other forms of recovery and disposal of waste, Resources allocated to prevention of environmental risks and pollution, Land usage, Energy consumption and measures implemented to improve energy efficiency and renewable energy use, Consumption of raw materials and measures implemented to improve efficiency in their use. Adaptation of consequences of climate change, Action implemented against corruption. Conditions of dialogue with stakeholders and Importance of subcontracting and consideration, in the relationship with subcontractors and suppliers of their social and environmental responsibility.

(4) Quantitative social information: ERAMET Norway (Norway), Aubert & Duval, Pamiers (France), Comilog S.A. (Gabon),

Quantitative environmental information: ERAMET Norway Porsgrunn (Norway), ERAMET Norway Sauda (Norway), ERAMET Norway Kvinsedal (Norway), Société Le Nickel Doniambo (New Caledonia), Marietta (USA), Sandouville (France).

(5) See list of quantitative environmental information disclosed in the footnote of the present report on page 3.





## 6.1 **CONSOLIDATED FINANCIAL STATEMENTS AS AT 31 DECEMBER 2016**

#### **6.1.1 INCOME STATEMENT**

(€ MILLION)	NOTES	FY 2016	FY 2015
Sales	3/4	2,897	3,015
Cost of sales and other income		(2,333)	(2,726)
Administrative and selling expenses		(164)	(172)
Research and development expenditure	4	(34)	(25)
EBITDA	3	366	92
Amortisation and depreciation of non-current assets and provisions for contingencies and losses	4	(275)	(283)
Current operating income	3/4	91	(191)
Other operating income and expenses	5	(138)	(553)
Operating income	3	(47)	(744)
Financial income	6	(58)	(74)
Share of income from joint ventures and associates	9	(66)	(78)
Income tax	10	(61)	(9)
Net income for the period		(232)	(905)
attributable to non-controlling interests	5	(53)	(191)
attributable to equity holders of the parent	3/5	(179)	(714)
Basic/Diluted earnings per share (€)	5	(6.79)	(27.11)

#### **6.1.2 STATEMENT OF COMPREHENSIVE INCOME**

(€ MILLION)	NOTES	FY 2016	FY 2015
Net income for the period		(232)	(905)
Translation differences for subsidiaries' financial statements in foreign currency		22	22
Change in revaluation reserve for assets available for sale		7	-
Change in revaluation reserve for hedging financial instruments	7	59	(30)
Income tax		(1)	-
Items recyclable to profit or loss	, ,	87	(8)
Revaluation of net defined benefit plan liabilities	11	(17)	(10)
Income tax		2	3
Items not recyclable to profit or loss		(15)	(7)
Other comprehensive income		72	(15)
attributable to non-controlling interests	5	7	(14)
· attributable to equity holders of the parent		65	(1)
Total comprehensive income		(160)	(920)
attributable to non-controlling interests		(46)	(205)
attributable to equity holders of the parent		(114)	(715)

These items are shown in the statement of changes in shareholder's equity under Other Comprehensive Income (OCI).

#### **6.1.3 STATEMENT OF CASH FLOWS**

(€ MILLION)	NOTES	FY 2016	FY 2015
Operating activities:	•		
Net income for the period		(232)	(905)
Non-cash income and expenses	6	389	761
Cash generated from operations		157	(144)
Net change in working capital requirement	8	(59)	131
Net cash flow from operating activities <sup>(1)</sup>	3	98	(13)
Investing activities			
Acquisition of non-current assets	9	(212)	(249)
Disposal of non-current assets		7	12
Net change in non-current financial assets	9	(14)	(29)
Net change in current financial assets	6	(135)	224
Share capital increase-controlled companies	9	(97)	-
Impact of changes in consolidation scope <sup>(2)</sup>	6	131	-
Net cash used in investing activities		(320)	(42)
Financing activities		_	
Issue of equity instruments (ODIRNAN)	6	100	-
Loan issues <sup>(3)</sup>	6	1,183	140
Loan repayments	6	(113)	(220)
Change in bank overdrafts	6	(32)	49
Other changes	6	9	5
Net cash used in financing activities		1,147	(26)
Effect of exchange rate changes		3	(3)
Increase (decrease) in cash and cash equivalents		928	(84)
Opening cash and cash equivalents	6	432	516
Closing cash and cash equivalents	6	1,360	432
(1) Including under operating activities			
Interest income	6	16	11
Interest paid	6	(71)	(62)
Tax paid	10	(33)	(71)

 <sup>(2)</sup> Including Erachem disposal amounting to €124 million in December 2016.
 (3) Including drawdown of Revolving Credit Facilities for €980 million in January 2016.

#### 6.1.4 STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

(€ MILLION)	NUMBER OF SHARES	SHARE CAPITAL	SHARE PREMIUM	RESERVES/ AVAI- LABLE- FOR-SALE ASSETS	RESERVES/ HEDGING INSTRU- MENTS	RESERVES/ DEFINED BENEFIT PLANS	TRANS- LATION ADJUST- MENTS	OTHER RESERVES	ATTRIBU- TABLE TO EQUITY HOLDERS OF THE PARENT	ATTRI- BUTABLE TO NON CONTROL- LING INTERESTS	TOTAL Sharehol- Ders' Equity
Shareholders' equity at 1 January 2015	26,543,218	81	373		(60)	(54)	1	1,981	2,322	434	2,756
Net income for the period								(714)	(714)	(191)	(905)
Other comprehensive income					(20)	(7)	26	-	(1)	(14)	(15)
Total comprehensive income		-	-	-	(20)	(7)	26	(714)	(715)	(205)	(920)
Share-based payment								5	5		5
Other movements								(146)	(146)	93	(53)
Total transactions with shareholders		-	-	-	-	-	-	(141)	(141)	93	(48)
Shareholders' equity at 31 December 2015	26,543,218	81	373		(80)	(61)	27	1,126	1,466	322	1,788
Net income for the period								(179)	(179)	(53)	(232)
Other comprehensive income				7	51	(13)	20	-	65	7	72
Total comprehensive income		-	-	7	51	(13)	20	(179)	(114)	(46)	(160)
Share capital increase	7,225	-	1					(1)	-		-
Equity instruments (ODIRNAN)								100	100		100
Share-based payment								3	3		3
Other movements				2				58	60		60
Total transactions with shareholders			1	2				160	163		163
Shareholders' equity at 31 December 2016	26,550,443	81	374	9	(29)	(74)	47	1,107	1,515	276	1,791

#### MAIN COMPONENTS OF CHANGES IN EQUITY

Premiums essentially consist of issue premiums, representing the difference between the par value of the shares issued and the amount of the contributions in cash or in kind received on issue.

Reserves on available-for-sale assets include changes in the fair value of bonds classified as Other current financial assets.

Hedging instrument reserves comprise the cumulative change in the effective portion of the fair value of derivatives relating to future cash flow hedging in connection with transactions that have not yet impacted the Net income for the period. This is offset in Derivatives under assets or liabilities, depending on whether hedging gains or losses are recognised.

Reserves on Defined benefit plans include the impact of changes in actuarial assumptions used for commitments, and the variance between actual returns and the discount rates on the plans assets.

Translation adjustments account for the conversion differences deriving from the translation of the financial statements of foreign subsidiaries into Euros. They also include the fair value changes of the net investment hedges of foreign subsidiaries.

#### AT 31 DECEMBER 2016

ERAMET launched an offering of net share settled undated bonds convertible into new shares (ODIRNAN) for a principal amount of €100 million recognised in equity (see key events for the period).

Other movements in shareholders' equity Group share relate primarily to the exercise by Mitsubishi of its put option in Strand Minerals (Indonesia) Pte. Ltd.

#### AT 31 DFCFMBFR 2015

The ERAMET group remeasured the put option granted by it to Mitsubishi directly in equity, and now recognises the non-controlling interest in the Weda Bay project in Indonesia directly in shareholders' equity, Group share (held through Strand Minerals (Indonesia) Pte. Ltd., a 66.6%-owned subsidiary of ERAMET).

#### **6.1.5** BALANCE SHEET

#### ASSETS

(€ MILLION)	NOTES	31/12/2016	31/12/2015
Intangible assets and goodwill	9	372	370
Property, plant and equipment	9	1,976	2,116
Investments in joint ventures and associates	9	107	169
Non-current financial assets	9	141	153
Deferred tax	10	4	8
Other non-current assets	8	99	70
Non-current assets		2,699	2,886
Inventories	8	896	937
Trade receivables and other current assets	8	525	538
Tax receivables	8 / 10	39	58
Derivatives	7	29	30
Current financial assets	6	331	196
Cash and cash equivalents	6	1,360	432
Current assets		3,180	2,191
Total assets		5,879	5,077

#### LIABILITIES

(€ MILLION)	NOTES	31/12/2016	31/12/2015
Share capital		81	81
Share premium		374	373
Available-for-sale asset revaluation reserve		9	-
Hedging instrument revaluation reserve		(29)	(80)
Revaluation reserve for net defined benefit plan liabilities		(74)	(61)
Translation adjustments		47	27
Other reserves		1,107	1,126
Attributable to equity holders of the parent		1,515	1,466
Attributable to non-controlling interests	5	276	322
Shareholders' equity		1,791	1,788
Employee-related liabilities	11	219	215
Provisions	12	482	564
Deferred tax	10	150	136
Non-current borrowings-due after more than one year	6	2,022	1,163
Other non-current liabilities	8	5	31
Non-current assets		2,878	2,109
Current provisions–due in less than one year	12	38	33
Current borrowings—due in less than one year	6	344	181
Trade payables and other current liabilities	8	717	748
Tax payables	8 / 10	34	31
Derivatives	7	77	187
Current liabilities		1,210	1,180
Total liabilities		5,879	5,077

#### 6.1.6 NOTES TO THE CONSOLIDATED STATEMENTS

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ERAMET is a French public limited company with a Board of Directors, governed by the provisions of Articles L. 225-17 and R. 225-1 et seq. of the French Commercial Code and the provisions of its Articles of Association. As required by law, the Company is audited by two statutory auditors.

The ERAMET group's consolidated financial statements at 31 December 2016 were approved by the ERAMET Board of Directors on 23 February 2017.

The accompanying notes form an integral part of these consolidated financial statements.

## NOTE 1 DESCRIPTION OF THE ERAMET GROUP'S BUSINESS

The ERAMET group is one of the world's largest producers of:

- alloy metals, especially manganese and nickel, which are used to improve the properties of steel;
- high-performance special steels and alloys used by industries such as aeronautics, power generation and tooling.

The ERAMET group is divided into three Divisions.

## ERAMET MANGANESE EXTRACTS AND PROCESSES MANGANESE ORE

- Comilog operates the Moanda mine in Gabon.
- The manganese extracted is then processed in the Group's metallurgical plants in France, Norway and the United States. The Group produces the widest range of alloys on the market.

 The ERAMET group has also expanded in titanium, aluminium and aluminium-lithium alloys and in the powder metallurgy business.

The ERAMET group is also exploring large projects in new business segments with strong growth potential, such as mineral sands (titanium dioxide and zircon) and lithium

## ERAMET NICKEL EXTRACTS AND PROCESSES NICKEL ORE

- Le Nickel-SLN operates five mines and one metallurgical plant in New Caledonia. The ERAMET group is also involved in the Weda Bay Nickel project to mine a large nickel deposit in Indonesia.
- Part of the nickel is then processed in the Sandouville refinery in France, which produces pure nickel, nickel chloride, nickel carbonate and cobalt chloride. Eurotungstène produces cobalt and tungsten powders in France.

## ERAMET ALLOYS CREATES, PROCESSES AND TREATS ALLOYS

 Aubert & Duval and Erasteel make special steels and superalloys, in particular for the aeronautics and power generation sectors. These markets require high added-value metallurgical expertise.

## NOTE 2 KEY EVENTS IN THE REPORTING PERIOD

#### RECOVERY PLAN FOR SOCIÉTÉ LE NICKEL-SLN

On 23 December 2015, ERAMET granted a loan of €120 million to SLN, maturing on 31 May 2016. The total loan amount was increased from €120 million to €150 million following the decision of ERAMET's Board of Directors on 17 February 2016.

On 9 May 2016, the Board of Directors of ERAMET approved the project of cost reduction and productivity improvement plan concerning the mines and metallurgical plant. On 27 May 2016, ERAMET's Board of Directors agreed to additional funding of €40 million to cover SLN's operations until the end of June 2016.

On 11 July 2016, the Board of Directors of SLN authorised two loan agreements:

 a loan agreement of €200 million with the French State, signed on 20 July 2016 and maturing on 30 June 2024. An initial drawdown of €150 million took place in late July 2016:

an amendment to the intercompany loan of 23 December 2015, subsequently amended on 22 February 2016 and 27 May 2016, between ERAMET and SLN, increasing the loan amount to €325 million with a maturity date of 30 June 2024. This amendment was approved by ERAMET's Board of Directors on 27 July 2016.

On another note, the scheme adopted to provide power to the Doniambo facility in New Caledonia has resulted in the installation of a new natural gas-fired electricity generation plant on the island. The investment project will be managed by a newly created public structure in New Caledonia. The main part of the bank funding will be guaranteed by the French State under the provisions adopted by the French Parliament in December 2016.

## SHAREHOLDING STRUCTURE OF THE WEDA BAY NICKEL PROJECT IN INDONESIA

Following a decision to review its portfolio of mining assets, on 21 April 2016 Mitsubishi Corporation expressed its intention to exercise a put option to sell to ERAMET the stake it owns with Pacific Metals Co. Ltd (Pamco) in Strand Minerals Pte. Ltd., which controls 90% of the Indonesian project and exploration company, Pt Weda Bay Nickel.

Under the terms of the agreement between the shareholders of Strand Minerals Pte. Ltd., ERAMET proceeded with the acquisition of the shares from Mitsubishi Corporation and Pamco. ERAMET thus became the sole shareholder of Strand Minerals Pte. Ltd., which owns 90% of Pt Weda Bay Nickel. This transaction increased the ERAMET group's net debt by €97 million, corresponding to the amount paid to Mitsubishi and Pamco.

This transaction has no impact on the Group's profit and loss statement.

## FUNDING AGREEMENTS FOR THE TRANS-GABON RAILWAY RENOVATION PLAN (SETRAG)

This renovation plan will ultimately increase the transport capacity and reliability of the railway. The corresponding amount is €316 million, which will be spread over eight years, of which €93 million will be financed by the Gabonese Government.

As provided in the amendment to the Concession Agreement signed in October 2015, the Gabonese State and Setrag have funded the remedial investment plan, as follows:

- the Gabonese government, with the signing of a Financing Agreement with the French Development Agency (AFD) in December 2016;
- Setrag, with the signing in June 2016 of the first tranche of a credit of €85 million over a period of 15 years with the International Finance Corporation (IFC-World Bank) and PROPARCO (Promotion et Participation pour la Coopération Économique—a subsidiary of the French Development Agency, AFD) with guarantee and commitment of support from Comilog. No amount had been drawn down as of 31 December 2016.

#### INCIDENT AT TIZIR TITANIUM AND IRON (TTI)

An operational incident took place on 15 August 2016 at the TiZir Titanium and Iron (TTI) facility in Tyssedal in Norway. TTI is a subsidiary of TiZir Ltd, a joint venture with the Australian company Mineral Deposits Ltd., which upgrades ilmenite to high purity titanium and iron.

TTI restarted production on 7 January 2017, after work to repair the refractory lining of the furnace was successfully completed in late 2016.

TTI reached an agreement with its insurer on a full and final settlement of NOK305 million (USD35 million), which was paid in full on 31 December 2016.

## ISSUE OF UNDATED BONDS CONVERTIBLE INTO NEW SHARES (ODIRNAN)

The ERAMET group strengthened its equity by €100 million by issuing undated bonds convertible into cash and/or new shares by ERAMET (ODIRNAN) on 5 October 2016.

The nominal value of the bonds, issued at par, was set at €46.33, which represents a conversion premium of 30% over ERAMET's reference share price.

A total of 2,158,428 bonds were issued for a cumulative nominal amount of €99,999,969.24.

The Company's majority shareholders subscribed for a total amount of €87 million representing 87% of the final issue amount.

See Note 6.

#### SALE OF ERACHEM (MANGANESE CHEMICAL) To PMHC II

As part of its asset disposal program, following the agreement signed on 10 December 2016, the ERAMET group finalised the sale on 30 December 2016 of Erachem to the US company, PMHC II, Inc., the parent company of Prince International Corporation. This transaction was completed for an amount of USD193 million.

Erachem comprises several subsidiaries of the Gabonese company Comilog, in which ERAMET has an equity interest of 63.71%. Erachem has sites in the United States, Belgium, China and Mexico, which provide manganese chemical activities specifically for the markets for batteries, agrochemicals and various other applications (electronics, pigments, etc.). Erachem's sales amounted to USD183 million in 2016.

#### REVOLVING CREDIT FACILITY DRAWN DOWN

In early January 2016, ERAMET had drawn down €980 million on the available credit facility under the Multicurrency Revolving Credit Facility Agreement (RCF).

#### NOTE 3 OPERATIONAL PERFORMANCE OF DIVISIONS AND THE GROUP-SEGMENT REPORTING

The ERAMET group is divided into three divisions: ERAMET Nickel, ERAMET Alloys and ERAMET Manganese. Each Division offers different products and services and relies on distinct technologies and sales strategies. Their operational and financial performance is therefore monitored separately. Their contribution to the main financial indicators of the Group is given below.

#### ACCOUNTING METHOD

market conditions.

The Divisions' financial statements are prepared in compliance with the accounting principles adopted for the Group's reporting. In this context, the operational performances of joint ventures—the subgroup TiZir (ERAMET Manganese) and the company UKAD (ERAMET Alloys)—are accounted for using the proportionate consolidation method. The reconciliation with the published data is given in the Joint venture contribution column.

Transactions between Divisions are carried out under

#### ESTIMATES, ASSUMPTIONS AND JUDGEMENTS

The Executive Committee, the chief operating decision-maker, regularly assesses the performance of each Division against the following indicators:

- · Sales.
- EBITDA, including the gross profit (difference between sales and the cost
  of sales), administrative and selling expenses and research & development
  expenditure before depreciation, amortisation and provisions, which are
  presented separately.
- Current operating income includes EBITDA, depreciation and amortisation and provisions for liabilities and charges. Current operating income excludes material transactions that are considered to be unusual in nature, in particular events relating to restructuring and impairment and disposals of assets.
- Cash flows generated by operating activities including EBITDA, other operational cash flows not impacting EBITDA and the change in working capital requirement (WCR).
- **Industrial investments,** including the acquisitions of intangible assets and property, plant and equipment.

The Executive Committee also monitors consolidated indicators such as:

- Net income, Group share, defined as the net income after tax attributable to ERAMET shareholders, after accounting for the percentage of non-controlling interest in each Group subsidiary.
- Net financial debt, represents the financial debt (long- and short-term borrowings) less current financial assets, and cash and cash equivalents. These items include the valuation of debt-hedging derivatives.
- Gearing, defined as the ratio of net financial debt to shareholders' equity (Group and non-controlling interest).

The Holding companies that provide the Group's central services (cash management, currency risk management, reinsurance captive) do not constitute a Division. Their aggregates are shown in a column with the interdivision eliminations (Holding and eliminations).

#### RECONCILIATION OF PUBLISHED FINANCIAL STATEMENTS AND GROUP REPORTING

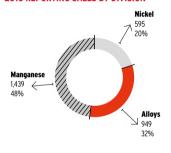
(€ MILLION)	FY 2016 PUBLISHED <sup>(1)</sup>	JOINT-VENTURE CONTRIBUTION	FY 2016 REPORTING <sup>(2)</sup>	FY 2015 Published <sup>(1)</sup>	JOINT-VENTURE CONTRIBUTION	FY 2015 REPORTING <sup>(2)</sup>
Sales	2,897	87	2,984	3,015	94	3,109
EBITDA	366	9	375	92	-	92
Current operating income	91	(7)	84	(191)	(16)	(207)
Operating income	(47)	(48)	(95)	(744)	(69)	(813)
Net income for the period–Group share	(179)	-	(179)	(714)	-	(714)
Net cash generated by operating activities	98	23	121	(13)	6	(7)
Industrial investments	206	11	217	242	25	267
(Net financial debt)	(675)	(161)	(836)	(716)	(162)	(878)
Shareholders' equity	1,791	(15)	1,776	1,788	(9)	1,779
Shareholders' equity-Group share	1,515	-	1,515	1,466	-	1,466

- (1) Financial statements prepared under applicable IFRS, with joint ventures are accounted for using equity method.
- (2) Group reporting, in which joint ventures are accounted for using proportionate consolidation.

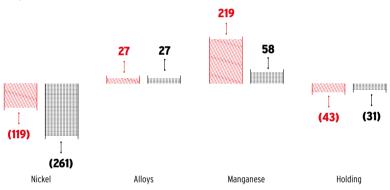
#### PERFORMANCE INDICATORS BY DIVISION

(€ MILLION)	NICKEL	ALLOYS	MANGANESE	HOLDING AND ELIMINATIONS	TOTAL
FY 2016					
Sales	595	949	1,439	1	2,984
EBITDA	(24)	74	358	(33)	375
Current operating income	(119)	27	219	(43)	84
Net cash generated by operating activities	(137)	22	243	(7)	121
Industrial investments (intangible assets and property plant & equipment)	56	55	104	2	217
FY 2015		***************************************		•	
Sales	686	991	1,430	2	3,109
EBITDA	(156)	78	196	(26)	92
Current operating income	(261)	27	58	(31)	(207)
Net cash generated by operating activities	(60)	27	106	(80)	(7)
Industrial investments (intangible assets and property plant & equipment)	56	44	164	3	267

#### **2016 REPORTING SALES BY DIVISION**



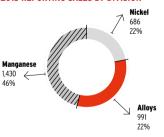
#### 2016/2015 REPORTING CURRENT OPERATING INCOME BY DIVISION



**2016** 

2015

#### **2015 REPORTING SALES BY DIVISION**



#### SALES, INDUSTRIAL INVESTMENTS AND NON-CURRENT ASSETS BY GEOGRAPHIC AREA

(€ MILLION)	FRANCE	EUROPE	NORTH AMERICA	ASIA	OCEANIA	AFRICA	SOUTH AMERICA	TOTAL
Sales (sales destination)	***************************************		•	•	•	•		
FY 2016	342	940	619	938	28	75	42	2,984
FY 2015	419	977	663	889	36	85	40	3,109
Industrial investments (intangible asse	ts and property plant &	equipmen	t)	•	***************************************			
FY 2016	74	30	9	_	42	61	1	217
FY 2015	49	47	21	1	53	95	1	267
Non-current assets (excluding deferred	l tax)	***************************************		***************************************	***************************************	•		
FY 2016	698	345	9	164	590	1,065	2	2,873
FY 2015	677	377	54	187	637	1,107	2	3,041

#### CONSOLIDATED PERFORMANCE INDICATORS

Segment reporting information is supplemented with the main consolidated performance indicators monitored by the Executive Committee. These indicators are taken from Group reporting and are used for the financial disclosure of the Group's results and performance.

#### PROFIT AND LOSS STATEMENT

(€ MILLION)	FY 2016	FY 2015
Sales	2,984	3,109
EBITDA	375	92
Amortisation and depreciation of non-current assets	(268)	(307)
Provisions for liabilities and charges	(23)	8
Current operating income	84	(207)
Impairment of assets	(110)	(474)
Other operating income and expenses	(69)	(132)
Operating income	(95)	(813)
Financial income	(79)	(90)
Share of income from associates	(2)	(1)
Income tax	(61)	(8)
Net income for the period	(237)	(912)
attributable to the minority interests	(58)	(198)
attributable to the Group	(179)	(714)
Basic/Diluted earnings per share (€)	(6.79)	(27.11)

#### STATEMENT OF CHANGES IN NET FINANCIAL DEBT

(€ MILLION)	FY 2016	FY 2015
Operating activities	<u> </u>	
EBITDA	375	92
Cash impact of items below EBITDA	(228)	(252)
Cash generated from operations	147	(160)
Working Capital variation	(26)	153
Net cash generated by operating activities (1)	121	(7)
Investing activities		
Industrial investments	(217)	(267)
Other investment flows	30	(16)
Net cash used in investing activities (2)	(187)	(283)
Net cash used in financing activities	100	
Effect of exchange rate changes	8	(41)
(Increase)/decrease in net financial debt	42	(331)
Opening (net financial debt)	(878)	(547)
Closing (net financial debt)	(836)	(878)
Free Cash Flow (1) + (2)	(66)	(290)

The reconciliation of cash and cash equivalents in the statement of cash flows to the net financial debt in the ERAMET group reporting is as follows:

(€ MILLION)	31/12/2016	31/12/2015
Cash and cash equivalents	1,360	432
Other current financial assets	331	196
Borrowings	(2,366)	(1,344)
Joint venture contribution	(161)	(162)
Net financial debt-Group reporting	(836)	(878)

#### ECONOMIC PRESENTATION OF BALANCE SHEET

(€ MILLION)	31/12/2016	31/12/2015
Non-current assets	2,818	3,003
Inventories	933	974
Trade receivables	333	293
Trade payables	(390)	(430)
Simplified Working Capital	876	837
Other Working Capital items	(156)	(136)
Total Working Capital	720	701
Total	3,538	3,704

(€ MILLION)	31/12/2016	31/12/2015
Shareholders' equity-Group share	1,515	1,466
Shareholders' equity–Minority interests	261	313
Shareholders' equity	1,776	1,779
Cash and cash equivalents and current financial assets	(1,698)	(630)
Borrowings	2,534	1,508
Net financial debt	836	878
Ratio of net financial debt to shareholders' equity (gearing)	47,1%	49,4%
Provisions and employee-related liabilities	740	812
Net deferred tax	142	123
Derivatives	44	112
Total	3,538	3,704

#### **NOTE 4 CURRENT OPERATING INCOME**

The current operating income reflects the performance of the ERAMET group's ordinary business activities as presented and defined in Note 3. This section presents its components: sales, cost of sales, administrative and selling expenses, research & development expenditure, and depreciation, amortisation and provisions.

#### SALES

#### ACCOUNTING METHOD

Sales mostly comprise sales of ores (nickel and manganese) and manufactured goods (special steels, alloys, superalloys, etc.) to third parties.

The earnings from the sale of these products are recognised from the time all the risks and rewards attached to the ownership of the sold product have been transferred to the client.

Sales are gross sales less trade rebates. Transportation and manufacturing expenses are included in the cost price of the goods sold.

Consolidated sales for 2016 were €2,897 million compared to €3,015 million in 2015, a decrease of 3.9% (-€118 million).

Comparison with the Group's reported sales and the distribution by Division are provided in Note 3.

#### COST OF SALES AND OTHER INCOME

ACCOUNTING METHOD	ESTIMATES, ASSUMPTIONS AND JUDGEMENTS
The cost of sales mainly comprises costs borne in industrial, mining and metallurgical facilities, in particular the consumption of raw materials, energy costs, personnel costs, and logistics and transport costs. It also accounts for the impacts of the change in and valuation of raw material inventories, work-in-progress and finished products.  Other income includes items related to current operating income, such as translation adjustments on sales and insurance proceeds.  Unhedged currency transactions are measured at the monthly exchange rate for the month of the transaction effective date. Gains and losses arising from the conversion of operating receivables and payables are recognised in Current operating income.  In the case of hedged transactions, the translation adjustments arising from the difference between the monthly exchange rate used to recognise sales and receipts or purchases and payments and the hedging rate for the settlement of transactions are also recognised in Current operating income.	The transaction date is the date on which it is executed. For practical reasons, the transaction date used is the month in which the transaction is booked.  The rate applied to recognise currency transactions in a given month corresponds to the average daily rate applicable in the previous month.

#### ADMINISTRATIVE AND SELLING EXPENSES

#### ACCOUNTING METHOD

Administrative and selling expenses mainly comprise personnel costs for non-industrial sites and other administrative and sales support services.

#### RESEARCH & DEVELOPMENT EXPENDITURE

#### ACCOUNTING METHOD

Research and development expenditure relates to expenses for scientific and technical activities necessary for the research, development and implementation of new manufacturing processes or the improvement of existing processes.

Research and development costs do not include expenditures incurred on projects under development that are not yet demonstrate that the asset will generate probable future economic benefits. These expenses are recognized in other operating income and expenses (see

Once the technical feasibility and profitability of a project have been established, the development costs incurred are capitalised. These expenses also include the geology expenses incurred in mining sites that are already in operation.

#### EXPENSES FOR THE PERIOD

(€ MILLION)	31/12/2016	31/12/2015
Non-capitalised research and development expenditure	34	25
of which geological expenditure ERAMET Nickel	4	7

#### AMORTISATION AND DEPRECIATION OF NON-CURRENT ASSETS AND PROVISIONS

#### ACCOUNTING METHOD

#### Amortisation and depreciation of non-current assets

Non-current assets can be depreciated when their expected use is limited in time or based on production units.

Where the duration or the pace of utilisation of an asset cannot be determined reliably, the straight-line method is applied.

The selected depreciation method is applied across all similar assets with the same conditions of use.

Depreciation begins at the date on which the asset is put into service.

Any significant change in the planned use of the asset, in terms of duration or pace, for example, will result in the depreciation being revised for the current and subsequent years. Likewise, in the case where impairment loss provisions are set aside or reversed following the comparison between the value in use of a non-current asset and its carrying amount (Note 9), the depreciation basis is modified prospectively, i.e. the depreciation is adjusted based on the new duration or the new pace of use for the current and future reporting periods.

The depreciation for the reporting period is recognised under a separate heading, Amortisation and depreciation of non-current assets, between EBITDA and Current operating income.

#### **Provisions**

See Note 12.

#### ESTIMATES, ASSUMPTIONS AND JUDGEMENTS

The ERAMET group uses two depreciation methods: the straight-line method and the units of production method.

#### Straight-line depreciation method

The depreciation of property, plant and equipment is calculated on a straight-line basis over the estimated useful life at 31 December 2016: Buildings

10-50 years

Industrial and mining facilities

5-50 years

Other Property, plant and equipment

2-10 years

Assets invested in the Setrag concession are depreciated over the shorter of their useful lives or the remaining period of the concession. Computer software is amortised over a variable period not exceeding five years.

#### Units of production method

The economic benefits generated by the use of certain industrial assets are determined in relation to the level of production, in particular in the start-up phase of new production units. These assets are depreciated using the units of production method.

The depreciation calculation accounts for the quantities produced during the reporting period, expressed as a percentage of the total quantities of product to be extracted or produced in the current and future reporting periods.

If the production is not deemed to fluctuate significantly from one year to the next, as with the assets whose material lifespan is shorter than the life of the plant or the mine to which they relate, the assets are depreciated using the straight-line method mentioned above over the life of the plant or the mine.

#### **Revision of useful lives**

The residual values and useful life of non-current assets are revised and adjusted at the end of each reporting period, as appropriate. Change is seen as a change in estimates, and impacts only the current and subsequent reporting periods.

The ERAMET group measures its existing assets and the useful lives when reviewing mining plans (ERAMET Nickel and ERAMET Manganese) and plant operation plans at the end of each reporting period. When it is established that the life of the allocated assets no longer matches the remaining period of expected returns, their depreciation period is modified prospectively. Uncertainties are inherent in the estimation of reserve and resource quantities, especially as regards assumptions about future prices, the geology of the mines, the mining methods used and associated costs incurred to develop and mine the reserves and resources. Changes in these assumptions could lead to major adjustments in the estimation of reserves and resources, which may be the basis for impairment or modification in depreciation expense in future periods.

(€ MILLION)	FY 2016	FY 2015
Intangible assets–Note 9	(22)	(21)
Property, plant & equipment–Note 9	(230)	(270)
Amortisation and depreciation of non-current assets	(252)	(291)
of which amortisation and depreciation of acquisition price allocation	(4)	(4)
Provisions	(23)	8
Total	(275)	(283)

# NOTE 5 NET INCOME GROUP SHARE AND NON-CONTROLLING INTEREST

The Net income Group share is the net income for the period after tax, attributable to ERAMET shareholders, after accounting for the non-controlling interest in each of the Group companies.

Apart from the Current operating income, the Net income for the period includes the following items:

- Other operating income and expenses (see below);
- Net financial income (Note 6);
- Share of income from joint ventures and associates (Note 9);
- Income tax (Note 10).

# CURRENT OPERATING INCOME-NET INCOME GROUP SHARE CROSS-REFERENCE TABLE

(€ MILLION)	NOTES	FY 2016	FY 2015
Current operating income	3/4	91	(191)
Other operating income and expenses	5	(138)	(553)
Operating income	3	(47)	(744)
Financial income	6	(58)	(74)
Share of income from joint ventures and associates	9	(66)	(78)
Income tax	10	(61)	(9)
Net income for the period		(232)	(905)
attributable to non-controlling interests	5	(53)	(191)
Net income, Group share	3/5	(179)	(714)

## OTHER OPERATING INCOME AND EXPENSES

#### ACCOUNTING METHOD

Other operating income and expenses include only very limited, unusual, abnormal and infrequent income and expenses for significant amounts that the ERAMET group presents separately in its profit and loss statement in order to facilitate the understanding of current **operating performance.** In particular, they include the following items:

- · restructuring costs;
- · costs incurred for development projects whose profitability has yet to be demonstrated;
- · defined benefits plan settlements and amendments;
- · capital gains and losses on disposals of assets;
- · impairment on goodwill and non-current assets.

# **BREAKDOWN BY CATEGORY**

(€ MILLION)	FY 2016	FY 2015
Other operating income and expenses excluding impairment	(68)	(131)
Impairment of assets	(70)	(422)
Other operating income and expenses	(138)	(553)
(€ MILLION)	FY 2016	FY 2015
Niobium project	(6)	(36)
Lithium project	(11)	(10)
Plant C project	(1)	(25)
Weda Bay Project	(13)	(10)
Other projects	(17)	(16)
Development projects	(48)	(97)
Restructuring and redundancy plans	(24)	(12)
Employee benefits-impact of restructuring	-	6
Employee benefits-plan amendment	15	(3)
Capital gain from sale of Erachem interest	27	-
Capital loss on sale of Somivab interest	(5)	-
Other items	(33)	(25)
Other income and expenses	(20)	(34)
Total	(68)	(131)

The decrease in expenses on projects under development between 2015 and 2016 is explained by the Group's decision to suspend major projects at the end of 2015.

The impact of the plan amendment in 2016 is mainly due to the change in some ERAMET Norway plans from defined benefit plans to defined contribution plans.

# IMPAIRMENT OF ASSETS AND IMPAIRMENT LOSS

(€ MILLION)	FY 2016	FY 2015
Losses on impairment tests–Goodwill	-	(6)
Losses on impairment tests–Intangible assets	-	(241)
Losses on impairment tests–Property, plant & equipment	(48)	(147)
Losses on impairment tests-intangible assets and property, plant & equipment;	(48)	(394)
Other impairment of assets	(14)	(16)
Other provisions	(8)	(12)
Other provisions	(0)	/
Total impairment of assets and impairment losses-Note 9	(70)	(422)
·		
·		
Total impairment of assets and impairment losses-Note 9	(70)	(422)
Total impairment of assets and impairment losses-Note 9  (€ MILLION)	(70) FY 2016	( <b>422</b> ) FY 2015
Total impairment of assets and impairment losses−Note 9  (€ MILLION)  ERAMET Nickel	(70)  FY 2016 (10)	( <b>422</b> ) FY 2015 (256)

See Note 9-Investments, Impairment of assets.

# NET EARNINGS PER SHARE, GROUP SHARE

#### ACCOUNTING METHOD

Net earnings per share can be obtained by dividing the Group share of net income by the average number of shares outstanding during the reporting period. This average number of shares outstanding excludes treasury shares.

Diluted earnings per share are calculated by taking into account the net income Group share for the period and the number of shares adjusted for potentially dilutive effects, mainly represented by employee share subscription and purchase plans and the potential conversion of ORDINAN.

		FY 2016			FY 2015	
	NET INCOME Group Share	AVERAGE NUMBER OF SHARES	EARNINGS Per Share	NET INCOME Group Share	AVERAGE NUMBER OF SHARES	EARNINGS PER SHARE
Basic earnings per share	(179)	26,378,347	(6.79)	(714)	26,339,672	(27.11)
Diluted earnings per share(1)	(179)	28,682,823	(6.79)	(714)	26,489,834	(27.11)

<sup>(1)</sup> Where basic earnings per share are negative, the diluted earnings per share are deemed equal to it, in which case the instruments are considered to be antidilutive.

# NON-CONTROLLING INTEREST SHARE IN EARNINGS-MINORITY INTEREST

		SHARE	0F	SHARE	0F
	% OF NON-CONTROL- LING INTEREST	NET INCOME	SHAREHOLDERS' EQUITY	NET INCOME	SHAREHOLDERS' EQUITY
(€ million)		FY 2016	31/12/2016	FY 2015	31/12/2015
At beginning of period		·	322		434
Net income for the period			(53)		(191)
Change in financial instrument revaluation reserve			7		(10)
Revaluation reserve for net defined benefit plan liabilities			(2)		-
Translation adjustments			2		(4)
Total Other Comprehensive Income (OCI)			7		(14)
Other movements			-		93
At period close		(53)	276	(191)	322
Le Nickel-SLN	44%	(71)	52	(170)	114
Comilog S.A.	36.29%	18	212	(12)	195
Pt Weda Nickel Ltd	10%	-	10	(9)	11
Interforge	6%	-	2	-	2

See Statement of changes in equity.

# NOTE 6 NET FINANCIAL DEBT AND SHAREHOLDERS' EQUITY

# **NET FINANCIAL DEBT**

Net financial debt is financial debt (long- and short-term borrowings) less current financial assets and cash and cash equivalents. These items include the valuation of hedging derivatives in respect of debt.

## ACCOUNTING METHOD

Borrowings are initially recognised on the basis of the amount received, less financing costs incurred. Borrowings are subsequently measured at amortised cost. Any variance between the amounts received and the redemption value of the borrowing is recognised in the profit and loss statement under Financial income (Borrowing costs) over the term of the borrowing, using the effective interest rate (EIR) method.

(€ MILLION)	31/12/2016	31/12/2015
Non-current borrowings-due after more than one year	(2,022)	(1,163)
Current borrowings-due in less than one year	(344)	(181)
Borrowings	(2,366)	(1,344)
Cash and cash equivalents	1,360	432
Other current financial assets	331	196
Net financial debt	(675)	(716)

# **BORROWINGS**

## **BORROWINGS BY CATEGORY**

(€ MILLION)	31/12/2016	31/12/2015
Borrowings on capital markets	689	691
Borrowings from credit institutions	1,374	451
Bank overdrafts and creditor banks	39	73
Finance lease liabilities	59	49
Other borrowings and financial liabilities	205	80
Total	2,366	1,344
due after more than one year	2,022	1,163
• due in less than one year	344	181

# BORROWINGS ON CAPITAL MARKETS AND BANK LOANS

(€ MILLION)	NOMINAL	INTEREST RATE	MATURITY	31/12/2016	31/12/2015
Bond issue-ERAMET S.A.	€525m	4,50%	2020	527	527
Euro private placement-ERAMET S.A. <sup>(1)</sup>	€50m	5,29%	2026	52	51
Euro private placement-ERAMET S.A. <sup>(1)</sup>	€50m	5,10%	2026	51	51
Deutsche Bank (Schuldschein) Ioan-ERAMET S.A.	€60m	6-month Euribor + 2%	2020	59	62
Borrowings on capital markets				689	691
ICBC/BNP Paribas/BGFI–Comilog S.A. borrowings	USD217m	6-month Libor +4.3%/+2.1%	2018/2022	96	120
Issued commercial paper–ERAMET S.A.	€2m	Between 0.45% and 0.81%	1 year max.	-	2
Borrowing base-ERAMET S.A.	€56m	1-month Euribor +2.1%	2017	70	56
European Investment Bank-ERAMET S.A.	€80m	1,736%	July-2025	81	80
Revolving Credit Facility(RCF)	€981m	6-month Euribor +0.75%/1.50%	2017/2018	985	-
Other borrowings from credit institutions				142	193
Borrowings from credit institutions				1,374	451

<sup>(1)</sup> With investor put options that may be exercised after the seventh year, i.e. in 2021.

Certain borrowings need to comply with financial ratios or covenants (Note 7).

# CHANGE OVER THE PERIOD

(€ MILLION)	FY 2016	FY 2015
At beginning of period	1,344	1,347
New borrowings	1,183	140
Loan repayments	(113)	(220)
Change in bank overdrafts	(32)	49
Other changes	9	5
Change to consolidation scope	(15)	-
Translation adjustments	(10)	23
At period close	2,366	1,344

New borrowings mainly correspond to:

- the drawdown of a syndicated loan of €980 million in early January 2016;
- French State funding to Société Le Nickel-SLN of €200 million, with €150 million drawn down since end July 2016, accounted for under other borrowings and financial liabilities.

# BORROWINGS BY CURRENCY AND MATURITY

(€ MILLION)	31/12/2016	31/12/2015
Euro	2,146	1,060
US DOLLAR	162	215
CFA franc	31	35
Pound sterling	1	5
Norwegian krone	1	7
Other currencies	25	22
Total	2,366	1,344
Less than one year	344	181
One to five years	1,793	953
Over five years	229	210
Total	2,366	1,344

After the renegotiation of the RCF, on 16 January 2017 (see events after the reporting date), the main repayment maturities for borrowings are in the year 2020 with the ERAMET bond for €525 million and the RCF for €781 million.

# CONFIRMED CREDIT FACILITIES

(€ MILLION)	31/12/2016	31/12/2015
Unused confirmed credit facilities <sup>(1)</sup>	-	981

<sup>(1)</sup> Bank covenants relating to these credit facilities are wholly satisfied. These covenants relate to the ratio of the Group's net financial debt to shareholders' equity.

# BORROWINGS BY INTEREST RATE

(€ MILLION)	31/12/2016		31/12/2015	31/12/2015	
Interest-free		43		57	
Fixed interest rates		1,083		864	
• below 5%	914		775		
• between 5% and 10%	169		89		
• above 10%	-		-		
Fixed interest rates		1,240		423	
• below 5%	1,240		421		
• between 5% and 10%	-		2		
above 10%	-		-		
Total		2,366		1,344	

# FINANCE LEASE LIABILITIES

	31/12/201	6	31/12/2015		
(€ MILLION)	NOMINAL VALUE	DISCOUNT VALUE	NOMINAL VALUE	DISCOUNT VALUE	
Less than one year	14	13	12	11	
One to five years	41	39	33	31	
Over five years	8	7	8	7	
Total before interest expense	63	59	53	49	
Interest expense		4		4	
Total	63	63	53	53	

# CASH AND CASH EQUIVALENTS

## ACCOUNTING METHOD

Cash includes cash in hand and demand deposits, excluding bank overdrafts which appear under borrowings. Cash equivalents correspond to marketable securities and consist of investments held to meet short-term cash commitments. Marketable securities are recognised at their fair value in the balance sheet. To be considered a cash equivalent, they must be readily

convertible to cash and subject to negligible risk of fluctuations in value. Changes in fair value are recognized in net income for the period.

# BREAKDOWN BY CATEGORY

(€ MILLION)	31/12/2016	31/12/2015
Cash	210	50
Cash equivalents	1,150	382
Total	1,360	432

# **BREAKDOWN BY CURRENCY**

(€ MILLION)	31/12/2016	31/12/2015
Euro	1,106	301
US dollar	237	91
Yuan Ren-Min-Bi (China)	3	6
Norwegian krone	3	23
Other currencies	11	11
Total	1,360	432

# BREAKDOWN BY INTEREST RATE TYPE

(€ MILLION)	31/12/2016	31/12/2015
Interest-free	198	33
Fixed interest rates	19	22
Fixed interest rates	1,143	377
Total	1,360	432

Interest-free items mainly consist of non-interest-bearing sight deposits.

Cash includes cash and cash equivalents.

Cash equivalents mostly comprise investments managed by Metal Securities.

(€ MILLION)	31/12/2016	31/12/2015
Money market fund shares/units	871	173
Negotiable debt securities	151	115
Interest-bearing bank accounts	61	22
Other investments	67	72
Cash equivalents	1,150	382
Cash	210	50
Cash and cash equivalents	1,360	432

The change from one period to the next is analysed through the statement of cash flows prepared using the indirect method.

## STATEMENT OF CASH FLOWS

# NON-CASH INCOME AND EXPENSES

(€ MILLION)	FY 2016	FY 2015
Depreciation, amortisation, impairment and provisions	329	689
Accretion expenses	9	9
Financial instruments	(7)	4
Deferred tax	18	(20)
Proceeds from asset disposals	(26)	1
Share of income from joint ventures and associates	66	78
Non-cash income and expenses	389	761

## IMPACT OF CHANGES IN CONSOLIDATION SCOPE

(€ MILLION)	FY 2016
Erachem-sale price	148
Erachem-dividends received	11
Erachem-cash from sale less dividends paid	(35)
Erachem-cash flow net impact	124
Sale price of Somivab interest	8
Other	(1)
Impact of changes in consolidation scope	131

# **CURRENT FINANCIAL ASSETS**

#### ACCOUNTING METHOD

These assets mostly consist of bonds of listed European companies that do not satisfy the criteria to qualify as cash equivalents. These bonds are measured at their fair value on initial recognition. The fair value used for listed bonds is the stock-market value, and for unlisted bonds it is based on estimates using specific financial criteria that reflect the specific situation of each bond (similar transactions or discounted value of future cash flows).

Where such bonds exhibit objective evidence of significant or lasting loss of value, the cumulative impairment loss, previously recognised in equity, is recognised in net income for the period.

Changes in the fair value of these investments are recognised in transferable equity under the item Change in fair value of available-for-sale financial assets.

The net increase of €135 million in current financial assets between 2015 and 2016 (compared to -€224 million between 2014 and 2015) is shown in the net cash flows relating to investment operations.

## FINANCIAL INCOME

(€ MILLION)	FY 2016	FY 2015
Net debt cost	(54)	(52)
Other financial income and expenses	(4)	(22)
Financial income	(58)	(74)

# **NET DEBT COST**

#### ACCOUNTING METHOD

Net debt costs include expenses relating to debt and financial revenue in connection with bonds and investment securities. Borrowing costs relate to interest payable on the debt and other costs incurred in connection with the borrowing of funds. Borrowing costs directly linked to the acquisition, building or production of an asset that requires more than 12 months to be put into service are deducted from the financing expense to which they relate. All the other borrowing costs are expensed in the period in which they are incurred.

(€ MILLION)	FY 2016	FY 2015
Interest income	16	11
Interest expense	(71)	(62)
Net income on marketable securities	5	3
Changes in fair value of marketable securities		(1)
Net translation differences	(4)	(3)
Total	(54)	(52)

## OTHER FINANCIAL INCOME AND EXPENSES

## ACCOUNTING METHOD

Other financial income and expenses include all the components of net financial income except for income and expenses relating to the net debt cost.

(€ MILLION)	FY 2016	FY 2015
Investment and dividend income	2	1
Gains (losses) on the disposal of investments in associates	-	(2)
Employee benefits-net interest	(7)	(6)
Accretion expenses	(9)	(9)
Financial instruments ineligible as hedges-currency	7	(3)
Financial instruments ineligible as hedges-commodity	-	(1)
Securitisation financial expense	(3)	(2)
Impairment of securities and current accounts	(6)	-
Net translation differences	3	-
ERAMET/TiZir loan financial products	7	-
Other	2	<del>-</del> _
Total	(4)	(22)

Accretion expenses relate to provisions for mining site restoration and dismantling industrial facilities as detailed in Note 12.

The financial instruments that do not qualify as hedges correspond to the portion of hedging instruments recognised in the profit or loss statement.

## SHAREHOLDERS' EQUITY

#### CHANGES TO THE SHARE CAPITAL

The share capital of €80,978,851.15 (31 December 2015: €80,956,814.90) is composed of €26,550,443 fully paid-up shares (31 December 2015: 26,543,218 shares) with a par value of €3.05 each.

	31/12/2016				31/12/	2015		
	SHAF	RE CAPITAL	VOTIN	IG RIGHTS	SHAR	SHARE CAPITAL		NG RIGHTS
	%	NUMBER Of Shares	%	NUMBER OF SHARES	%	NUMBER OF SHARES	%	NUMBER OF SHARES
Registered shares								
SORAME et Compagnie d'Études Industrielles du Rouvray (CEIR)	37.05	9,835,834	44.02	19,671,668	37.06	9,835,834	44.17	19,671,668
FSI Equation, subsidiary of APE (Agence des participations de l'État)	25.65	6,810,317	30.48	13,620,634	25.66	6,810,317	30.58	13,620,634
S.T.C.P.I.	4.03	1,070,587	4.79	2,141,174	4.03	1,070,587	4.81	2,141,173
ERAMET S.A.	0.40	105,801	-	-	0.82	218,276	-	-
ERAMET S.A. share fund	0.20	52,373	0.23	104,746	0.20	52,373	0.24	104,746
Other	32.68	8,675,531	20.47	9,145,539	32.23	8,555,831	20.20	8,995,747
Total number of shares	100.00	26,550,443	100.00	44,683,761	100.00	26,543,218	100.00	44,533,968
of which registered shares	69.21	18,375,085	81.84	36,570,694	69.27	18,387,508	82.03	36,531,116
of which bearer shares	30.79	8,175,358	18.16	8,113,067	30.73	8,155,710	17.97	8,002,852

In accordance with the Shareholders' Agreement of 16 March 2012, which entered into force on 16 May 2012 and was renewed on 31 December 2016 for a period of one year expiring on 31 December 2017, subject to Decision and Notice No. 212C0647 of the *Autorité des marchés financiers* (AMF) at its conclusion as well as AMF Decision and Notice No. 216C1753 concerning changes to the concert with the acquisition by the *Agence des participations de l'État* (APE) of 100% of the share capital of FSI Equation, ERAMET is majority-owned by a group of shareholders declared to be acting in concert, including:

- a sub-concert between SORAME and CEIR, companies wholly-owned by the Duval family, under a simultaneous shareholders' agreement of 19 July 1999, which entered into force on 21 July 1999 and was amended on 13 July 2009;
- the *Agence des participations de l'État* (APE), through its subsidiary FSI Equation.

The provisions of the shareholders' agreement mentioned above as well as those of the sub-concert are contained in key extracts of AMF Decision and Notice Nos. 216C1753, 212C0486 and 209C1013 (amended 13 July 2009).

Since 1 January 2002, registered shares that meet the necessary conditions benefit from double voting rights.

## **ODIRNAN**

As stated in the key events for the period, the ERAMET group launched an offering of net share settled undated bonds convertible into new shares (ODIRNAN).

This issue has strengthened the balance sheet structure of the ERAMET group.

ODIRNAN is a perpetual bond with no maturity date. Holders do not have the option to redeem the instrument for cash in hand. The instrument can be redeemed in the event of liquidation of the Company with the payment of accrued and deferred coupons, as applicable. The organisation of the coupon payments is left up to ERAMET and may be delayed, as ERAMET has not decided on a dividend distribution since the penultimate interest payment date (or since the issue date for the first two payment dates). In case of non-payment of coupons, they will remain due and will constitute arrears which will bear interest at the applicable rate for bond coupons.

The coupon is fixed at an annual rate of 4% until October 2022. It will then switch to a variable rate from 5 October 2022, calculated at the 6-month Euribor rate plus a margin of 1,000 basis points («step-up" clause). In the event of a change of control of ERAMET, the annual interest rate will be increased by 500 basis points unless the Company opts for early redemption within 45 days of the change of control.

Bond holders will receive an equity conversion right. The issuer may choose to deliver one of the following to bondholders exercising their right to receive shares:

- cash only;
- new shares only;
- or a combination of new shares and cash.

The characteristics of ODIRNAN shares led the ERAMET group to classify them as an equity instrument:

- there is no contractual obligation to repay the nominal value except in the event of liquidation of the issuer. The regulatory framework stipulating redemption in case of liquidation does not affect the classification as an equity instrument;
- the payment of coupons to bond holders is:
  - dependent on the liquidation of the issuer. As noted above, an obligation for the issuer to

proceed with payment in case of liquidation does not establish the existence of a debt,

 but rather is under the control of the issuer (dividends, share buy-back or equivalent, early redemption decided by the issuer, decision to pay the next bond coupon, etc.).

Finally, the default interest clause (capitalised at the same rate as the bonds) and the «step up» clause, which significantly increases the amount of coupons beyond a certain date if the instrument has not been previously redeemed by the issuer, constitute economic constraints, not contractual obligations.

Therefore, given the characteristics of the instruments and elements mentioned above, ERAMET has no contractual obligation to pay compensation on perpetual debt instruments.

Finally, the different options mentioned above do not call into question the classification of equity instruments.

At 31 December 2016, 7,225 bonds were subject to equity conversion. The number of bonds in circulation is therefore 2,151,203 (2,158,428 bonds at issuance).

## TREASURY SHARES

The table below summarises the treasury share transactions:

		PRICE SUPPORT(1)	AWARDS TO EMPLOYEES(2)	TOTAL
Position at 1 January 2015		89,601	140,450	230,051
As a percentage of share capital	26,543,218	0.34%	0.53%	0.87%
Bonus share grants			(45,393)	(45,393)
Purchases/Sales		33,618		33,618
Position at 31 December 2015	· ·	123,219	95,057	218,276
As a percentage of share capital	26,543,218	0.46%	0.36%	0.82%
Bonus share grants			(51,547)	(51,547)
Purchases/Sales		(60,928)		(60,928)
Position at 31 December 2016		62,291	43,510	105,801
As a percentage of share capital	26,550,443	0.23%	0.16%	0.40%

<sup>(1)</sup> Liquidity contract signed with Exane BNP Paribas

ERAMET treasury shares are classified under 0ther reserves and recognised at purchase cost for an amount of €14 million at 31 December 2016 (31 December 2015: €23 million). These transaction amounts were allocated to shareholders' equity.

<sup>(2)</sup> Instructions to buy back 250,000 shares (ceiling reached in 2013)

# NOTE 7 FINANCIAL INSTRUMENTS AND RISK MANAGEMENT

This note gives an overview of the financial instruments of the ERAMET group, the associated risks, its risk management objectives, sensitivity and monitoring of the financial risk management strategy.

#### ACCOUNTING METHOD

#### **Financial instruments**

Derivative assets and liabilities, current financial assets, and cash and cash equivalents are initially recognised in the balance sheet at their fair value (normally the transaction price) adjusted for transaction costs. At each period closing, the change in fair value is recognised in income (Other financial income and expenses) unless a cash flow hedge exists. In that case, the change is recognised in Other comprehensive income and shown in equity (change in the revaluation reserve of hedging instruments).

#### **Derivatives**

The ERAMET group uses derivatives to hedge certain risks. To manage its currency risk, the ERAMET group uses foreign currency forwards/futures, foreign currency swaps and, to a lesser extent, foreign currency options. Foreign currency forwards/futures are recognised as hedges where the ERAMET group has defined and documented the hedging relationship and demonstrated its effectiveness. Interest rate risk is managed using interest-rate swaps. Lastly, the ERAMET group also uses collars and swaps when hedging commodity purchases and sales (nickel, fuel oil, aluminium and electricity).

Derivatives are measured at their fair value upon initial recognition. Subsequently, the fair value of derivatives is remeasured at each reporting date. The fair value of foreign currency forwards/futures is estimated on the basis of market conditions. The fair value of interest rate derivatives is that which the ERAMET group would receive (or pay) to transfer current contracts at the reporting date. The fair value of commodity derivatives is estimated on the basis of market conditions. Derivatives are shown in the balance sheet under current assets or liabilities.

#### Hedging

Gains or losses on hedging instruments are recognised symmetrically with the gains or losses on the hedged items. However, changes in the fair value of hedges, independently of the hedged transactions, are recognised as profit or loss for the period under Current operating income or Other financial income and expenses, depending on the nature of the hedge.

The ERAMET group identifies the hedging item and hedged item when the hedge is set up and formally documents the hedging relationship by identifying the hedging strategy, the hedged risk and the hedge effectiveness measurement method:

- Fair value hedge: the hedged item is remeasured in respect of the hedged risk and the hedging instrument is measured and recognised at fair value. The changes in both items are recognised simultaneously in Current operating income.
- Cash flow hedge: the hedged item is not remeasured. Only the hedging instrument is remeasured at fair value. To offset the remeasurement, the effective portion of the change in fair value that can be ascribed to the hedged risk is recognised net of tax in shareholders' equity. The cumulative amounts in shareholders' equity are recognised in income for the period when income is affected by the hedged item. The ineffective portion is retained in income for the period under Other financial income and expenses.
- Hedging of net investment in foreign subsidiaries; derivatives intended to hedge net foreign currency investment in foreign subsidiaries. are treated as net foreign currency investment hedges. The gains or losses from such hedges, and the changes in fair value (apart from the time value) are recognised in equity as currency translation differences, and transferred to income when the subsidiary is sold.
- · Recognition of derivatives that do not fulfil hedge accounting conditions: the ERAMET group uses these derivatives only to hedge future cash flows, and changes in fair value are immediately recognised in Other financial income and expenses.

## Fair value measurement

The ERAMET group measures its financial instruments at fair value at each reporting date.

Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction. When measuring fair value, it is assumed that the transaction to sell the asset or transfer the liability is carried out:

- · on the main market for that asset or liability; or
- if there is no main market, on the best market for that asset or liability.

The fair value measurement of a non-financial asset considers the capacity of a market participant to generate economic benefits by making full use of the asset or by selling it to another market participant who will make full use of the asset.

The fair values of financial instruments are ranked according to a three-level hierarchy:

- · Level 1: Listed prices (unadjusted) of the same assets and liabilities on an active market;
- Level 2: Listed price of a similar instrument on an active market, or another measurement technique based on observable parameters:
- Level 3: Measurement technique incorporating non-observable parameters.

The criteria for classifying and recognising financial assets and liabilities and any transfer from one level to another in the fair value hierarchy where applicable are given below.

#### ESTIMATES, ASSUMPTIONS AND JUDGEMENTS

The uncertainties and estimates as well as the judgements used are considered for the valuation of forward/futures contracts, the application of hedge accounting and the valuation of derivatives measured at fair value.

To continue to apply hedge accounting to raw material purchases and sales (nickel, fuel oil, aluminium, and electricity), the ERAMET group determines that the heading instrument is efficient so as to offset the currency risk on its raw material purchases and sales, and ensures that the documentation complies with the requirements. The process for testing the efficiency of the hedge calls for the use of judgements and estimates.

#### Fair value measurement

Fair value represents an estimate at a given date and can change from one period to another due to market conditions and other factors. The ERAMET group gives priority to the assumptions that the market participants would use to determine the price of the asset or the liability, considering that the market participants act in their own best economic interests. The ERAMET group uses measurement techniques that are appropriate in the circumstances and for which sufficient data is available to determine the fair value, maximising the use of pertinent observable inputs while minimizing the use of non-observable inputs.

# FINANCIAL INSTRUMENTS SHOWN IN THE BALANCE SHEET

	31/12/2016		BREAKDOWN	BY TYPE OF I	NSTRUMENT		31/12/2015		BREAKDOWN	BY TYPE OF IN	ISTRUMENT	
(€ MILLION)	STATEMENT OF FINANCIAL POSITION	FAIR VALUE THROUGH P&L	AVAI- LABLE- FOR-SALE ASSETS	LOANS AND RECEI- VABLES	LIABILITIES AMORTISED AT COST	DERIVA- TIVES	STATE- MENT OF FINANCIAL POSITION	FAIR VALUE THROUGH P&L	AVAI- LABLE- FOR-SALE ASSETS	LOANS AND RECEI- VABLES	LIABI- LITIES AMOR- TISED AT COST	DERIVA- TIVES
Non-consolidated equity investments	45		45				50		50			
Other non-current financial assets	96			96			103			103		
Other non-current assets	99			99			70			70		
Trade receivables	330			330			288			288		
Other current assets	195			195			250			250		
Derivatives	29					29	30					30
Other current financial assets	331		331				196		196			
Cash and cash equivalents	1,360	1,360					432	432				
Assets	2,485	1,360	376	720	-	29	1,419	432	246	711	-	30
Non-current borrowings-due after more than one year	2,022				2,022		1,163				1,163	
Other non-current liabilities	5			5			31			31		
Current borrowings- due in less than one year	344				344		181				181	
Trade payables	371			371			406			406		
Other current liabilities	346			346			342			342		
Derivatives	77					77	187					187
Liabilities	3,165	-	-	722	2,366	77	2,310	-	-	779	1,344	187

No reclassification among categories of financial instruments was carried out during the period. Equity investments and Other current financial assets are recognised in the balance sheet at fair value. Other non-current financial assets are measured at amortised cost calculated using the effective interest rate (EIR).

Borrowings are recognised at amortised cost measured at the effective interest rate (EIR).

The fair value of trade receivables and trade payables is equal to the value shown in the balance sheet, since for the most part they fall due in less than one year.

The fair value of financial instruments broken down by fair value hierarchy is as follows:

	31/12/2016	BREAKDOWN BY FAIR	VALUE CATEGORY	31/12/2015	BREAKDOWN BY FAIR VALUE CATEGORY		
(€ MILLION)	VALUE IN THE Balance sheet	LEVEL 1	LEVEL 2	VALUE IN THE Balance sheet	LEVEL 1	LEVEL 2	
Current financial assets	331	331		196	196		
Cash and cash equivalents	1,360	1,360		432	432		
Derivatives	29		29	30		30	
Assets	1,720	1,691	29	658	628	30	
Derivatives	77		77	187		187	
Liabilities	77	-	77	187	-	187	

# EFFECTS OF FINANCIAL INSTRUMENTS ON THE PROFIT AND LOSS STATEMENT

(€ MILLION)	FY 2016 IMPACT ON NET INCOME	FINANCIAL INCOME AND (EXPENSES)	AMORTISED COST	FAIR VALUE	TRANSLATION ADJUSTMENTS	PROFIT (LOSS) ON DISPOSAL	NET IMPAIRMENT
Investment securities	22	2				23	(3)
Other financial assets	(18)	(8)			3		(13)
Derivatives	(60)			(60)			
(Net debt)/Net cash	(55)	(53)	(4)	1	(4)	5	
Total	(111)	(59)	(4)	(59)	(1)	28	(16)

(€ MILLION)	FY 2015 Impact on Net Income	FINANCIAL INCOME AND (EXPENSES)	AMORTISED COST	FAIR VALUE	TRANSLATION ADJUSTMENTS	PROFIT (LOSS) ON DISPOSAL	NET IMPAIRMENT
Investment securities	(1)	1				(2)	
Other financial assets	2	9			(1)		(6)
Derivatives	(28)			(28)			
(Net debt)/Net cash	(56)	(50)	(5)	(2)	(2)	3	
Total	(83)	(40)	(5)	(30)	(3)	1	(6)

The financial revenue from equity investments consists of dividends. The gains or losses on currency and commodity hedges are for the most part recognised in Current operating income. The portion that does not qualify as hedges is recognised in Other financial income and expenses.

#### BREAKDOWN OF DERIVATIVES INCLUDED IN THE STATEMENT OF FINANCIAL POSITION

	31/12/	2016	31/12/2015		
(€ MILLION)	ASSETS	LIABILITIES	ASSETS	LIABILITIES	
At beginning of period	30	187	23	141	
Change in hedging instruments for the period–shareholders' equity <sup>(1)</sup>	-	(59)	(2)	25	
Change in hedging instruments for the period–financial income/loss <sup>(2)</sup>	(4)	(11)	12	16	
Net change in hedging derivatives <sup>(3)</sup>	3	(40)	(3)	18	
Other movements	-	-	-	(13)	
At period close	29	77	30	187	
Net position in hedging derivatives <sup>(3)</sup>	10	15	7	55	
Financial instruments-currency hedges	16	54	8	94	
Financial instruments-interest-rate hedges	-	5	-	-	
Financial instruments-commodity hedges	3	3	15	38	

- (1) The impact corresponds to the effective portion of the change in fair value of derivative instruments used to hedge currency, interest rate and commodity risks.
- (2) The impact corresponds to the effective portion of the change in fair value of derivative instruments used to hedge currency, interest rate and commodity risks.
- (3) Foreign-currency receivables and debts are translated at the closing rate, and the difference between the closing rate and the hedging rate is recognised under «Financial instrument assets and liabilities».

## RISK MANAGEMENT

The ERAMET group uses derivatives to control its exposure to currency, interest rate and commodity risks. The Executive Committee has delegated the management of the main risks to the ERAMET group Finance Department. This management is carried out directly by ERAMET or via companies such as Metal Currencies, created specifically to manage the ERAMET group's currency risk.

The ERAMET group's policy is to reduce its exposure to interest rate and foreign exchange fluctuations. Positions are traded either on organised markets, or over the counter with leading banking counterparties.

Gains or losses on hedging instruments are recognised symmetrically with the gains or losses on the hedged items. However, unrealised gains and losses on financing hedging transactions that are ineligible under hedging standards are recognised in Net income for the period.

All transactions outstanding at the reporting date are recognised in the Statement of financial position, without an offsetting entry.

#### **CURRENCY RISK**

When the exposure stemming from borrowings taken out by ERAMET group companies in currencies other than their functional currencies is not offset by income in those foreign currencies, the ERAMET group may have recourse to hedging instruments. In addition, the ERAMET group uses financial instruments to limit its exposure to currency risk on its sales and on certain dollar-denominated costs.

The ERAMET group is exposed to two types of currency risk, namely:

- transactional foreign currency risk where a Group company has revenue in a currency other than its functional currency that is not offset by purchases in that currency;
- foreign currency risk to the balance sheet related to changes in the net assets of subsidiaries valued in currencies other than the Euro.

The ERAMET group centralises the subsidiaries' currency risk. Each ERAMET group company reports its exposure in currencies other than its functional currency to Group Treasury. This management is part of a multiyear policy with procedures approved by the Executive Committee along with monthly reporting to its members. The ERAMET group manages the currency risk to the balance sheet for each case individually.

#### Transactional risk

As part of transactional risk management, currency hedging primarily involves the US dollar but also the Norwegian Krone, the pound sterling, the Swedish Krona and the Japanese yen. These hedges are designed to protect the ERAMET group's present and future positions on trade transactions, more than 50% of which are invoiced in foreign currencies, whereas production costs are for the most part denominated in Euros. The transactions are carried out via the company Metal Currencies.

The subsidiaries in question determine the amount of their net exposure based on multiyear budgets and forecasts. The associated risks are then hedged within a maximum horizon of thirty-six months if the amount is greater than €2 million or the equivalent thereof per currency, unless exemptions apply. The ERAMET group uses various instruments to hedge against currency risk: futures/forward contracts and options.

## Balance sheet risk

The ERAMET group manages currency risks to the balance sheet, primarily related to the US dollar, by issuing financial debt denominated in the same currency as the net assets in question, or via currency swaps.

The breakdown of the hedging portfolio by currency is shown below:

AT 31 DECEMBER 2016		2016 SALES			2017 SALES			2018 SALES AND BEYOND		
(FOREIGN CURRENCY UNIT MILLION)	AMOUNT	CURRENCY	RATE	AMOUNT	CURRENCY	RATE	AMOUNT	CURRENCY	RATE	
Commercial hedges	<u> </u>				<u></u>			<u>, , , , , , , , , , , , , , , , , , , </u>		
EUR/USD	235	USD	1.10	270	USD	1.10	38	USD	1.24	
EUR/NOK	318	NOK	8.93	575	NOK	9.32	310	NOK	9.73	
Other hedges—total amount not detaile	ed by year	•	•		•	•		•		
EUR/USD	316	USD	1.28							
EUR/NOK	460	NOK	8.85							

AT 31 DECEMBER 2015		2015 SALES			2016 SALES			2017 SALES AND BEYOND		
(FOREIGN CURRENCY UNIT MILLION)	AMOUNT	CURRENCY	RATE	AMOUNT	CURRENCY	RATE	AMOUNT	CURRENCY	RATE	
Commercial hedges	•	•	*		•	•		•		
EUR/USD	155	USD	1.26	297	USD	1.18	201	USD	1.18	
EUR/NOK	351	NOK	8.71	755	NOK	8.93	730	NOK	9.41	
Other hedges—total amount not detailed by y	ear	*	*		***			•		
EUR/USD	233	USD	1.15							
EUR/NOK	1,022	NOK	8.95							

At 31 December 2016, the fair value of currency hedges covering transactional risks represented a net liability of €38 million (net liability of €86 million at 31 December 2015).

An increase or decrease of 0.10 in the EUR/USD exchange rate would have a pre-tax impact on the hedges recognised in equity at 31 December 2016 of +€23 million should exchange rates rise (+€55 million at 31 December 2015) and approximately -€28 million should those rates fall (-€66 million at 31 December 2015).

The notional amount of currency hedging contracts breaks down as follows:

(FOREIGN CURRENCY UNIT MILLION)		31/12/20	16		31/12/2015				
	FORWARD SALES	FORWARD PURCHASES	CALL OPTIONS	PUT OPTIONS	FORWARD PURCHASES	FORWARD PURCHASES	CALL OPTIONS <sup>(1)</sup>	PUT OPTIONS(1)	
Currency against EUR	k			······································	······································	······································	<del>-</del>		
• USD	959	162	116	105	1,732	702	416	338	
• JPY	96				30				
• GBP		2			8				
• NOK	13	1,073	578	813		1,513	967	1,345	
Currency against SEK			L						
• JPY		125			166				
• USD		5			8				

<sup>(1)</sup> Not including USD88 million in exotic call options and USD38 million in exotic put options.

The pre-tax impact on shareholders' equity and income of financial instruments hedging currency risks is shown below:

		CURRENCY HEDGES								
	FY 20	16	FY 2015							
(€ MILLION)	TRANSACTIONAL RISKS	BALANCE SHEET RISKS	TRANSACTIONAL RISKS	BALANCE SHEET RISKS						
At beginning of period	(104)	27	(98)	1						
Change in unexpired hedging portion <sup>(1)</sup>	(2)		(47)							
Change in ineffective portion via income <sup>(2)</sup>	7		(3)							
Change in effective portion via income <sup>(3)</sup>	82		46							
Translation adjustments and other movements		20	(2)	26						
At period close	(17)	47	(104)	27						
Changes recognised in shareholders' equity:										
hedging reserve	80		(1)							
translation reserve		20		26						
Total	80	20	(1)	26						
Changes recognised via income:										
current operating income	(82)		(46)							
financial income	7		(3)							
Total	(75)		(49)							

- (1) The impact corresponds to the effective portion of the change in fair value of derivative instruments used to hedge currency risks.
- (2) The impact corresponds to the non-effective portion of the change in fair value of derivative instruments used to hedge currency risks.
- (3) Foreign-currency receivables and debts are translated at the closing rate, and the difference between the closing rate and the hedging rate is recognised under «Financial instrument assets and liabilities».

## INTEREST RATE RISK

Depending on market conditions and forecast changes in net financial debt, the ERAMET group's Finance Department monitors the allocation between fixed and floating rate debt and cash investments, and decides on whether to set up rate hedges. The financial instruments used are interest rate swaps, caps, and floors. The Group's Treasury Department is responsible for setting up hedges.

The cash surpluses managed by Metal Securities are invested in:

- instruments linked to the EONIA (Euro OverNight Index Average) or EURIBOR (Euro InterBank Offered Rate) rates;
- fixed-rate instruments swapped against the EURIBOR.

These instruments are included in Other current financial assets and are hedged using interest rate

futures (fixed rates against floating rates). Other cash surpluses managed by Metal Securities are primarily invested in instruments linked to the EONIA rate.

## COMMODITY RISK

The ERAMET group is exposed to commodity price volatility, affecting both its sales as a nickel and manganese producer and its production costs, as a consumer of energy (fuel oil and electricity) and commodities (nickel and aluminium).

The ERAMET group holds derivative instruments for the purposes of reducing its exposure. To this end, the ERAMET group mainly uses forwards, tunnel options and call options.

The main Group entities involved are:

- ERAMET and Le Nickel-SLN for nickel sales;
- Aubert & Duval for nickel purchases;

- Le Nickel-SLN for fuel oil;
- Aubert & Duval for aluminium;
- Erasteel Kloster AB and ERAMET Norway A/S for electricity.

The exposures to manganese and coke price volatility are not hedged since there is no organised market for these commodities.

Hedges are contracted with horizons of one to four years, depending on the commodities, and are based on the budget. Only part of the forecast consumption or production is hedged (e.g. for fuel oil, a maximum of 80% of the budget is hedged). The ERAMET group uses various instruments to hedge and limit its exposure, namely forwards/futures and options.

At 31 December 2016, the fair value of hedges set up for the various commodities stood at €0 million net (€23 million in net liabilities at 31 December 2015).

The main commodities contracts outstanding are set out below:

		31/12/2016			31/12/2015			
(TONNES)	SWAPS	CALL OPTIONS	PUT OPTIONS	SWAPS	CALL OPTIONS	PUT OPTIONS		
Nickel	6,457			7,949				
Fuel oil				99,996				
Brent crude oil (barrel)					275,040	275,040		
Aluminium	84			2,125				

A change of plus or minus 10% in commodity prices would have no material pre-tax impact on the hedges recognised through shareholders' equity.

Furthermore, operational funds (investments and receivables) are implemented directly in the ERAMET group's subsidiaries.

centralising and investing the ERAMET group's cash surpluses.

## HOUIDITY RISK

The ERAMET group must ensure that it maintains a sufficient level of liquidity to meet its contractual obligations, including servicing its bank and bond debt.

In this context, the ERAMET group anticipates the regular renewal of its existing borrowings (credit facilities, bonds, leases, etc.) and establishes new modes of financing (ODIRNAN 2016), according to the opportunities available.

ERAMET also aims to diversify its sources of funding, particularly between the bond and banking markets.

ERAMET centralises virtually all the cash requirements and surpluses of its controlled companies. This centralisation is performed by Metal Securities, which is responsible for managing the investment of cash surpluses.

The ERAMET group has a financial liquidity position at 31 December 2016 amounting to €1,691 million, of which €1,360 million is classified as cash and cash equivalents. These cash surpluses are essentially transferred to Metal Securities, the Group company in charge of

# Revolving Credit Facility (RCF)

On 16 January 2017, the ERAMET group signed a renegotiation agreement concerning its Revolving Credit Facility (RCF) of €981 million, extending its maturity by two years. The original instalments of €85 million in January 2017 and €896 million in January 2018, are now €115 million in January 2018, €85 million in January 2019 and €781 million in January 2020. This facility has a single financial covenant (gearing) subject to cross-default.

This credit facility was drawn down in its entirety in early January 2016.

The ERAMET group is liable to repay its borrowings, primarily comprising financial market borrowings and bank borrowings, and its other liabilities and derivatives for which the repayment schedule (including future interest) is given below:

		FUTURE PAYMENT SCHEDULE						
(€ MILLION)	STATEMENT OF FINANCIAL POSITION	LESS THAN ONE YEAR	ONE YEAR TO FIVE YEARS	MORE THAN FIVE YEARS	TOTAL			
Borrowings on capital markets	689	30	738		768			
Borrowings from credit institutions	1,374	302	1,176	69	1,547			
Bank overdrafts and creditor banks	39	39			39			
Finance lease liabilities	59	14	41	8	63			
Other borrowings and financial liabilities	205	38	20	172	230			
Total borrowings	2,366	423	1,975	249	2,647			
Derivatives	77	77			77			
Trade and other payables	717	717			717			
Total other financial liabilities	794	794	-	-	794			

The schedule of future receipts on financial assets is set out below:

		FUTURE RECEIPTS SCHEDULE AT FAIR VALUE				
(€ MILLION)	STATEMENT OF FINANCIAL POSITION	LESS THAN ONE YEAR	ONE YEAR TO FIVE YEARS	MORE THAN FIVE YEARS	TOTAL	
Other current financial assets	331	331			331	
Cash and cash equivalents	1,360	1,360			1,360	
Total cash and cash equivalents	1,691	1,691	-	-	1,691	
Derivatives	29	29			29	
Trade and other receivables	624	525	99		624	
Total other financial assets	653	554	99	-	653	

Where appropriate, financial liabilities are covered by banking covenants at Group level or locally; the main covenants are described below:

COMPANY	TYPE OF CREDIT LINE		RATIO	AMOUNT
ERAMET S.A.	Revolving credit facility	Net debt minus SLN loan arranged with the French State/shareholder's equity	<1	€981 million
	Deutsche Bank (Schuldschein) Ioan	Restated net debt/shareholder's equity- attributable to Group	<1	€60 million
	Euro private placement	Net debt/shareholder's equity	<1	€100 million
	European Investment Bank	Net debt/shareholder's equity	<1	€80 million
Comilog S.A.	ICBC/BNP Paribas/BGFI borrowings	Net debt/shareholder's equity	< 1.15	USD217 million
		Net cash flow/debt servicing	>2	
		Sales to ERAMET Norway A/S/debt servicing	> 150%	(1)
Aubert & Duval	Crédit Agricole	Consolidated net debt/shareholder's equity	< 1.2	€7 million
	Crédit du Nord	Financial debt/consolidated equity	< 1.2	€1 million
	Société Générale	Restated net financial debt/consolidated equity increased by half the investment subsidies and regulated provisions	<1.2	€2 million

<sup>(1)</sup> Covenant applicable only to one of the two USD30 million loans subscribed by Comilog.

ERAMET's covenants are determined on the basis of the published consolidated financial statements. Comilog's covenants are determined on the basis of Comilog's separate and consolidated financial statements.

At 31 December 2016, the covenants showed no circumstances of acceleration, with the exception of two unfulfilled covenants on Aubert & Duval (gearing) for which a waiver is being obtained from the banks and has led to the classification of €8 million in short-term borrowings.

Moreover, at 31 December 2016, no cases of cross-default likely to impact funding at Group level were recorded.

# CREDIT AND COUNTERPARTY RISK

The ERAMET group may be exposed to credit risk owing to default by a counterparty-customers and financial partners-as a result of its cash surpluses invested by its dedicated entity, Metal Securities. The ERAMET group has several means to limit this risk: gathering information ahead of entering into transactions (from rating agencies, published financial statements, etc.), credit insurance and the establishment of letters of credit and documentary credits. Specifically for trade receivables, there is a dedicated credit manager for each Division of the Group.

The age of the Group's trade receivables and overdue receivables is shown below:

(€ MILLION)		31/12/2016			31/12/2015		
	GROSS AMOUNT	IMPAIRMENT	NET AMOUNT	GROSS AMOUNT	IMPAIRMENT	NET AMOUNT	
On-time or not due	203	-	203	231	-	231	
Delays:							
less than one month	81	(1)	80	37	(1)	36	
one to three months	43	-	43	10	-	10	
three to six months	4	-	4	9	(2)	7	
six to nine months	1	(1)	-	4	(4)	-	
nine to twelve months	3	(3)	-	6	(2)	4	
over one year	7	(7)	-	5	(5)	-	
Total trade receivables	342	(12)	330	302	(14)	288	

No material unpaid or impaired receivables have been renegotiated.

# **EQUITY AND BOND RISK**

ERAMET and its subsidiaries do not speculate on the stock markets; the investments held relate to unlisted controlled companies entirely in line with the Group's business activities.

In compliance with the Group's investment policy, which defines and limits counterparty risk, ERAMET group has bought corporate bonds subject to bond risk and recognized under other current financial assets.

# **NOTE 8 WORKING CAPITAL REQUIREMENT**

(€ MILLION)	31/12/2015	CHANGE IN WCR STATEMENT OF FLOWS	CHANGE IN PAYABLES ON ASSET DISPOSALS	TRANSLATION ADJUSTMENTS AND OTHER	31/12/2016
Inventories	937	7		(48)	896
Customers	288	75		(33)	330
Suppliers	(406)	13		22	(371)
Simplified WCR	819	95		(59)	855
Other items of WCR	(74)	(36)	5	39	(66)
Total WCR	745	59	5	(20)	789

# **INVENTORIES**

Inventories consist mainly of the products of the three Divisions of the Group-ERAMET Nickel, ERAMET Manganese and ERAMET Alloys-at different stages of the production process, and are recorded at the lower of cost and net liquidation value.

ACCOUNTING METHOD	JUDGMENTS AND ESTIMATES
Inventories are measured using the weighted average unit cost for the industrial operations of ERAMET Alloys, and on a first-in-first-out (FIFO) basis for the industrial and mining operations of ERAMET Nickel and ERAMET Manganese.  Inventories are carried at cost price and only include production costs, while not exceeding the realisable value. Costs stemming from sub-normal activity are eliminated from inventory measurement at the end of the reporting period.  Impairment losses for raw materials are recognised when the net realisable value falls below the cost of entry into storage. Consumables are fully depreciated where the quantities are in storage over a much longer period than their estimated use. The impairment of spare parts that do not qualify for capitalisation is calculated on the basis of their use during the year. Spare parts inventory in excess of one year's use is fully depreciated. For work-in-process, intermediate and finished products in inventory for over a year, the forward-looking approach is applied on the basis of the order book and market validation of achievements within one year; the quantities beyond one year of consumption are fully depreciated, except for specific cases.  Fixed production costs relating to recognised or planned sub-normal activity are not incorporated in inventory measurement, and are recognised as ordinary operating expenses for the period in which they are incurred. Sub-normal activity is taken into account when the actual production volume is considerably lower than the normal production volume (or normative capacity).	Judgement is exercised to determine the net realisable value, as well as to allocate the fixed and variable production expenses attributable directly to inventories.

(€ MILLION)	31/12/2016	31/12/2015
At beginning of period	937	1,019
Change in gross inventories	(11)	(74)
(Impairment)/net reversals for the period	18	(20)
Increase/(decrease) in net inventories-cash flows	7	(94)
Translation adjustments and other movements	(48)	12
At period close	896	937
Raw materials	229	234
Merchandise and finished products	252	282
Work-in-progress and semi-finished goods	341	323
Consumables and spare parts	74	98
Breakdown of impairment losses:		
At beginning of period	(147)	(125)
• (Impairment)/net reversals for the period	18	(20)
Translation adjustments and other movements	7	(2)
At period close	(122)	(147)

Impairment mainly relate to raw materials, merchandise and finished products.

## TRADE AND OTHER RECEIVABLES

Trade and other receivables are amounts that the ERAMET group expects to collect from third parties.

transferred to the transferee. Where the risks remain but do not prejudice the removal of the receivables from the balance sheet, they are recognised under Other operating

Disposals with recourse against the ERAMET group in the event of payment default by the client means that these transferred receivables must be retained in the balance sheet.

receivables together with the related security deposits (Note 8).

#### ACCOUNTING METHOD **ESTIMATES AND JUDGEMENTS** Receivables are booked at transaction value at initial recognition and are subsequently mea-Judgement must be exercised to determine sured at each reporting date at amortised cost. Foreign currency receivables and payables when the ERAMET group could reasonably are re-measured at the rate prevailing at the period-end date. The resulting translation not recover the receivables. The impairment adjustments are recognised in Current operating income or in net financial income (Other loss is calculated based on historical losses financial income and expenses) depending on the type of receivable or debt (Note 4). on receivables, the age of the receivable Impairment losses are recognised for receivables where they are more than likely not to be and an assessment of the risks involved. recovered and it is possible to reasonably measure the amount of the impairment based on historical losses on receivables, the age of the receivable and an assessment of the risks involved. This impairment, offset in Current operating income, reduces the gross value of the receivable Receivables disposed of under a securitisation contract are removed from the balance sheet when the ERAMET group has transferred the contractual rights to collect the cash amount and where almost all the risks and rewards attached to these receivables have been

(€ MILLION) GROSS AMOUNT IMPAIRMENT NET VALUE 31/12/2016 NET VALUE 31/12/2015 At beginning of period 739 (131)608 684 Change in gross amount 85 85 (49)Impairment losses for the period (27)(27)(37)Changes in working capital requirement-cash flows (86) 58 Translation adjustments and other movements (45) 3 (42)10 At period close 779 (155)624 608 Trade receivables 342 (12) 330 288 Tax and payroll receivables 128 127 (1) 127 Security deposit-securitisation agreement 15 15 17 Other operating receivables 195 (142)53 106 Receivables on the Setrag concession agreement-2 2 6 non-current asset 74 TiZir shareholder current account-non-current asset 74 55 UKAD shareholder current account-non-current 14 9 14 asset Receivable for sale of Erachem 9 9

The bulk of trade and other receivables are due in less than one year.

Tax and payroll receivables include a VAT credit amount to the Gabonese government of €54 million at 31 December 2016 for the years 2014 to 2016 (€42 million at 31 December 2015).

779

680

99

(155)

(155)

624

99

525

## SECURITISATION OF CUSTOMER RECEIVABLES

Total

· Non-current assets

· Current assets

ERAMET group uses factoring or securitisation as a source of funding for its receivables. Under these agreements, certain subsidiaries in France and the United States have committed to banking institutions to transfer their trade receivables totalling €162 million at 31 December 2016 (€155 million at 31 December 2015). The analysis of the transfer of risks and rewards resulted in either full deconsolidation or partial deconsolidation. Non-deconsolidated receivables amounted to €13 million at 31 December 2016 (compared to €12 million at 31 December 2015).

608

70

538

A security deposit may be required to cover the commitments given by the transferor subsidiaries to the financing company and will be returned upon the

settlement of the transaction. It consists of reserves to hedge against credit risk, delayed payment risk and dilution risk. This deposit amounted to €15 million at 31 December 2016 (€17 million at 31 December 2015).

(€ MILLION)	31/12/2016	31/12/2015
Trade receivables–Invoices assigned	(162)	(155)
Trade receivables–Invoices not deconsolidated	13	12
Other operating receivables–Security deposit	15	17

# TRADE AND OTHER PAYABLES

Trade and other payables mainly comprise the amounts owed to suppliers and tax authorities that have already been billed or are already due.

(€ MILLION)	31/12/2016	31/12/2015
At beginning of period	779	810
Changes in working capital requirement	(32)	(37)
Change in payables on non-current assets	(5)	(4)
Translation adjustments and other movements	(20)	10
At period close	722	779
Non-current liabilities	5	31
Current liabilities	717	748
Trade payables	371	406
Tax and payroll receivables	212	198
Other operating payables	77	77
Payables on non-current assets	51	57
Unearned income	6	10
Setrag debt for the purchase of own property and inventory-non-current	5	4
Strand debt for Weda Bay project expenses-non-current	-	27

Most of the trade and other payables are due in less than one year.

The debts recognised under non-current liabilities include Setrag S.A.'s 25-year debt to the Gabonese Republic related to the service concession arrangements. The USD29 million debt recognised following the sale of a 33.4% stake in Strand Minerals Pte. Ltd. to Mitsubishi Corporation, in connection with mining project expenses, has been repaid in connection with the release of Mitsubishi (see Key events for the period).

Other operating liabilities include €45 million at 31 December 2016 and 2015 corresponding to the unpaid balance of the Comilog tax audit for the years 2007 to 2013.

# **NOTE 9 INVESTMENTS**

The ERAMET group groups its investments into two categories:

- industrial investments relating to assets in connection with extraction or production equipment; intangible assets and property, plant and equipment;
- financial investments that mainly relate to interest held in joint ventures and non-consolidated companies, as well as other non-current financial assets.

#### ACQUISITION OF NON-CURRENT ASSETS

(€ MILLION)	FY 2016	FY 2015
Capital expenditure on property, plant & equipment for the period	189	227
Capital expenditure on intangible assets for the period	17	15
Total industrial capital expenditure	206	242
Change in payables for the acquisition of non-current assets-Note 8	5	4
Acquisition of investment securities	1	3
Total acquisition of non-current assets-Statement of cash flows	212	249

# PROPERTY, PLANT AND EQUIPMENT

#### ACCOUNTING METHOD

Property, plant and equipment are stated in the balance sheet at their carrying amount, which is the acquisition or manufacturing cost less depreciation and impairment of losses incurred.

Land is not depreciated.

Spare parts deemed to be items of property, plant and equipment are capitalised and depreciated on the basis of their actual use. Tooling specifically manufactured for certain customers is capitalised and depreciated over its likely useful life.

Major repairs are deemed to be components of items of property, plant and equipment.

Borrowing costs that are directly linked to the acquisition or production of an asset are incorporated in that asset's cost. When operations commence, a provision is made for the restoration of mining site, offset by an environmental and dismantling asset that is depreciated on a straight-line basis during the operation of the mine.

Finance leases transferring almost all of the risks and benefits inherent in ownership of the good to the ERAMET group are recognised as items of property, plant and equipment, offset by a financial debt (Note 6). These are amortised over their expected useful life on the same basis as the items of property, plant and equipment held or, if shorter, the term of the corresponding lease. Similarly, other agreements, and primarily sub-contracting, involving the use of a specific asset and the right to use it, are reclassified as leases where

The Trans-Gabon railway concession was recognised as follows: property owned by the ERAMET group is recognised as a balance sheet asset and depreciated over the shorter of its useful life or the remaining period of the concession.

Returnable assets representing the assets contributed to the concession by the Gabonese Republic that must be returned in the same state upon expiry of the agreement are not recognised in the balance sheet. Assets acquired by the ERAMET group following the signing of the concession agreement that must be turned over to the Gabonese Republic at the end of the concession are recognised as property, plant and equipment and depreciated over the term of the concession. A provision is made to cover the risk of non-renewal of the concession in line with investment assumptions.

#### ESTIMATES, ASSUMPTIONS AND JUDGEMENTS

Judgement is exercised to determine all the expenses (i.e. labour, overheads) directly associated with the acquisition, construction, improvement or development of a non-current asset, including the costs of bringing it to the location and in the state that is required for its use as planned by Management.

Expenses for non-current assets are no longer capitalised once the non-current asset is practically completed and is capable of functioning as intended. To determine whether these conditions are met, a review must be carried out of the considerations applied in the same industries, predetermined by the Management's judgement with reference to the factors affecting the expected production capacity. Where a non-current asset is composed of individual components which call for different methods or depreciation rates, judgement is exercised to determine how best to split the asset. Distinguishing between inspections and major revisions for repair and maintenance, and determining the appropriate period for amortising these costs, are a matter of judgement.

# PROPERTY, PLANT AND EQUIPMENT BY CATEGORY

(€ MILLION)	GROSS AMOUNT	DEPRECIATION & AMORTISATION	IMPAIRMENT LOSS	NET AMOUNT 31/12/2016	NET AMOUNT 31/12/2015
Land and buildings	1,105	(573)	(83)	449	491
Industrial and mining facilities <sup>(1)</sup>	3,513	(2,246)	(191)	1,076	1,145
Other property, plant and equipment	832	(522)	(7)	303	337
Work-in-progress, down-payments	156	-	(8)	148	143
Total	5,606	(3,341)	(289)	1,976	2,116
<ul><li>(1) Of which:</li><li>Assets funded by finance leases</li></ul>				99	92
Dismantling assets—site restoration				97	89

# CHANGE OVER THE PERIOD

(€ MILLION)	FY 2016	FY 2015
At beginning of period	2,116	2,296
Investments for the period	189	227
Disposals for the period	(7)	(3)
Depreciation & amortisation for the period	(230)	(270)
Impairment losses for the period	(48)	(147)
Change in the gross amount of dismantling assets	13	(4)
Translation adjustments and other movements	(57)	17
At period close	1,976	2,116
Gross amount	5,606	5,769
Depreciation & amortisation	(3,341)	(3,384)
Impairment losses	(289)	(269)

## **INTANGIBLE ASSETS**

#### ACCOUNTING METHOD

Intangible assets are stated in the balance sheet at their carrying amount, which is the acquisition cost less amortisation and potential impairment of losses incurred.

#### Goodwill

Goodwill is the difference between the acquisition price of an entity and the ERAMET group's share in the fair value of the identifiable asset or liability (including possible liabilities) of the acquired entity at the acquisition date. It is recognised at cost, less accumulated impairment losses.

Goodwill in associates and joint ventures is recognised under investments in joint ventures and associates (Note 9).

#### Mining reserves

Amounts capitalised with respect to mineral deposits relate to partial asset contributions or permits acquired since 1974. Depending on specific operating characteristics, mining reserves are amortised on the basis of the ratio of annual production to the estimated reserves or the length of the concession.

## Geology, prospecting and research expenses

Geology, exploration, prospecting and mining research expenses incurred prior to operation are recognised as intangible assets, in compliance with IFRS 6–Exploration for and Evaluation of Mineral Resources.

The royalties paid for mining prospecting and exploration are also recognised under intangible assets.

#### **ESTIMATES AND JUDGEMENTS**

Judgement must be used to determine whether the expenditure on intangibles can be recognised as an intangible asset.

If its useful life is limited in time, the intangible asset is amortised on a straight-line basis over the estimated useful life.

The goodwill is allocated to the cash generated unit from where it arose, for the purposes of impairment testing.

## INTANGIBLE ASSETS BY CATEGORY

(€ MILLION)	GROSS AMOUNT	DEPRECIATION & AMORTISATION	IMPAIRMENT LOSS	NET AMOUNT 31/12/2016	NET AMOUNT 31/12/2015
Goodwill	173	-	(18)	155	154
Indonesia mining reserves	269	-	(141)	128	124
Gabon mining reserves	61	(36)	-	25	27
New Caledonia mining reserves	54	(41)	-	13	13
Indonesia geology, prospecting and research expenses	498	-	(498)	-	-
Other geology, prospecting and research expenses	25	(24)	-	1	11
Software	112	(85)	(2)	25	20
Other intangible assets	40	(27)	(2)	11	16
Work-in-progress, down-payments	33	-	(19)	14	15
Total	1,265	(213)	(680)	372	370

At 31 December 2016, the net goodwill of €155 million (31 December 2015: €154 million) net is mainly due to the acquisition of the Norwegian company Eralloys Holding A/S in 2008 for €150 million (€149 million at 31 December 2015).

## CHANGE OVER THE PERIOD

(€ MILLION)	FY 2016	FY 2015
At beginning of period	370	593
Investments for the period	17	15
Disposals for the period	-	(1)
Depreciation & amortisation for the period	(22)	(21)
Impairment losses for the period	-	(247)
Translation adjustments and other movements	7	31
At period close	372	370
Gross amount	1,265	1,260
Depreciation & amortisation	(213)	(230)
Impairment losses	(680)	(660)

## WEDA BAY PROJECT IN INDONESIA

On 2 May 2006, the ERAMET group acquired Weda Bay Minerals Inc., a company listed on the Toronto stock exchange, whose subsidiary Pt Weda Bay Nickel holds a world-class nickel deposit on Halmahera island, Indonesia, as part of a Contract of work (COW) concession. Following this acquisition, the ERAMET group carried out studies to mine that deposit.

Capitalised project expenditure mainly consists of geological, exploration and prospecting costs, as well as the costs of technical and economic studies.

The nickel market conditions took a turn for the worse in 2015, causing uncertainty in the short to medium term. In addition, the ERAMET group decided to put all major projects on hold.

At the same time, negotiations with Indonesia regarding the amendment of the terms of the COW to comply with the new Indonesian mining law were pursued to clarify certain aspects of the regulatory and taxation framework applicable to the project.

The ERAMET group's historical partners on the project—the Mitsubishi Corporation and Pacific Metals Co Ltd—decided in 2016 to exercise the option to sell to ERAMET their holdings in Strand Minerals Pte. Ltd., which stand at 30% and 3.4% respectively (see Key events for the period).

Pt Antam has several purchase options allowing it to increase its holding, the terms and conditions of exercise of which are given in Note 14.

See events after the reporting date.

# INCREASE IN OWNERSHIP INTEREST-CONTROLLED COMPANIES

The amount of €97 million shown in the presented in the Statement of cash flows includes:

- €26 million for the reimbursement of the shareholders' current account by Strand to Mitsubishi and Pamco (see Note 5–Working capital requirement).

## IMPAIRMENT OF ASSETS AND IMPAIRMENT LOSS

#### ACCOUNTING METHOD

Impairment tests are performed regularly: systematically at least once a year at the annual reporting date for goodwill and intangible assets with indefinite lives, and where there are indications of impairment. For intangible assets and items of property, plant and equipment with finite lives, impairment tests are carried out where there are indications of impairment.

Impairment testing consists on comparing the carrying amount of assets with their recoverable amount, which is defined as the higher of the value in use (or recoverable amount through use) and the fair value (or recoverable amount through sale), less selling costs. Impairment losses are calculated as the difference between the recoverable and net book value and are recognised in the income for the period under Other operating income and expenses (Note 5).

Impairment losses recognised on goodwill are not reversible. For the other assets, previously recognised impairment losses are measured at each reporting date to identify if the losses have decreased or no longer exist. An impairment loss is reversed only if the carrying amount of the asset does not exceed its net book value, as it would have been determined had no impairment been recognised.

#### ESTIMATES, ASSUMPTIONS AND JUDGEMENTS

Cash-generating units (CGU) are homogeneous groups of assets whose continuous use generates independent cash flows.

The ERAMET group has defined its CGUs with reference to the various production sites, ERAMET Nickel, ERAMET Manganese and ERAMET Alloys.

Impairment tests are performed for each CGU. All intangible assets, including goodwill, and all items of property, plant and equipment are allocated to CGUs.

As at 31 December 2016, the ERAMET group is divided into 13 CGUs, distributed as follows:

- · 4 CGUs in FRAMET Nickel:
- 7 CGUs in ERAMET Manganese;
- · 2 CGUs in ERAMET Allovs.

ERAMET group's General Management determines the existence of events calling for impairment testing based on several criteria. Impairment loss indicators correspond mainly to changes and fluctuations in:

- · raw material prices and the selling price of finished goods;
- economic and regulatory environment and market conditions;
- · interest rates;
- · technological level;
- · asset performance and obsolescence.

An impairment test is carried out on the CGUs concerned when these indicators show a negative development.

To determine the value in use, the ERAMET group uses the method of discounted future cash flows generated from the use of the assets. The data used to calculate the discounted forecast cash flows is taken from the annual budgets and multiyear plans prepared by the Management of the CGUs concerned. These plans are created on the basis of 5-10 year projections, in keeping with mining and industrial cycles, plus a final value corresponding to the capitalisation to infinity of normative cash flows. Plans for certain CGUs are prepared for longer periods corresponding to the operating period of the sites without assigning a terminal value.

The growth rates used are the same as those used in budgets. The growth rates to infinity used for the terminal values are generally between 1% and 3%, depending on the CGU.

The discount rate applied to calculate the value in use is the weighted average cost of capital, namely:

- 10% for mining activities (also 10% in 2015):
- 8% for metallurgical activities (9% in 2015);
- 11% for the Weda Bay project in Indonesia (also 11% in 2015):
- 11.5% for the Grande Côte CGU (11.5% in 2015).

The ERAMET group may measure the recoverable amount using other methods that it deems relevant in the context of the CGUs concerned (particularly for the Weda Bay project).

Whatever the method used, the assumptions used are Management's best estimates. The ERAMET group regularly reviews its estimates and assessments to take account of past experience and other factors that are deemed relevant with regard to economic conditions.

The change in impairment of assets and other impairment losses is broken down as follows:

(€ MILLION)	31/12/2015	IMPAIRMENT LOSS FY 2016	TRANSLATION ADJUST- MENTS AND OTHER	31/12/2016
ERAMET Nickel	(654)	(10)	(19)	(683)
ERAMET Alloys	(71)	(12)	7	(76)
ERAMET Manganese	(232)	(48)	22	(258)
Total	(957)	(70)	10	(1,017)
Goodwill	(18)	-	-	(18)
Intangibles	(642)	-	(20)	(662)
PP&E	(269)	(48)	28	(289)
Other provisions		(22)		(48)

## FINANCIAL YEAR 2016

Impairments of targeted assets were accounted for on the ERAMET group's three lines of business, on the CGUs or the individual assets given the ongoing reorganization activities.

## FINANCIAL YEAR 2015

Given the heavily degraded market conditions, the deep crisis in the global metal market and especially the all-time low manganese and nickel prices, the ERAMET group recognised impairment of assets and impairment losses of €422 million.

The main assets concerned belong to ERAMET Nickel representing a total of €256 million (particularly the Weda Bay project in Indonesia) and to ERAMET Manganese totalling €154 million, particularly in the manganese alloys and recycling business.

## SENSITIVITY

Sensitivity is determined with reference to changes in future cash flows and discount rates

The ERAMET group's cash projections for its mining and metallurgical businesses are highly dependent on the sale price assumptions, especially that of ores (nickel, manganese, zircon, etc.), on the Euro-dollar parity, and the world demand for products sold by the Group.

## SLN CGU-ERAMET NICKEL

The value in use is extremely sensitive to the price of nickel-the main hypothesis of the impairment test for this CGU.

This commodity is traded on the London Metal Exchange (LME). Directly observable forward prices do not reflect the long-term price. The target level for 2020 is thus determined by average industry consensus and corresponds to the previous levels reached prior to 2012. The price trend curve used to reach this target level is more conservative than the average consensus.

The selected prices are thus integrated into the 5-year business plan, which allows the cash flow projections of the CGU to be determined.

However, there is strong interdependence between the different variables, namely the value of the dollar, the price of Brent crude oil and the price of nickel, which generally do not impact the test in the same way.

A decrease of USD0.5/lb in the target nickel price, a 0.5% increase in the discount rate, or a decrease of 0.5% in the long-term growth rate under identical operating conditions would not result in recognition of an impairment loss.

# GABON AND MANGANESE ALLOYS CGUS-ERAMET **MANGANESE**

Manganese ore is not a listed commodity. The price is adjusted according to supply and demand, particularly concerning alloy production forecasts and the marginal capacity of the South African producer.

To determine the forecast price of manganese ore, the ERAMET group uses an internal model that takes into account the marginal cost of South African production, available logistical means (trains or trucks) and ZAR/ USD parity.

The price forecasts thus determined are integrated into the business plans of the Gabon and manganese alloys CGUs. These price forecasts can be compared with studies issued by the CRU (Commodities Research Unit), an independent body that carries out studies on certain metals, including manganese.

Regarding the Gabon CGU, a 0.5% increase in the discount rate, a 0.5% decrease in long-term growth rate or a fall of 1% in the EBITDA margin of the final year would not result in recognition of an impairment loss.

#### AUBERT & DUVAL CGU-FRAMET ALLOYS

The business plan provides for an increase in profitability of this activity on the basis of productivity plans, reduced structural costs and improved sales. Plans to reduce costs and improve productivity were initiated as from end-2012. A 0.5% increase in the discount rate, a 0.5% decrease in the long-term growth rate or a fall of 1% in the EBITDA margin of the final year would not result in recognition of an impairment loss.

## **ERASTEEL CGU-ERAMET ALLOYS**

Concerning the Erasteel CGU, a fall of 1% in the EBITDA margin, a 0.5% increase in the discount rate and a 0.5% decrease in the long-term growth rate would not result in recognition of additional impairment losses.

# RESIDUAL VALUES BY CGU GROUP

The residual values of invested capital are detailed as follows by CGU group:

(€ MILLION)	FY 2016	FY 2015
ERAMET Nickel		
Net intangible assets and property, plant & equipment;	747	780
Working capital requirement	163	50
Total	910	830
ERAMET Alloys		
Net intangible assets and property, plant & equipment;	476	479
Working capital requirement	369	363
Total	845	842
ERAMET Manganese		
Net intangible assets and property, plant & equipment;	1,102	1,212
Working capital requirement	197	253
Total	1,299	1,465
ERAMET Holding and others		
Net intangible assets and property, plant & equipment;	23	15
Working capital requirement	60	79
Total	83	94
ERAMET group		
Net intangible assets and property, plant & equipment;	2,348	2,486
Working capital requirement	789	745
Total	3,137	3,231

Invested capital is defined as the sum of net tangible assets, property, plant and equipment and working capital requirements. It is used to determine the accounting values of assets tested as part of asset impairment tests.

# INVESTMENTS IN JOINT VENTURES AND ASSOCIATES

ACCOUNTING METHOD	ESTIMATES, ASSUMPTIONS AND JUDGEMENTS
Joint ventures are companies over which ERAMET has joint control, meaning that the decisions concerning the relevant activities require the unanimous consent of all controlling parties.  Associates are companies over which the ERAMET group has significant influence.  Joint ventures and associates are accounted for using the equity method of accounting and are initially recognised at cost. Their carrying amount includes the goodwill determined at their acquisition less accumulated impairment. The consolidated financial statements include ERAMET's share in earnings and the equity movements of the companies accounted for using the equity method, after adjustments to bring the accounting rules of those companies in line with those of the ERAMET group.  The dividends received from joint ventures and associates are deducted from their balance sheet value. An impairment test is carried out when there are indicators that the recoverable amount may fall below its carrying amount (Note 9).	Significant influence exists when ERAMET has the powers to take part in financial and operating decisions of the company but does not exercise control or joint control over these policies. ERAMET has presumed significant influence if it holds 20% to 50% of the voting rights of a company.  ERAMET group's General Management determines the existence of events calling for impairment testing under the same conditions as those given in the Impairment of assets section.

## BREAKDOWN BY ENTITY

			SHAR	E OF	SHAR	E OF
(€ MILLION)			NET INCOME	SHAREHOLDERS' EQUITY	NET INCOME	SHAREHOLDERS' Equity
Company	Country	% holding	2016	31/12/2016	2015	31/12/2015
TiZir subgroup	UK	50%	(64)	95	(77)	155
UKAD	France	50%	(1)	-	-	5
Total joint ventures			(65)	95	(77)	160
HeYe Erasteel Innovative Materials Ltd	China	49%	(1)	8	(1)	9
EcoTitanium	France	21.75%	-	4	-	-
Total associates			(1)	12	(1)	9
Total			(66)	107	(78)	169

## TIZIR SUBGROUP

On 27 July 2011, the ERAMET group and Mineral Deposits Ltd (MDL) entered into an agreement to create a joint venture, the British company TiZir Ltd, bringing together the Norwegian company TiZir Titanium & Iron A/S and the Grande Côte Opérations S.A. mineral sands project in Senegal. The final agreements were completed on 25 October 2011. The ramp-up began in July 2014 and continued over the 2015 and 2016 reporting periods.

The fully contributory balance sheet of the TiZir subgroup is as follows:

(€ MILLION)	31/12/2016	31/12/2015
Non-current assets	644	722
Non-cash current assets	70	89
Liabilities excluding gross financial payables	(59)	(59)
Net debt	(495)	(461)
Non-controlling interest	30	19
Shareholders' equity, Group share	190	310
Share of shareholders' equity	95	155

The investments made for TiZir in Senegal (Grande Côte) and Norway (TTI) totalled €21 million in 2016 (€48 million in 2015).

In addition, the TiZir Ltd bond issuance of USD275 million (ERAMET share totalling €130 million) expires in September 2017.

The fully contributory profit and loss statement of the TiZir subgroup is as follows:

(€ MILLION)	FY 2016	FY 2015
Sales	145	152
EBITDA	16	(6)
Current operating income	(13)	(35)
Non-controlling interest	(10)	(13)
Net income, Group share	(128)	(154)
Share of profit	(64)	(77)

Translation adjustments of €6 million for the financial year 2016 (€34 million in 2015) were posted to items recyclable to profit or loss in the ERAMET group's Statement of comprehensive income.

## FINANCIAL YEAR 2016

An impairment loss of the investment value of €40 million (Group share) was recognised at 31 December 2016, given the expected decline in zircon sale prices. The selling price assumptions were determined using the medium- and long-term consensus of market experts.

A 0.5% increase in the discount rate would have an impact of about €12 million (Group share) on the impairment loss amount. A 10% decline in the longterm zircon prices would have an impact of about €20 million (Group share).

## FINANCIAL YEAR 2015

An impairment loss of the investment value of €52 million (Group share) was recognised at 31 December 2015, given the expected decline in zircon sale prices (€28 million at 31 December 2014). The selling price assumptions were determined using the medium- and long-term consensus of market experts.

## NON-CURRENT FINANCIAL ASSETS

ACCOUNTING METHOD	JUDGMENTS
Other non-current financial assets include other long-term financial assets and non-consolidated equity investments.  Other non-current financial assets relate to loans or current accounts extended to non-consolidated companies or companies under joint control. They are initially recognised at fair value plus acquisition costs and are measured on each reporting date at amortised cost using the effective interest rate (EIR) method, less any offsetting provisions for impairment losses recognised in income for the period (Other financial income and expenses, see Note 6).  Non-consolidated equity investments are recognised in the balance sheet at their acquisition cost or their value on the date of their deconsolidation, less any offsetting provisions for impairment losses recognised in income for the period (Other financial income and expenses, see Note 6).	The ERAMET group has divided its non-consolidated subsidiaries into two categories:  • controlled companies that are not consolidated owing to their low impact on the ERAMET group's financial statements;  • non-controlled companies corresponding to holdings in companies over which the ERAMET group has no control or significant influence.

# BY CATEGORY

(€ MILLION)	GROSS AMOUNT	IMPAIRMENT	NET AMOUNT 31/12/2016	NET AMOUNT 31/12/2015
Deposits and guarantees	23	(8)	15	22
Shareholders' loan-TiZir	51	-	51	46
Other non-current financial assets	53	(23)	30	35
Total excluding non-consolidated equity investments	127	(31)	96	103
Non-consolidated equity investments	85	(40)	45	50
Total	212	(71)	141	153

The shareholders' loan to TiZir accounts for the loan amount granted by ERAMET to its subsidiary under joint control, TiZir Ltd.

Other non-current financial assets chiefly relate to financial current accounts or loans granted to non-consolidated companies.

# CHANGE

(€ MILLION)	31/12/2016	31/12/2015
At beginning of period	153	141
Net change in non-current financial assets-statement of flows	14	29
Acquisition/Disposal of investment securities	1	2
Impairment	(21)	(23)
Other movements	(6)	4
At period close	141	153

# BY CURRENCY

(€ MILLION)	31/12/2016	31/12/2015
Euro	33	39
US dollar	57	56
CFP franc	5	6
Other currencies	1	2
Total	96	103

# BY INTEREST RATE TYPE

(€ MILLION)	31/12/2016	31/12/2015
Interest-free	8	16
Fixed interest rates	21	23
Fixed interest rates	67	64
Total	96	103

Interest-free items mainly relate to deposits and guarantees as well as certain loans to employees.

# NON-CONSOLIDATED EQUITY INVESTMENTS

(€ MILLION) COMPANY	COUNTRY	% HOLDING	GROSS AMOUNT	IMPAIRMENT	NET AMOUNT 31/12/2016	NET AMOUNT 31/12/2015
Main controlled companies:						
Brown Europe	France	100%	8	-	8	8
Metallied	Spain	100%	2	(2)	-	_
Aubert & Duval USA Inc. (formerly Htm Inc.)	United States	100%	3	(2)	1	1
• Erasteel GmbH	Germany	100%	3	(1)	2	2
ERAMET Alloys UK Ltd	United Kingdom	100%	3	(1)	2	2
Aubert & Duval Mold and Die Technology	China	85%	3	(1)	2	2
Aubert & Duval Special Steel GmbH	Germany	100%	3	(3)	-	2
• La Petite-Faye	New Caledonia	100%	2	-	2	2
• ERAMET Research <sup>(1)</sup>	France	100%	-	-	-	1
• ERAMET Ingénierie <sup>(1)</sup>	France	100%	-	-	-	1
• ERAMET Services <sup>(1)</sup>	France	100%	-	-	-	2
Maboumine	Gabon	76.14%	26	(26)	-	-
Main non-controlled companies:						
HeYe Special Steel Ltd	China	10%	14	-	14	14
• Squad	India	33.33%	3	-	3	2
• EcoTitanium <sup>(1)</sup>	France	21.65%	-	-	-	4
Other companies			15	(4)	11	7
Total			85	(40)	45	50

<sup>(1)</sup> Consolidated entities as of 01/01/2016.

Controlled but non-consolidated companies are mainly sales entities, the services of which are fully assigned to the ERAMET group, and industrial companies (shaping, wiredrawing and drawing of metallurgical products).

Equity investments in controlled companies are not consolidated since they have no material impact on the ERAMET group's consolidated financial statements.

# **NOTE 10 TAXES**

This note explains the income tax expense and related tax amounts shown in the profit and loss statement and balance sheet. The section on deferred tax provides information on expected future tax payments.

#### ACCOUNTING METHOD

Income tax includes both current and deferred tax. The income tax expense is recognised in the profit and loss statement, except where it relates to a business acquisition or items recognised directly in equity or in Other comprehensive income.

Current income tax includes taxes that the ERAMET group expects to pay on its taxable income for the reporting period at the prevailing tax rates or rates substantively enacted at the reporting date, as well as any adjustments for tax relating to prior reporting periods.

Deferred tax is recognised as temporary differences between the carrying amount of the assets and liabilities measured for the purposes of financial reporting and the tax basis of those assets and liabilities measured at the income tax rate and tax laws enacted or substantively enacted at the reporting date and effective in the period in which these temporary differences should be used.

Deferred tax assets, including those related to loss carry-forwards, which are determined by fiscal entity, are recognised whenever it can be shown that they are likely to be realised.

The deferred tax assets and liabilities are classified in the balance sheet as non-current items and are offset if the entity has a legally enforceable right of set-off as is the case with the French tax consolidation group. Deferred tax liabilities on investments in subsidiaries, associates and joint ventures are recognised unless where the ERAMET group can determine the timetable for the reversal of the related temporary differences, and where it is likely that such differences will not reverse in the foreseeable future. Provisions are made for non-recoverable tax on dividends planned in the foreseeable future.

#### ESTIMATES, ASSUMPTIONS AND JUDGEMENTS

The ERAMET group operates in several countries. Its income is therefore taxed at various income tax rates. Given the magnitude of the operations and the complexity of tax regulations, the ERAMET group must assess uncertainties and exercise judgement to estimate the tax amount that it will eventually pay. The tax amount finally paid depends on various factors that include negotiations with tax authorities and the outcome of tax audits.

The ERAMET group estimates deferred tax based on the temporary differences between the assets and liabilities shown in its consolidated financial statements and the tax bases of these assets and liabilities determined under the applicable tax laws. The deferred tax asset amount is generally recognised insofar as a probable taxable profit will be available in the future against which deductible temporary differences can be used. Consequently, the deferred tax asset that is recognised and considered as realisable can be reduced if the projected profit cannot be obtained. To assess the likelihood that these assets will be realised, the ERAMET group reviews the following information in particular:

- projected future profitability:
- extraordinary losses not expected to recur in the future;
- past taxable profits; and
- · tax strategies.

## **INCOME TAX**

(€ MILLION)	FY 2016	FY 2015
Current tax	(43)	(29)
Deferred tax	(18)	20
Tax income/(expense)	(61)	(9)

## **EFFECTIVE TAX RATE**

(€ MILLION)	FY 2016	FY 2015
Operating income	(47)	(744)
Financial income	(58)	(74)
Pre-tax income of consolidated companies	(105)	(818)
Standard taxation rate in France (%)	34.43%	34.43%
Theoretical tax income/(expense)	36	282
Impact on theoretical tax of:		
permanent differences between accounting and taxable profit	28	72
impairment of assets	3	(87)
standard tax rate differences in foreign countries	2	(4)
tax credits	5	4
unrecognised or limited deferred tax assets	(142)	(282)
miscellaneous items	7	6
Actual tax income/(expense)	(61)	(9)
Effective tax rate	-58%	-1%

The decrease in the tax rate of French companies to 28% from 2019 onwards has no impact on the consolidated financial statements of the ERAMET group. Deferred tax assets are limited to the amount of deferred tax liabilities in the French tax consolidation group given the history of losses in the past years.

FINANCIAL YEAR 2015

# Unrecognised or limited deferred tax assets mostly relate to deferred tax assets on the tax loss carry-forwards of Le Nickel-SLN totalling €194 million at 31 December 2015, of which €97 million concerned

totalling €57 million, the French tax consolidation

group (€34 million) and other limited or unrecognised

deferred tax assets in certain subsidiaries totalling

€51 million (Guilin, GCMC, Setrag, Comilog-CMM).

prior periods. The balance concerns the unrecognised deferred tax assets on losses in the French tax consolidation group (€35 million) and other limited or unrecognised deferred tax assets in certain subsidiaries totalling €53 million (Guilin, GCMC, Setrag, Comilog-CMM).

The impact of impairment of assets is mainly explained by the non-taxation of impairment.

# FINANCIAL YEAR 2016

Unrecognised or limited deferred tax assets mostly relate to the tax loss carry-forwards of Le Nickel-SLN

# MAIN STANDARD TAX RATES IN FOREIGN COUNTRIES

(%)	FY 2016	FY 2015
China	12.5%-25.0%	12.5%-25.0%
United States	35.0%	35.0%
Gabon	35.0%	35.0%
Norway	27.0%	27.0%
New Caledonia	35.0%	35.0%
Sweden	22.0%	22.0%

#### CHANGE IN TAX RECEIVABLES AND TAX PAYABLES

(€ MILLION)	31/12/2016	31/12/2015
At beginning of period	27	(3)
Current tax-income statement	(43)	(29)
Tax paid	33	71
Translation adjustments and other movements	(12)	(12)
At period close	5	27
Tax receivables	39	58
Tax payables	34	31

#### DEFERRED TAXES IN THE BALANCE SHEET

#### BREAKDOWN BY CATEGORY

(€ MILLION)	31/12/2016	31/12/2015
Tax loss carry-forwards <sup>(1)</sup>	26	38
Intangible assets and property, plant & equipment	51	50
Inventory valuation	41	48
Financial instruments	37	35
Employee-related liabilities	78	78
Other provisions for liabilities and charges	55	50
Other items	12	28
Deferred tax assets before netting	300	327
Deferred tax netting by tax entity	(296)	(319)
Deferred tax assets	4	8
Regulated provisions and special amortisation and depreciation	(209)	(168)
Intangible assets and property, plant & equipment	(142)	(185)
Inventory valuation	(26)	(37)
Financial instruments	(24)	(14)
Employee-related liabilities	(17)	(18)
Other provisions for liabilities and charges	(16)	(20)
Other items	(12)	(13)
Deferred tax liabilities before netting	(446)	(455)
Deferred tax netting by tax entity	296	319
Deferred tax liabilities	(150)	(136)
Net deferred tax liabilities	(146)	(128)
(1) Limited deferred tax assets for tax loss carry-forwards	<i>516</i>	531

#### CHANGE IN DEFERRED TAXES IN THE BALANCE SHEET

(€ MILLION)	ASSETS	LIABILITIES	NET FY 2016	NET FY 2015
At beginning of period	8	(136)	(128)	(134)
Deferred tax offset in shareholders' equity	(23)	24	1	3
Deferred tax on profit (loss)	(24)	6	(18)	20
Deferred tax netting by tax entity	23	(23)	-	-
Translation adjustments and other movements	20	(21)	(1)	(17)
At period close	4	(150)	(146)	(128)

Deferred tax assets and liabilities are reported separately in the balance sheet after offsetting within each tax entity. Except for the French tax consolidation group, every company is an independent tax entity.

#### FRENCH TAX CONSOLIDATION GROUP

Tax losses of €411 million (€344 million at 31 December 2015) mainly arose during the past four reporting periods and have not been capitalised as deferred tax assets.

#### **NOTE 11 PERSONNEL COSTS AND EMPLOYEE BENEFITS**

#### **WORKFORCE AND PERSONNEL COSTS**

#### AVERAGE WORKFORCE AND WORKFORCE AT END OF PERIOD BY DIVISION

The average workforce and workforce at end of period include all fully consolidated companies at 31 December of each year.

	FY 2016 AVERAGE WORKFORCE	31/12/2016 WORKFORCE AT PERIOD END	FY 2015 Average Workforce	31/12/2015 WORKFORCE AT PERIOD END
Workers	1,535	1,471	1,642	1,627
ETAM (employees, technicians and supervisors)	849	821	882	879
Managers	250	242	273	271
ERAMET Nickel	2,634	2,534	2,797	2,777
Workers	2,541	1,941	2,809	2,791
ETAM (employees, technicians and supervisors)	1,691	1,508	1,837	1,816
Managers	719	620	728	735
ERAMET Manganese	4,951	4,069	5,374	5,342
Workers	2,590	2,588	2,624	2,589
ETAM (employees, technicians and supervisors)	1,446	1,451	1,404	1,444
Managers	519	519	511	522
ERAMET Alloys	4,555	4,558	4,539	4,555
Workers	31	31	27	30
ETAM (employees, technicians and supervisors)	162	157	45	45
Managers	216	205	126	125
ERAMET Holding and others	409	393	198	200
Workers	6,697	6,031	7,102	7,037
ETAM (employees, technicians and supervisors)	4,148	3,937	4,168	4,184
Managers	1,704	1,586	1,638	1,653
Total	12,549	11,554	12,908	12,874

The reduction in the ERAMET Manganese workforce is mainly explained by the disposal of Erachem and Somivab.

The increase of the item ERAMET Holding and miscellaneous is mainly due to the consolidation at 1 January 2016 of ERAMET Services, ERAMET Ingénierie AND ERAMET Research.

The total workforce managed in the HR reporting system implemented by the Group, which includes non-consolidated companies and companies accounted for using the equity method, totalled 12,777 employees at 31 December 2016 (13,938 employees at 31 December 2015).

#### PERSONNEL COSTS BY CATEGORY

(€ MILLION)	FY 2016	FY 2015
Wages and salaries	(471)	(480)
Social security contributions and other personnel costs	(190)	(184)
Profit sharing	(11)	(13)
Share-based payment	(3)	(5)
Personnel costs subtotal	(675)	(682)
Personnel costs-temporary staff	(28)	(28)
Total personnel costs including temporary staff	(703)	(710)
Personnel costs (including temporary staff) as % of sales	24%	24%

#### **EMPLOYEE-RELATED LIABILITIES**

The ERAMET group offers its employees many long-term benefits, such as retirement packages, pension plans, healthcare plans and long-service awards. The characteristics of these benefits vary in line with the governing laws and regulations in each country and the agreements in force in each company.

#### ACCOUNTING METHOD

Employee-related liabilities are either defined benefit plans or defined contribution plans. Defined benefit plans specify the amount that an employee will receive at the time of retirement whereas defined contribution plans specify how the contributions are calculated.

#### **Defined contribution plans**

For these plans, the ERAMET group makes payments to a fund manager and is under no obligation to make supplementary payments if the fund manager lacks sufficient assets to pay the employee benefits due for the current and prior periods. As a result, these plans do not show any deficit or surplus and are not included in the balance sheet. The contributions are expensed when paid.

#### Defined benefit plans and other long-term benefits

A defined benefit plan is a post-employment benefit plan that is distinct from the defined contribution plan. The cost of the retirement benefits and other benefits accrued to employees is established actuarially for each plan using the projected unit credit cost method. They are assessed annually by independent actuaries. The obligations of the ERAMET group are recognised as balance sheet liabilities and correspond to the difference between the present value of the obligations in respect of defined benefits and the fair value of plan assets at the reporting date. Plan assets consist of assets held in a pension fund or insurance policies.

The costs of services rendered are recognised in Current operating income in the period in which they are incurred. The costs of past services resulting from amendments and curtailments to the plan, as well as the gains and losses upon plan settlement are recognised in Other operating income and expenses. The interest expense for net obligations is included in Other financial income and expenses. The actuarial gains (losses) (including the impact of foreign exchange) on plan assets and the obligation in respect of defined benefits are recognised directly in Other comprehensive income for the period in which they arise. They are recognised immediately in income in the case of long-term benefits.

#### ESTIMATES, ASSUMPTIONS AND JUDGEMENTS

The cost of employee benefits and the value of the obligations are calculated using assumptions such as discount rates, salary increases. retirement age, life expectancy, inflation and cost of healthcare. These assumptions are determined annually by the ERAMET group's Management.

The discount rates used are mostly calculated for each zone or country based on the average rates of private issuers observed in those zones or countries at each reporting date.

The rates vary from country to country:

- · in the Eurozone and in the United States, the discount rates were determined on the basis of AA10+ corporate bonds;
- · in Norway, the discount rate is determined based on secured bonds such as mortgage-backed bonds;
- · in New Caledonia, given that the corporate and government bond markets are illiquid, the rate was based on the French government bond rate and takes into account an appreciation of the inflation rate differential:
- in Gabon, the discount rate is based on the local government bond rate.

#### MAIN ACTUARIAL ASSUMPTIONS AND RELATED SENSITIVITY

The actuarial assumptions used vary according to the economic and demographic conditions existing in the country in which the plan is in force. The main actuarial assumptions used for measuring these liabilities are as follows:

	31/12/2016		31/12/2015				
	RATES		RATES				
	DISCOUNT	INFLATION	DISCOUNT	INFLATION			
Eurozone	1.50%	1.80%	2.00%	1.90%			
United States	3.80%	2.00%	4.00%-4.20%	2.20%			
Norway	2.50%	1.75%	2.50%	2.30%			
New Caledonia	2.60%	0.60%	3.20%	1.00%			
Gabon	6.00%	2.50%	8.00%	2.50%			

#### SFNSITIVITY

An increase or decrease of 0.5 percentage point in the discount rate or inflation rate, with other actuarial assumptions remaining constant, will have the following impact:

		DISCOUNT	RATE		INFLATION RATE					
	INCREASE BY	0.5%	DECREASE B	Y 0.5%	INCREASE B	Y 0.5%	DECREASE BY 0.5%			
(€ MILLION)	€ MILLION	%	€ MILLION	%	€ MILLION	%	€ MILLION	%		
France	(17)	-8%	20	10%	(3)	-2%	3	2%		
United States	(5)	-5%	5	5%	-	0%	-	0%		
Norway	(1)	-8%	1	8%	1	2%	(1)	-2%		
New Caledonia	(2)	-5%	2	5%	-	0%	-	0%		
Gabon	(1)	-3%	1	3%	-	0%	-	0%		
Other countries	(1)	-11%	1	11%	1	5%	(1)	-5%		
Total	(27)	-7%	30	8%	(1)	0%	1	0%		

## DESCRIPTION OF THE MAIN DEFINED BENEFIT PLANS AND ASSOCIATED RISKS

The ERAMET group's main defined benefit plans are offered in France, United States, Gabon and New Caledonia. The main plan assets are therefore located in these countries. The main characteristics of the plans described below relate to these four countries.

Retirement packages are generally paid as a lump sum or annuities determined on the basis of the employee's length of service, final salary or average final remuneration. Pre-retirement and supplementary healthcare benefits and life insurance are also provided under the pension plan, along with long-service awards in the form of a lump sum that varies according to the number of years' service completed.

In the United States, most defined benefit plans are no longer accessible to new employees. They participate in defined contribution plans.

In New Caledonia, the obligations also include the payment of a loyalty bonus awarded after 10 years of service and then every five years, calculated as a percentage of the basic salary, as well as the granting of plane tickets whose number, value and frequency depends on the employee's professional category.

#### RISKS ASSOCIATED WITH THE PLANS

The ERAMET group is exposed to the standard risks inherent to defined benefit plans, such as higher-than-expected salary increases, increased inflation rates or lower-than-expected returns, as well as actuarial risks, especially investment risk, interest rate risk and longevity risk. The plans are also exposed to the risk of internal negotiation to reach a more favourable agreement, and the risk of increase in taxes or annuities for supplementary pension plans.

#### **GOVERNANCE POLICY**

Under the laws governing defined benefit plans, it is the ERAMET group's duty to manage the plan assets and design investment policies that define, for each prefinanced plan, the investment objectives, the asset allocation target, risk mitigation strategies, and other components required by law for pension plans.

### INVESTMENT POLICIES AND RISK MANAGEMENT INITIATIVES

The investment policies are designed to obtain longterm return on investment which, combined with contributions, will enable the plans to have sufficient assets to be able to pay the promised benefits while keeping risk at an acceptable level. The asset allocation target is determined on the basis of the expected market conditions and climate, the maturity profile of plan liabilities, the level of cover of the respective plans, and the risk tolerance of the plans' beneficiaries.

In France, the plans are funded by insurers through Group life insurance contracts. The investments are made by the insurers in their respective Euro funds. These funds, of which over 80% is invested in buy and hold rate products, have suffered from a deterioration in bond returns for some years now and are still exposed to default risk on returns in a protracted low interest rate period.

In the United States, the financial management of funds is entrusted to various asset managers who are among the key players in the business. Index-based management is used for the most part and active management for the remainder. Half of the asset allocation is in government bonds and American companies, denominated in USD, with the objective of matching the liability duration. The other half is invested through funds in American equities, world equities and emerging market equities and bonds. The risks inherent to these financial assets are therefore curve risk, duration risk, credit risk and inflation risk for bonds, and market risk and capital risk for equities. Nonetheless, in 2016, the markets in which the assets are invested performed positively.

#### OVERALL COST OF EMPLOYEE-RELATED LIABILITIES

The cost of employee-related liabilities recognised in profit and loss statement and in the Statement of comprehensive income is detailed below:

		PENSION PLANS			RE	RETIREMENT PACKAGE				OTHER BENEFITS				TOTAL EMPLOYEE-RELATED LIABILITIES			
(€ MILLION)	201	6	201	5	201	6	201	5	201	6	201	5	2016	5	2015	5	
Service cost		5		6		6		6		7		1		18		13	
Past service cost <sup>(1)</sup>		(10)		-		(5)		(5)		-		2		(15)		(3)	
Net interest expense		3		2		3		3		1		1		7		6	
Cost recognised in income		(2)		8		4		4		8		4		10	,	16	
Impact of revaluation on commitments		4		9		14		1		1		(1)		19		9	
• experience	(3)		7		-		(2)		-		(1)		(3)		4		
demographic assumptions	9		(2)		11		(1)		1		-		21		(3)		
financial assumptions	(2)		4		3		4		-		-		1		8	***************************************	
Impact of revaluation on pension plan assets		(2)		3		_		(2)		_		-		(2)		1	
Cost recognised in other comprehensive income		2		12		14		(1)		1		(1)		17		10	
Total cost recognised in comprehensive income		-		20		18		3		9		3		27		26	

<sup>(1)</sup> Pension plan changes and curtailments.

The impact of past service cost (€15 million) is mainly due to the change in some ERAMET Norway plans (see Note 5 § Other operating income and expenses).

#### CHANGE IN OBLIGATIONS AND PLAN ASSETS

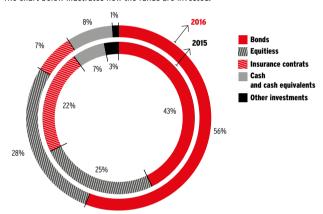
The table below illustrates the change in obligation by plan type, distribution by beneficiary and based on whether or not pre-financing is used, as well as the change in the fair value of the plan assets and its differentiation by category (listed and unlisted assets).

		PENSION	PLANS		R	ETIREMENT	PACKAG	E [		OTHER BE	NEFITS		TOTA	L EMPLO	EE-RELA	TED
(€ MILLION)	201	6	201	15	20	16	201	15	20	16	20	15	201	6	201	5
Change in obligation				•						•						-
Obligation at beginning of period	322		299		102		101		43		43		467		443	
Cost recognised in income	4		16		6		4		8		4		18		24	
Impact of revaluation	4		9		14		1		1		(1)		19		9	
<ul> <li>Contributions and benefits paid</li> </ul>	(31)		(14)		(20)		(4)		(4)		(4)		(55)		(22)	
Change to consolidation scope	(57)		-		2		-		1		-		(54)		-	
Translation differences and other movements	4		12		(1)		-		(2)		1		1		13	
Obligation at period end	246		322		103		102		47		43		396		467	
Obligation attributable to																
Working beneficiaries	96		134		103		99		40		35		239		268	
<ul> <li>Beneficiaries entitled to deferred benefits</li> </ul>	10		48		-		-		-		-		10		48	
Pensioners	140		140		-		3		7		8		147		151	
	246		322		103		102		47		43		396		467	
Obligation																
• prefinanced	203	83%	291	90%	44	43%	60	59%	-	-	-	-	247	62%	351	75%
• not financed	43	17%	31	10%	59	57%	42	41%	47	100%	43	100%	149	38%	116	25%
	246		322		103		102		47		43		396		467	
Change in plan assets																
Faire value of plan assets at beginning of period	215		207		37		34						252		241	
<ul> <li>Interest income recognised in income</li> </ul>	7		7		1		1		-		-		8		8	
• Impact of revaluation	2		(3)		-		2		-		-		2		(1)	
• Contributions paid	2		4		1		1		-		-		3		5	
Benefits paid	(30)		(13)		(16)		-		_		-		(46)		(13)	
Change to consolidation scope	(44)		-		-		-		-		-		(44)		-	
Translation differences and other movements	2		13		-		(1)		-		-		2		12	
Fair value of plan assets at period close (II)	154		215		23		37		-		-		177		252	
Plan assets	····	-														-
Listed on an active market	154	100%	152	71%	12	52%	37	100%	-	-	-	-	166	94%	189	75%
• Unlisted	-	-	55	26%	11	48%	-	-	-	-	-	-	11	6%	55	22%
	154		207		23		37		-		-		177		244	
Net liabilities in the balance sheet (I) - (II)	92		107		80		65		47		43		219		215	

The table below shows the breakdown between the main countries, the obligations in connection with employee-related liabilities, plan assets, net liability and financial cover

		31/12/20	016		31/12/2015						
(€ MILLION)	CURRENT VALUE OF OBLIGATIONS (A)	FAIR VALUE OF PLAN ASSETS (B)	NET LIABILITIES IN THE BALANCE SHEET (A) + (B)	FINANCIAL COVER RATIO - (B) / (A)	CURRENT VALUE OF OBLIGATIONS (A)	FAIR VALUE OF PLAN ASSETS (B)	NET LIABILITIES IN THE BALANCE SHEET (A) + (B)	FINANCIAL COVER RATIO - (B) / (A)			
France	203	(66)	137	32.5%	176	(68)	108	38.6%			
United States	104	(90)	14	86.5%	152	(126)	26	82.9%			
Norway	12	(3)	9	25.0%	64	(37)	27	57.8%			
New Caledonia	39	(11)	28	28.2%	35	(11)	24	31.4%			
Gabon	29	-	29	-	21	-	21	-			
Other countries	9	(7)	2	77.8%	19	(10)	9	52.6%			
Total	396	(177)	219	44.7%	467	(252)	215	54.0%			

The chart below illustrates how the funds are invested.



#### PROJECTED CASH OUTFLOWS

The global average term was 14.6 years at 31 December 2016 (13.8 years at 31 December 2015).

In 2017, contributions for employee-related liabilities are estimated at €1 million. Future benefits, whether paid by levies on investments or directly by the ERAMET group, are estimated at €10 million.

#### BONUS SHARE PLAN AND SHARE-BASED PAYMENTS

#### ACCOUNTING METHOD

The ERAMET group has established various share award plans that are all equity-settled plans: "democratic" plans open to all employees that are not subject to performance criteria and "selective" plans open to certain employees and corporate officers subject to performance requirements.

The fair value of the services received in consideration for the granting of these options is definitively measured with reference to the fair value of the options on the grant date and the number of options that will have vested by the end of the vesting period.

The total fair value thereby determined is apportioned on a straight-line basis over the full vesting period for the plans, with the number of vested exercisable options assumed at the beginning of the vesting period being reviewed at every reporting date.

This fair value is recognised in Current operating income as administrative and selling expenses, offset by an increase in shareholders' equity.

#### ESTIMATES, ASSUMPTIONS AND JUDGEMENTS

Judgement must be exercised to determine the fair value of share award plans at the award date.

The fair value of democratic plans is estimated using the Black-Scholes-Merton model.

Selective plans are subject to two performance conditions: one intrinsic condition based on the ERAMET group's financial performance and one external condition based on the ERAMET stock performance. The fair value of these plans is measured using the Monte Carlo model.

The assumptions used to measure the plans are based on:

- expected volatility determined on the basis of an observation of the stock's historical performance;
- a risk-free zero coupon rate over the term of the plan;
- a future distribution rate based on the average for the last five years.

The bonus share awards to employees with tax residence in France fully vest after a two-year vesting period for democratic plans, and after three years for selective plans, on the understanding that the beneficiaries must retain the shares awarded to them for an additional two years.

The bonus share awards to employees with tax residence outside France fully vest and are freely transferable after a four-year period.

Share-based payments relate only to bonus share plans for the benefit of employees and settled in the form of shares. They represented an expense of €3 million for the 2016 reporting period (€5 million in 2015).

Shares were allocated under two new bonus share plans on 27 May 2016:

- one plan for all employees for an initial total of 24,906 shares;
- one plan open to certain employees and corporate officers, where:
  - one part of the shares is subject to two performance conditions—an internal condition and an external condition—for an initial total of 93.909 shares, and
  - one part of the shares is not subject to performance criteria, for an initial total of 40.418 shares.

The criteria for share awards and the assessment of the accounting expense are the same as those described above.

The characteristics of the two new bonus share award plans for the financial year 2016 are as follows:

		NUMBER OF Shares	EXERCISE PRICE (€)	MATURITY (YEARS) <sup>(1)</sup>	RISK FREE RATE	AVERAGE DIVIDEND YIELD	FAIR VALUE OF OPTION (€) <sup>(2)</sup>
Plan open to all employees	France/Italy	10,010	free	2+2	-0.44%	0.00%	27.45
	World	14,896	free	4 + 0	-0.30%	0.00%	28.89
Plan open to certain employees and corporate officers	France/Italy	106,327	free	3 + 2	-0.38%	0.00%	27.75/13.52
	World	28,000	free	4+0	-0.30%	0.00%	28.89/14.24

<sup>(1)</sup> Maturity = vesting period + lock-in period.

The change in the number of bonus share awards in the 2015 and 2016 reporting periods was as follows:

NUMBER OF BONUS SHARES	31/12/2016	31/12/2015
At beginning of period	441,191	409,940
New plans 2016/2015	159,233	160,096
Definitive allocations	(51,547)	(45,393)
Prescribed shares	(7,879)	(5,544)
Lapsed shares	(127,289)	(77,908)
At period close	413,709	441,191
Distribution by year of allocation		
2016	-	109,683
2017	98,453	141,650
2018	129,279	145,974
2019	143,351	43,884
2020	42,626	-

<sup>(2)</sup> Bonus share award plans whose share awards are subject to two performance conditions have two fair values: the first being the intrinsic condition and the second being the external condition.

#### **NOTE 12 PROVISIONS**

A provision is a debt recorded in the balance sheet. It is an estimated value owing to uncertainty as to the time of payment and the amount to be paid. The main provisions set aside by the ERAMET group relate to site restoration and environmental and social risks (especially restructuring).

#### ACCOUNTING METHOD

The ERAMET group sets aside a provision, where its amount can be reliably estimated, to cover all liabilities arising from past events that are known at the reporting date and the settlement of which is likely to result in an outflow of resources to settle the liability.

#### Provisions for site restoration and dismantling, provisions for environmental risks

The provisions for mining site restoration are recognised when mining sites are opened and as and when they show degradation, and are then remeasured and accreted at each reporting date. Where there is a legal or contractual obligation to restore mining or industrial sites, a restoration provision is made, offset by an environmental and dismantling asset. The provision is based on site-by-site estimates of the cost of this work. The asset is amortised over the life of the operation of the mine or the industrial site. Restoration costs are discounted over the period remaining until the expected end of operation of the mine or site, and the effects attributable to the passage of time (accretion expenses) are recognised in Net income for the period under Other financial income and expenses (see Note 6). Provisions are made for all other environmental contingencies on the basis of estimated future costs without, however, making any allowance for insurance indemnities receivable. For industrial sites where there are no plans to discontinue operations, no provision is made for site restoration.

Depending on the governing laws in each country, an environmental bond issued by a banking or financial institution to the benefit of local authorities may need to be set up for the rehabilitation of mining and industrial sites.

#### Restructuring and redundancy plans

Provisions are made for restructuring and redundancy costs where such measures have been planned in detail and announced before the reporting date or whose implementation has begun.

#### ESTIMATES, ASSUMPTIONS AND JUDGEMENTS

#### Provisions for site restoration and dismantling

The ERAMET group must meet regulatory and constructive obligations with regard to the restoration of certain mining sites at the end of operation. Provisions for site restoration and dismantling of industrial sites are estimated on the basis of forecast cash flows by maturity and discounted using an inflation rate and a discount rate determined in accordance with local economic conditions.

These provisions are recognized in respect of an immediate degradation with corresponding asset for restoring or dismantling and the changes in assumptions will therefore correct this value with a prospective effect.

The remaining term to the planned end date of operation of the mines or industrial sites is defined over a maximum period not extending beyond 2060 in New Caledonia, 2032 and 2042 in Gabon and 2074 for the industrial sites in the United States.

The ERAMET group measures its provision for site restoration and dismantling at each reporting date or as new information becomes available. The final costs of site restoration and dismantling are by nature uncertain. These uncertainties may lead to actual expenditure in the future whose amount may differ from the current provision amount. Therefore, major adjustments may be made to the provisions set aside, which may impact future income.

The provisions made are based on good practice in the sector and are calculated as follows:

- For mining, calculation of a cost per hectare for site restoration (replanting, landscaping, soil management, etc.) based on the cleared areas. The costs are based on estimated internal costs or the cost of providers, depending on the nature and complexity of the areas to be restored.
- For the dismantling of facilities, cost estimation based on external estimates or experience from dismantling/remediation work performed on other Group sites.
- These costs are inflated and accreted based on the estimated useful lives. The estimated rates, including the discount rate, are fixed according to the same terms as those used for the assessment of employee-related liabilities (see Note 11).

At 31 December 2016, the provision for site restoration represents the best estimate of the present value of future costs to be incurred.

(€ MILLION)	FY 2016	FY 2	2015
At beginning of period	597	5	30
Allocations (reversals) for the period	19	1	(5)
allocations for the period	71	44	
• used (reversals) for the period	(50)	(49)	
• unused (reversals) for the period	(2)	-	
Accretion expenses	9		9
Dismantling assets	13	-	(4)
Translation adjustments and other movements	(118)		67
At period close	520	5	97
Due after more than one year	482	5	64
• Due in less than one year	38		33
Environmental contingencies and site restoration	404	3	377
Personnel	31	-	41
Other liabilities and charges	85	1	179

#### ENVIRONMENTAL CONTINGENCIES AND SITE RESTORATION

(€ MILLION)	31/12/2016	31/12/2015
Site restoration <sup>(1)</sup>	373	349
Environmental contingencies	31	28
Total	404	377
(1) of which provisions offsetting a dismantling asset	300	284
Due after more than one year	398	370
• Due in less than one year	6	7

#### Site restoration

(€ MILLION)	FY 2016	FY 2015
At beginning of period	349	344
Allocations (reversals) for the period	7	(10)
allocations for the period	12	2
• used (reversals) for the period	(5)	(12)
• unused (reversals) for the period	-	-
Accretion expenses	9	9
Dismantling assets	13	(4)
Translation adjustments and other movements	(5)	10
At period close	373	349
Le Nickel-SLN (New Caledonia)-ERAMET Nickel	280	263
Comilog (Gabon)-ERAMET Manganese	43	30
ERAMET Marietta (United States)-ERAMET Manganese	29	28
Comilog France–ERAMET Manganese	14	16
GCMC (United States)-ERAMET Manganese	6	6
Other companies	1	6

## REGULATORY FRAMEWORK OF PROVISIONS FOR SITE RESTORATION AND DISMANTLING

#### New Caledonia

**For mining**, the 2009 Mining Code establishes the general framework. The provisions are allocated each of the mine sites in their prefectural operating licence.

**For industrial operations governed by ICPE,** the regulatory framework is based on Article 3 of the decision of the Southern Province of 25 September 2008, whose implementation involves the application of certain metropolitan circulars relating to site safety.

The provisions for wash facilities (industrial facilities on mine sites) are for their part included in the ICPE prefectural orders for each of the sites concerned.

#### Gabon

The existing provisions used as a reference for Gabon have not been set out in detail (no implementing circular). However rehabilitation projects are based on the decree establishing the conditions for application of Law No. 005/2000 of 12 October 2000 (Mining Code), as amended and supplemented by Order 2002 on the Mining Code in the Gabonese Republic.

The provision under Article 78 was also accounted for, in line with Article 21.5 of the Comilog Mining Convention.

#### **United States**

Provision is made for two key components:

- restoration of waste water basins, a regulatory requirement contained in the local permit («Permit to Install»);
- work performed as part of the «Voluntary Action Plan» negotiated with the US Environmental Protection Agency (EPA) in 2010 in connection with the «Ohio waste laws" as part of the cessation of activities at the North site (asbestos removal and dismantling of the corresponding facilities).

Discount and inflation rates used for site restoration and dismantling provisions calculation are detailed below:

	31/12/2016		31/12/2	2015
	DISCOUNT RATE	INFLATION RATE	DISCOUNT RATE	INFLATION RATE
United States	3.80%	2.00%	3.75%-4.00%	2.20%-2.30%
New Caledonia	2.60%	0.60%	3.20%	1.00%
Gabon	6.00%	2.50%	8.00%	2.50%

An increase or decrease of 0.25% in the discount rate would result in an increase or decrease of €14 million in provisions at 31 December 2016, mainly affecting Le Nickel-SLN in New Caledonia (€13 million at 31 December 2015).

Estimated expenses are allocated as follows in percentage terms:

(€ MILLION)	31/12/2016	31/12/2015
2017-2021	15%	16%
2022-2026	13%	12%
2027-2031	11%	10%
2032 and beyond	61%	62%

#### **PERSONNEL**

(€ MILLION)	31/12/2016	31/12/2015
ERAMET Alloys	18	22
ERAMET Manganese	7	5
ERAMET Holding	2	7
Restructuring and redundancy plans	27	34
Other labour liabilities and charges	4	7
Total	31	41

#### OTHER LIABILITIES AND CHARGES

(€ MILLION)	FY 2016		FY 2015
At beginning of period	179	-	120
Allocations (reversals) for the period	15		4
allocations for the period	23	24	
• used (reversals) for the period	(8)	(20)	
• unused (reversals) for the period	-	-	
Translation adjustments and other movements	(109)		55
At period close	85		179
Financial risks associated with the put options granted by ERAMET to Mitsubishi	-		109
Provision for free return–Concession	26		23
Provisions for tax contingencies	18		17
Commercial disputes	5		6
Other provisions for liabilities and charges	36		24

Other changes in financial year 2016 include €106 million for the cancellation of the option for Mitsubishi to sell its interest in Strand to ERAMET following the exercise of the put option by Mitsubishi and Pamco on 21 April 2016.

The difference between this amount and the disbursed amount of €71 million (see Note 6-Investments) is recognised in Group equity for a total of €35 million (see Statement of changes in equity).

#### **NOTE 13 RELATED-PARTY TRANSACTIONS**

#### ACCOUNTING METHOD

Transactions with related parties comprise the following:

- · ordinary transactions with non-consolidated companies and associates;
- · gross compensation and benefits to Directors and members of the Executive Committee.

#### ORDINARY TRANSACTIONS WITH NON-CONSOLIDATED COMPANIES AND ASSOCIATES

#### PROFIT AND LOSS STATEMENT

(€ MILLION)	FY 2016	FY 2015
Sales		
Non-consolidated controlled subsidiaries	26	29
Associates and joint ventures	6	6
Cost of sales, administrative and selling expenses		
Non-consolidated controlled subsidiaries	(4)	(14)
Associates and joint ventures	(49)	(38)
Net debt cost		
Non-consolidated controlled subsidiaries	-	-
Associates and joint ventures	-	2

#### **BALANCE SHEET**

(€ MILLION)	FY 2016	FY 2015
Trade and other receivables	-	
Non-consolidated controlled subsidiaries	22	11
Associates and joint ventures	27	22
Trade and other payables	-	
Non-consolidated controlled subsidiaries	1	18
Associates and joint ventures	10	5
Net financial assets (liabilities)	*	
Non-consolidated controlled subsidiaries	10	(2)
Associates and joint ventures	64	47

#### GROSS COMPENSATION AND BENEFITS TO DIRECTORS AND MEMBERS OF THE EXECUTIVE COMMITTEE

(€ MILLION)	FY 2016	FY 2015
Short-term benefits	•	
Fixed compensation	2,414	2,727
Variable compensation	1,913	954
Directors' fees	843	833
Other benefits		
Post-employment benefits	673	82
Retirement package	-	-
Compensation paid in shares	1,193	2,390
Total	7,036	6,986

#### NOTE 14 OFF-BALANCE SHEET AND OTHER COMMITMENTS, CONTINGENT LIABILITIES AND OTHER INFORMATION

The ERAMET group reached agreements with third parties to cover the good performance of its obligations. These obligations are dependent upon subsequent events that may result in the ERAMET group's making or receiving a payment. They are not recognised in the balance sheet if they are not likely to increase the obligations already reported in the balance sheet.

#### **OFF-BALANCE SHEET COMMITMENTS**

(€ MILLION)	31/12/2016	31/12/2015
Commitments given	298	310
Operating activities:	106	120
Financing activities	192	190
Commitments received	14	9
Operating activities:	14	9
Operating activities: Financing activities	14	9

These commitments mostly relate to:

- operating activities: client and environmental bank guarantees, other endorsements and bank guarantees (customs, leases), letters of credit;
- financing activities: guarantees, pledges, collateral and mortgage for external financing of equity method and non-consolidated companies.

#### FUNCTIONAL GUARANTEES FOR THE PERFORMANCE OF BUSINESS CONTRACTS

Functional guarantees are any commitments relating to business contracts, given by ERAMET and its subsidiaries to clients.

These commitments mainly consist of advance payment bonds and product guarantees post delivery of goods.

To finance the performance of the contract, the ERAMET group collects advance payments from the client. To guarantee their refund in case of a breach of its contractual obligations, the ERAMET group may, at the client's request, establish an advance payment bond. These bank guarantees amounted to €16 million at 31 December 2016 (compared to €20 million at 31 December 2015).

Product warranties fall under the ERAMET group's limit of liability defined contractually for each business contract. The ERAMET group does not recognise provisions for guarantees given that there have been no warranty claims from its clients.

The ERAMET group considers its financial risk relative to all the above guarantees to be low, based on historical data and on the existence of civil liability policies that would limit the financial consequences on the Group's consolidated financial statements.

#### FINANCING ACTIVITIES

The off-balance sheet commitments related to financing activities correspond mainly to the commitments given in respect of the ERAMET group's share in the TiZir Ltd bond and the commitments given to MDL in connection with the subordinated loan financing of the joint venture Company TiZir Ltd (see other commitments).

#### **FUTURE LEASE PAYMENTS**

Future operating lease payments are as follows by maturity:

(€ MILLION)	31/12/2016
Less than one year	32
One to five years	84
Over five years	107
Total	223

#### OTHER COMMITMENTS

#### INVESTMENT IN SENEGAL THROUGH THE TIZIR LTD JOINT VENTURE

The ERAMET group, together with its partner Mineral Deposit Ltd (MDL), has expanded its investment in the mineral sands operation in Senegal.

In addition to the initial investment, each partner contributed USD137.5 million as capital, the full amount of which was paid out in the financial year 2013. Furthermore, the ERAMET group (via ERAMET S.A.) granted a shareholders' loan of USD45 million to TiZir Ltd, the full amount of which was paid out in the financial year

The partners were also party to a mutual USD25 million guarantee covering certain specific contingencies.

The two partners contributed equally to financing the joint venture through a subordinated loan of USD105 million, of which the last tranche was paid out in September 2015.

As an additional commitment to TiZir Ltd, the ERAMET group and MDL agreed in Q4 2015 to grant a subordinated loan of USD60 million.

The ERAMET group has committed to granting a loan to MDL to the extent that the latter will not be able to honour some of the calls for funds. If the loan is not repaid, ERAMET may, under certain conditions, be required to dilute MDL in the capital of TiZir Ltd and to take control of the Company, if applicable.

At 31 December 2016, the ERAMET group (Eralloys Holding, a wholly-owned subsidiary of ERAMET) granted a loan of USD13.2 million (USD25 million at 31 December 2015) to MDL to allow the company to make its contribution to calls for funds since 22 December 2015.

#### TRANS-GABON RAILWAY CONCESSION-SETRAG

Under the terms of the 2005 agreement, signed for an initial period of 30 years, Setrag, the concession holder, is required to meet operating capacity targets (volume of goods and number of passengers).

The concession holder is free to set prices. Its main shareholder, Comilog, is committed to ensuring that the necessary funding is made available to cover the capital expenditure required to achieve the operating capacity targets.

On 16 October 2015, Setrag and the Gabonese Republic signed an amendment to the concession agreement for the management and operation of the Trans-Gabon railway. The aim of the amendment is to sustainably restore the technical capacity of the railway and the economic viability of the concession holder. This amendment thus provides for a remedial investment plan estimated at €316 million over eight years, of which €93 million will be provided by the Gabonese State and €213 million by Setrag. The necessary funding for the implementation of this plan has been put in place in the financial year 2016.

At 31 December 2016, the investment plan was being launched and execution will start in the financial year 2017. At 31 December 2016, no funding had been drawn down by Setrag.

#### CALL OPTION ON PT WEDA BAY NICKEL IN FAVOUR OF PT ANTAM

The Indonesian State company Pt Antam, which owns 10% of Pt Weda Bay Nickel, has a call option exercisable between the submission date of a feasibility study by an independent banking institution and 30 days later. This option, which relates to 15% of Pt Weda Bay Nickel's share capital, will be priced at 150% of the expenses incurred at the time of the decision to begin construction. Pt Antam also has an additional call option exercisable during the first 60 days of the 14th year of production on an interest of between at least an additional 5% and the percentage required to hold a maximum interest of 40%. If Pt Weda Bay Nickel's shares are listed, the price of the shareholding will be calculated based on the average market price for the 60 days preceding and 60 days following the option exercise. If Pt Weda Bay Nickel is not listed, the shareholding value will be assigned by independent experts.

# AGREEMENT TO INCREASE THE GABONESE REPUBLIC'S INTEREST IN COMILOG

On 20 October 2010, ERAMET and the Gabonese Republic concluded an agreement to step up Gabon's equity interest in Comilog. Under this agreement, from 2010 to 2015, ERAMET was required to transfer in stages to the Gabonese Republic an additional interest of up to 10% of the share capital of Comilog, which would have increased the Gabonese Republic's shareholding in Comilog S.A. from 25.4% to 35.4%.

The first transfer stage (2010-2011) involved the sale of a 3.54% equity interest in Comilog; 2.17% of the capital was transferred in December 2010 and 1.37% in June 2011

At 31 December 2016, the equity interest in Comilog held by Société Équatoriale des Mines (SEM, a Gabonese company) and the *Caisse des dépôts du Gabon* on the one hand, and by ERAMET on the other, represented 28.94% and 63.71% respectively.

To date, therefore, the agreement has been partially fulfilled. No binding deadline has been set for the continued increase in interest. ERAMET is in regular contact with the Gabonese Republic on this matter.

#### CONTINGENT LIABILITIES

Contingent liabilities arise from past events which, by nature, can be solved only if one or more unpredictable future events occur or do not occur. To measure their potential impact, the ERAMET group exercises judgement to a great extent and may rely on estimated outcomes of future events.

#### TAX AUDIT IN ITALY

Aubert & Duval is subject to a tax audit for the years 2009 to 2016, focusing on the assumption of the existence of a permanent establishment in Italy.

Following a report by the *Guardia di Finanza*, the tax authority is examining the case. The company has already submitted its defence. It is not possible to comment on the outcome of the review at this stage in proceedings.

#### COMILOG CUSTOMS INSPECTION

In 2016, Comilog received a certified report following an inspection in respect of customs clearance of materials, spare parts and mining equipment imported from 2009 to 2012. Comilog filed its defence with the customs tax authority in January 2017. It is not possible to comment on the outcome of the review at this stage in proceedings.

#### OTHER INFORMATION

#### ICPE (FACILITIES CLASSIFIED FOR ENVIRONMENTAL PROTECTION) REGULATION APPLICABLE TO THE DONIAMBO ELECTRIC POWER PLANT

By order of the President of the Assembly of South Province, New Caledonia on 12 November 2009, new, more stringent technical directives regarding airborne emissions were declared applicable at the latest by 1 September 2013 in the present electric power plant at Doniambo. By order of 27 December 2016, the President of the Assembly of South Province extended the deadline for the application of the new limits for airborne emissions to 30 June 2019.

### GCMC AND BMC PLACED UNDER CHAPTER 11 PROTECTION

In June 2016, GCMC a wholly-owned subsidiary of Comilog, specialising in the recycling of oil catalysts in the United States, and its wholly owned subsidiary BMC, filed a voluntary petition before the competent court in Pennsylvania for protection under Chapter 11 of the US Bankruptcy code. Chapter 11 allows companies to continue operating for the duration of the proceedings and may facilitate the search for a buyer.

BMC has found a buyer for its assets and the liquidation of the legal structure is underway at 31 December 2016.

GCMC has not found a buyer and the company should cease trading in 2017. The ERAMET group has drawn all the necessary conclusions regarding the accounting impact in its financial statements on the basis of this assumption.

#### NOTE 15 FEES PAID TO THE STATUTORY AUDITORS

	ERNST & Y	OUNG	KPM	KPMG		OTHER TOTA		4L	
(€ MILLION)	2016	2015	2016	2015	2016	2015	2016	2015	
Statutory audit, certification, examination of individual and consolidated financial statements									
• ERAMET S.A.	178	175	222	218	-	-	400	393	
Fully consolidated companies	857	1,116	768	849	422	133	2,047	2,098	
Sub-total Sub-total	1,035	1,291	990	1,067	422	133	2,447	2,491	
	82%	87%	76%		100%	96%	82%	85%	
Other work and services directly relating to the statutory audit									
• ERAMET S.A.	44	13	73	37	-	-	117	50	
Fully consolidated companies	104	45	25	11	-	-	129	56	
Sub-total Sub-total	148	58	98	48	-	-	246	106	
	12%	4%	8%		0%	0%	8%	4%	
Other services provided by the Statutory Auditor firms to fully consolidated subsidiaries									
Legal, tax and employee-related	46	127	210	208	-	2	256	337	
• Other	33	-	4	3	-	4	37	7	
Sub-total Sub-total	79	127	214	211	-	6	293	344	
	6%	9%	16%		0%	4%	10%	12%	
Total	1,262	1,476	1,302	1,326	422	139	2,986	2,941	

# NOTE 16 EVENTS AFTER THE REPORTING DATE

### TWO-YEAR EXTENSION TO REVOLVING CREDIT FACILITY MATURITY

On 16 January 2017, the ERAMET group signed a renegotiation agreement concerning its Revolving Credit Facility (RCF) of €981 million, extending its maturity by two years. The original instalments of €85 million in January 2017 and €896 million in January 2018, are now €115 million in January 2018, €85 million in January 2019 and €781 million in January 2020.

# FRAMEWORK AGREEMENT SIGNED TO BRING VALUE TO THE WEDA BAY NICKEL DEPOSIT IN INDONESIA

ERAMET signed a MoU with the Chinese steel producer group Tsingshan to establish the conditions for a partnership to develop this asset. Tsingshan is the world's leading producer of stainless steel.

The partnership would entail producing a nickel ferroalloy from Weda Bay ore in Indonesia based on a pyrometallurgical process, for a nameplate capacity of 30,000 tonnes of nickel per year.

This partnership would be reflected by the entry of Tsingshan group in Strand Minerals Pte. Ltd. ERAMET would hold 43% of the shares and Tsingshan group 57%.

To the Company's knowledge, there were no other events after the reporting date.

# NOTE 17 BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS

# GENERAL PRINCIPLES AND DECLARATION OF COMPLIANCE

Pursuant to European Regulation 1606/2002 of 19 July 2002 on the application of international accounting standards, the consolidated financial statements of the ERAMET group for the financial year ended 31 December 2016 have been prepared in Euros rounded to the nearest million, unless instructed otherwise, in accordance with IFRS (International Financial Reporting Standards) as adopted by the European Union at 31 December 2016.

The accounting principles applied for the preparation of the annual consolidated financial statements are in line with IFRS and the related interpretations, as adopted by the European Union at 31 December 2016 and available on the website: http://ec.europa.eu/finance/accounting/ias/index\_fr.htm.

The accounting principles and methods adopted for the consolidated financial statements at 31 December 2016 are those that were used for the consolidated financial statements at 31 December 2015, except for the IFRS interpretations, standards and amendments adopted by the European Union and IASB whose application is mandatory for reporting periods opened as from 1 January 2016 (and for which the ERAMET group had not opted for early application).

These standards and amendments have had no impact on the ERAMET group's consolidated financial statements.

The ERAMET group did not adopt the standards, interpretations and amendments published respectively by IASB and IFRS IC (IFRS Interpretations Committee) whose application was not mandatory for the reporting periods opened as of 1 January 2016. These are currently being studied to estimate their potential impact.

The impact of the application of IFRS 15 for recognizing revenue from 1 January 2018 is currently being analyzed. Given the nature of the activities of its Divisions, ERAMET group does not anticipate any significant change.

The effects of the application of IFRS 9 on Financial Instruments, from 1 January 2018, are also being analyzed. There is not significant impact expected.

ERAMET group has initiated the project to implement IFRS 16 Leases, effective from 1 January 2019 (subject to adoption by the European Union).

#### CONSOLIDATION PRINCIPLES AND SCOPE

#### CONSOLIDATION PRINCIPLES

The consolidated financial statements of ERAMET group comprise the financial statements of ERAMET and those of its fully-consolidated and equity-method subsidiaries.

The subsidiaries are fully consolidated if ERAMET holds exclusive direct or indirect control. ERAMET has exclusive control over a subsidiary when it is exposed to variable returns from its involvement with that subsidiary and has the ability to affect those returns through its power over the subsidiary. ERAMET reassesses its control over a subsidiary if facts and circumstances indicate a change in any of the elements of control.

The subsidiaries are accounted for using the equity method if ERAMET exercises joint control or has significant influence (Note 9). The equity method of accounting consists of replacing the carrying amount of the holding in a joint venture or an associate by the acquisition cost of these shares adjusted for ERAMET's share in the equity at the reporting date.

#### TRANSLATION OF FOREIGN CURRENCY-DENOMINATED TRANSACTIONS AND FINANCIAL STATEMENTS

Foreign currency transactions are translated at the applicable exchange rate at the time of the transaction. Foreign currency debts and receivables are measured at the closing rate. Translation adjustments resulting from this conversion are recognised in income for the period, except those involving loans and borrowings between the ERAMET group companies, considered an integral part of the net investment in a foreign subsidiary. These are recognised directly in shareholders' equity under Translation adjustments, linked to the foreign subsidiary.

The financial statements of foreign entities with functional currencies other than the Euro were translated using the official exchange rates at 31 December 2016 for balance sheet items, except for shareholders' equity, for which historical rates were applied. Items from the profit and loss statement and Statement of cash flows are translated at the average rate over the period. Translation adjustments stemming from currency fluctuations used to translate shareholders' equity and net income for the period are allocated to reserves. Translation adjustments are carried as a change to shareholders' equity and broken down between Group and non-controlling interests. Where a foreign subsidiary ceases to be consolidated, the cumulative amount of translation differences is recognised in profit or loss statement for the period.

The main currencies used preparing the consolidated financial statements for the 2015 and 2016 reporting periods are as follows (conversion into Euro):

	FY 2016			
CURRENCY/CONVERSION RATE FOR €1	CLOSING	AVERAGE	CLOSING	AVERAGE
US dollar	1.0541	1.10732	1.0887	1.11143
Norwegian krone	9.0863	9.30045	9.603	8.93646
Yuan Renminbi	7.3202	7.34816	7.0608	6.9801
CFA franc (pegged)	655.957	655.957	655.957	655.957
CFP franc (pegged)	119.33174	119.33174	119.33174	119.33174

#### SCOPE OF CONSOLIDATION

(NUMBER OF COMPANIES)	31/12/2016	31/12/2015
Fully consolidated companies	50	54
Equity method companies	7	6
Number of consolidated companies	57	60

#### FINANCIAL YEAR 2016

At 31 December 2016, the following changes have been made to the consolidation scope compared to 31 December 2015:

- removals from consolidation scope (see Key events for the period):
  - Erachem subsidiaries following the sale of the company to PMHC II on 30 December 2016 (see Key events for the period): Erachem Comilog Inc., Erachem Comilog Sprl, Comilog US, GECC, Erachem Mexico,
  - the legal entity of BMC, following the sale of its assets and the liquidation of the company expected early 2017,

- Somivab, following the sale of the company;
- addition to consolidation scope at 1 January 2016 of the following wholly-owned subsidiaries of ERAMET: ERAMET Services, ERAMET Ingénierie, ERAMET Research;
- addition to consolidation scope at 1 January 2016 of EcoTitanium, established in 2015, of which ERAMET holds a 21.75% interest and consolidated using the equity method;
- ERAMET's acquisition of a 33.4% stake in Strand Minerals Pte. Ltd. from Mitsubishi and Pamco. (see Key events for the period).

#### FINANCIAL YEAR 2015

Valdi, a company affiliated in 2014 to ERAMET Manganese, was sold by ERAMET Holding Manganese to Erasteel in 2015, and is affiliated to ERAMET Alloys as regards operations as from 1 January 2015.

The companies without operations—Comilog Lausanne and Guangxi Comilog Ferro Alloys—were wound up in the 2015 reporting period without material impact on the ERAMET group's consolidated financial statements.

All companies within the scope of consolidation share the same reporting date of 31 December.

#### ENTITIES INCLUDED IN THE SCOPE OF CONSOLIDATION AS OF 31 DECEMBER 2016

				PERCENTAGE	(%)
COMPANY	COUNTRY	HEAD OFFICE CONSOLIDATION METHOD		CONTROL	INTEREST
ERAMET	RAMET France Paris Consolidatin		Consolidating entity	-	-
Nickel	***************************************	•	•	<del>-</del>	
Le Nickel-SLN	New Caledonia	Nouméa	Fully consolidated	56	56
Cominc	New Caledonia	Nouméa	Fully consolidated	100	56
Poum	New Caledonia	Nouméa	Fully consolidated	100	56
Weda Bay Minerals Inc.	Canada	Halifax	Fully consolidated	100	100
Weda Bay Mineral Singapore Pte Ltd	Singapore	Singapore	Fully consolidated	100	100
Strand Minerals Pte. Ltd.	Singapore	Singapore	Fully consolidated	100	100
Pt Weda Nickel Ltd	Indonesia	Jakarta	Fully consolidated	90	90
ERAMET Holding Nickel	France	Paris	Fully consolidated	100	100
Eurotungstène Poudres	France	Grenoble	Fully consolidated	100	100
Manganese			•		
ERAMET Holding Manganese	France	Paris	Fully consolidated	100	100
ERAMET Comilog Manganese	France	Paris	Fully consolidated	100	81.86
ERAMET Marietta Inc.	United States	Marietta	Fully consolidated	100	100
ERAMET Norway A/S	Norway	Porsgrunn	Fully consolidated	100	100
Eralloys Holding A/S	Norway	Baerum	Fully consolidated	100	100
DNN Industrier A/S	Norway	Odda	Fully consolidated	100	100
Comilog S.A.	Gabon	Moanda	Fully consolidated	63.71	63.71
Setrag SA	Gabon	Libreville	Fully consolidated	100	63.71

				PERCENTAGE (	(%)
COMPANY	COUNTRY	HEAD OFFICE	CONSOLIDATION METHOD	CONTROL	INTEREST
Comilog Holding	France	Paris	Fully consolidated	100	63.71
Comilog International	France	Paris	Fully consolidated	100	63.71
Port Minéralier d'Owendo SA	Gabon	Libreville	Fully consolidated	97.24	61.95
Gulf Chemical & Metallurgical Corp.	United States	Freeport	Fully consolidated	100	63.71
Comilog France	France	Paris	Fully consolidated	100	63.71
Comilog Dunkerque	France	Paris	Fully consolidated	100	63.71
TiZir Ltd	UK	London	Equity method	50	50
TiZir Titanium & Iron A/S	Norway	Tyssedal	Equity method	50	50
TiZir Mauritius Ltd	Mauritius	Mauritius	Equity method	50	50
Grande Côte Opérations SA	Senegal	Dakar	Equity method	45	45
Comilog Asia Ltd (China)	Hong Kong	Hong Kong	Fully consolidated	100	92.74
Comilog Asia Ferro Alloys Ltd	Hong Kong	Hong Kong	Fully consolidated	100	92.74
Guilin Comilog Ferro Alloys Ltd	China	Guangxi	Fully consolidated	100	92.74
Comilog Far East Development Ltd	Hong Kong	Hong Kong	Fully consolidated	100	92.74
ERAMET Comilog Shanghai Trading Co. Ltd	China	Shanghai	Fully consolidated	100	92.74
ERAMET Comilog Shanghai Consultancy Services Co. Ltd	China	Shanghai	Fully consolidated	100	92.74
Alloys					
Erasteel SAS	France	Paris	Fully consolidated	100	100
Erasteel Champagnole	France	Champagnole	Fully consolidated	100	100
Valdi	France	Paris	Fully consolidated	100	100
Erasteel Kloster AB	Sweden	Söderfors	Fully consolidated	100	100
Erasteel Stubs Ltd	UK	Warrington	Fully consolidated	100	100
Erasteel Inc.	United States	New Jersey	Fully consolidated	100	100
Erasteel Trading Ltd	China	Tianjin	Fully consolidated	100	100
HeYe Erasteel Innovative Materials Co Ltd	China	Tianjin	Equity method	49	49
ERAMET Holding Alliages	France	Paris	Fully consolidated	100	100
ERAMET Alliages	France	Paris	Fully consolidated	100	100
Aubert & Duval	France	Paris	Fully consolidated	100	100
Interforge	France	Clermont-Ferrand	Fully consolidated	94	94
EcoTitanium	France	Paris	Equity method	21.75	21.75
UKAD	France	Paris	Equity method	50	50
Holding and others			•	•	
ERAS SA	Luxembourg	Luxembourg	Fully consolidated	100	100
Metal Securities	France	Paris	Fully consolidated	100	100
Metal Currencies	France	Paris	Fully consolidated	100	100
ERAMET Services	France	Paris	Fully consolidated	100	100
ERAMET Research	France	Trappes	Fully consolidated	100	100
ERAMET Ingénierie	France	Trappes	Fully consolidated	100	100
Eramine	France	Paris	Fully consolidated	100	100
Bolera Minera SA	Argentina	Buenos Aires	Fully consolidated	82.43	82.43
Eramine Sudamerica SA	Argentina	Buenos Aires	Fully consolidated	100	100

#### **GLOSSARY**

#### Current operating income

Includes EBITDA, depreciation of property, plant and equipment, amortization of intangible assets and provisions for liabilities and charges. The current operating income excludes material transactions that are considered unusual in nature, in particular events related to restructuring and impairment loses, shown in operating income and expenses.

#### **FBITDA**

Earnings before financial income and expenses and other operating income and expenses, income tax, provisions for liabilities and charges, and depreciation of property, plant and equipment and amortization of intangible assets.

#### Financial liquidity

Includes cash and cash equivalents, current financial assets and the available amount in the credit facilities made available to ERAMET group companies.

#### Gearing

Ratio of net financial debt to total equity (Group non-controlling interest).

#### Group reporting

Financial information prepared for the Executive Committee, the chief operating decision-maker (CODM), in which the operating performance of joint ventures, the subgroup TiZir Ltd and the company UKAD are accounted for using the proportionate consolidation method. This information is reconciled with published data and is used to measure the performance of the ERAMET group and its divisions (segment information-see Note 3). It is also used for the ERAMET group's financial reporting.

#### Industrial investments

Includes the acquisition of property, plant and equipment and intangible assets.

#### Net financial debt

Represents the gross financial debt (long- and short-term borrowings) less cash and cash equivalents and current financial assets. These items include the valuation of debt-hedging derivatives.

#### Net income, Group share

Net income for the period after tax, attributable to ERAMET shareholders, after accounting for the non-controlling interest in each of the ERAMET group companies.

#### OCI (Other Comprehensive Income)

Transactions for which the change in value of an asset or liability is recognised directly in equity without passing through the profit and loss statement. This is the case, for example, for unrealized gains or losses on hedging instruments, actuarial gains and losses relating to employee benefits, and certain translation differences.

# 6.1.7 AUDITORS' REPORT ON THE CONSOLIDATED ACCOUNTS

#### YFAR FNDFD 31 DFCFMBFR 2016

To the Shareholders.

In compliance with the assignment entrusted to us by your General Meeting, we hereby report to you, for the year ended 31 December 2016, on:

- the audit of the accompanying consolidated financial statements of ERAMET S.A.:
- the justification of our assessments;
- the specific verification required by law.

These consolidated financial statements have been approved by the Board of Directors. Our role is to express an opinion on these consolidated financial statements based on our audit.

## 1 OPINION ON THE CONSOLIDATED FINANCIAL STATEMENTS

We conducted our audit in accordance with professional standards applicable in France; those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit involves performing procedures, using sampling techniques or other methods of selection, to obtain audit evidence about the amounts and disclosures in the consolidated financial statements.

An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made, as well as the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities and of the financial position of the Group as at 31 December 2016 and of the results of its operations for the year then ended in accordance with IFRS system adopted by the European Union.

#### 2 JUSTIFICATION OF OUR ASSESSMENTS

In accordance with the requirements of Article L. 823-9 of the French Commercial Code (Code de commerce), we bring to your attention the following matters.

### IMPAIRMENT TEST OF INTANGIBLE ASSETS AND

Your Group proceed, in accordance with the procedure described in Note "9-Investments" to the consolidated financial statements, in impairment testing of Goodwill and intangible assets with indefinite lives, systematically at least once a year at the annual reporting date. For intangible assets and items of property, plant and equipment with finite lives, impairment tests are carried out where there are indications of impairment.

Our work consisted in reviewing the available documentation and conditions for implementing impairment tests. We also appraised the relevance of assumptions used, the reasonableness of assessments

realized and the appropriateness of information given in the notes to the consolidated financial statements.

#### **PROVISIONS**

As stated in Note "12–Provisions" in the notes to the consolidated financial statements, your Group is required to perform estimates and to make assumptions regarding provisions for contingencies and losses and in particular regarding the provisions for the restoration of mining sites and for dismantling. This Note outlines the uncertainty of these costs as well as the sensitivity to the assumptions used and to the discount rates.

Our work consisted in appraising the assessment methods and procedures used and the documentation provided. It was on that basis that we appraised the reasonable nature of the estimates and re-examined the methods and procedures described in this Note.

These assessments were made as part of our audit of the consolidated financial statements taken as a whole, and therefore contributed to the opinion we formed which is expressed in the first part of this report.

#### 3 SPECIFIC VERIFICATION

As required by law we have also verified, in accordance with professional standards applicable in France, the information presented in the Group's management report.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

French original signed by The Statutory Auditors

Paris-La-Défense, 27 February 2017 **KPMG Audit**Division of KPMG S.A.

Denis Marangé

Partner

Paris-La-Défense, 27 February 2017 **Ernst & Young Audit** 

Jean-Roch Varon

Partner

# 6.2 **INDIVIDUAL COMPANY ACCOUNTS AS OF 31 DECEMBER 2016**

#### **6.2.1 INCOME STATEMENT**

(€ THOUSANDS)	NOTES	FY 2016	FY 2015
Operating income	<del></del>		
Sales of goods and merchandise		530,513	553,245
Income from ancillary activities		54,576	72,987
Sales	5.1	585,089	626,232
Change in inventories of finished products and work in progress		(8,143)	952
Capitalised production		232	54
Operating subsidies		166	294
Reversal of provisions (and amortisation), expense transfers		35,129	16,966
Other income		12	1
Other income		27,396	18,267
Total income		612,485	644,499
Operating expenses			
Purchases of goods		470,962	421,809
Change in inventory (merchandise)		(27,145)	12,835
Raw materials and other supplies purchased		45,860	69,857
Change in inventory (raw materials and supplies)		4,684	1,064
External purchases and expenses		71,486	96,658
Taxes, duties and other levies		3,580	3,487
Wages and salaries		32,361	32,600
Payroll charges		24,853	11,054
Depreciation and amortisation charges		7,989	13,952
Provisions for losses on current assets		4,311	14,450
Provisions for contingencies and losses		15,314	16,833
Other expenses		3,395	1,967
Total expenses		657,649	696,568
Operating profit/(loss)		(45,164)	(52,069)
Net financial income/(loss)	5.4	(135,544)	(265,623)
Current profit/(loss) before taxes		(180,709)	(317,692)
Extraordinary items	5.5	6,333	(13,164)
Employee profit-sharing & incentives			
Income tax	5.2	8,821	(659)
Net profit/(loss)		(165,554)	(331,516)

#### **6.2.2** BALANCE SHEET

#### **ASSETS BALANCE SHEET**

(€ THOUSANDS)	NOTES	GROSS VALUES	DEPRECIATION, AMORTISATION AND PROVISIONS	31/12/2016 NET VALUES	31/12/2015 NET VALUES
Non-current intangible assets			1 1 1		
Patents, licences, rights and similar assets		20,822	18,418	2,404	3,522
Non-current assets under construction		21,181	18,555	2,627	663
Non-current intangible assets		42,003	36,972	5,031	4,185
Property, plant and equipment					
Land		1,131		1,131	1,131
Buildings		27,524	22,897	4,627	4,748
Technical installations, machinery and equipment		73,332	66,844	6,488	7,197
Other		9,766	8,178	1,588	2,483
Non-current assets under construction		7,849		7,849	2,129
Down payments		7		7	11
Property, plant and equipment		119,609	97,919	21,689	17,698
Non-current financial assets					
Investments in associates		1,709,308	704,751	1,004,556	1,100,991
Receivables on investments in associates	4.2	2,471,158	451,809	2,019,350	1,025,685
Other capitalised investments		14,036	10,398	3,638	3,320
Other		10,945		10,945	9,106
Non-current financial assets		4,205,447	1,166,958	3,038,489	2,139,103
Non-current assets	4.1	4,367,059	1,301,850	3,065,209	2,160,985
Inventories and work in progress					
Raw materials and other supplies		36,200	7,162	29,039	8,434
Work in progress		9,637	1,575	8,062	9,083
Semi-finished and finished products		6,615		6,615	15,221
Merchandise		22,216		22,216	27,179
Inventories and work in progress	4.7	74,669	8,737	65,932	59,917
Down payments made on orders		123		123	2,156
Trade receivables		74,710	65	74,644	64,636
Other receivables		66,341	27,267	39,074	71,790
Operating receivables	4.2 & 4.7	141,051	27,333	113,718	136,426
Cash & cash equivalents	4.3	54,410		54,410	39,705
Accruals	4.4	6,522		6,522	10,619
Current assets		276,775	36,070	240,705	248,823
Total assets		4,643,834	1,337,920	3,305,914	2,409,809

#### LIABILITIES BALANCE SHEET

(€ THOUSANDS)	NOTES	31/12/2016	31/12/2015
Share capital		80,979	80,957
Issue, merger and contribution premiums		373,650	373,337
Legal reserve		8,096	8,096
Other reserves		253,839	253,839
Retained earnings		493,894	825,410
Profit/(loss) for the financial year		(165,554)	(331,516)
Net equity	4.5	1,044,903	1,210,122
Regulated provisions	4.8	15,355	31,718
Shareholders' equity		1,060,258	1,241,840
Proceeds from issuances of equity securities	4.9	99,665	0
Provisions for contingencies		20,042	11,004
Provisions for charges		20,468	18,370
Provisions for contingencies and charges	4.8	40,511	29,374
Bond issues		632,409	632,275
Borrowings and debt with credit institutions		1,219,288	234,442
Miscellaneous financial borrowings and debts		138,645	137,183
Financial debts	4.10	1,990,341	1,003,900
Down payments received on current orders		61	99
Trade payables		76,123	63,315
Tax and payroll liabilities		15,891	17,632
Operating payables		92,015	80,947
Liabilities on non-current assets		26	283
Other liabilities		22,441	53,366
Miscellaneous liabilities		22,467	53,649
Accruals		596	
Liabilities	4.10 & 4.11	2,105,480	1,138,595
Total liabilities		3,305,914	2,409,809

#### **6.2.3 STATEMENT OF CASH FLOWS**

(€ THOUSANDS)	FY 2016	FY 2015
Operating activities	•	
Net profit/(loss)	(165,554)	(331,516)
Elimination of non-cash and non-operating income and expenses	143,204	279,497
Cash generated from operations	(22,350)	(52,019)
Change in operating working capital requirement	(277)	39,895
Net cash generated by operating activities	(22,626)	(12,124)
Cash flows from investing activities		
Net payments for non-current financial assets	(70,127)	(82,152)
Payments for non-current intangible assets, PP&E	(11,585)	(5,202)
Disposal of non-current assets	285	1,248
Change in other receivables and debts	1,741	(10,240)
Net cash used in investing activities	(79,686)	(96,346)
Cash flows from investing activities		
Share capital increases	335	
Net cash used in financing activities	335	
Increase (decrease) in net cash	(101,977)	(108,470)
Net cash (borrowings) at beginning of period	537,539	646,009
Net cash (borrowings) at period end	435,562	537,539

#### **6.2.4 NOTES TO THE INDIVIDUAL COMPANY ACCOUNTS**

Note 1 Description Note 2 Major evo		Note 5	Explanatory notes to the income statement	260 <b>Note 9</b>	Employee charges and benefits
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Note 4 Explanate balance s	•		Risk management Consolidation of the financial	261 <b>Note 11</b>	Subsidiaries and investments in associates table

#### NOTE 1 DESCRIPTION OF ACTIVITIES

The Group is one of the world's largest producers of:

- alloy metals, especially manganese and nickel, which are used to improve the properties of steel;
- high-performance special steels and alloys used by industries such as aeronautics, power generation and tooling.

The company ERAMET S.A., the parent company, has two main functions operationally:

- a pure holding function called ERAMET Holding, bringing together the various support services including the Administrative and Financial Department, the Human Resources Department, the Communication and Sustainable Development Department, the Legal Department, the Purchasing Department, the Information Systems Department and the Strategy, Development and Innovation Department;
- part of the Nickel Division (General Management, Sales Management and Industrial Management).

The costs of these different services are billed to the three divisions through intermediary management fee contracts. Other operating costs relating to Nickel are directly allocated to the Nickel Division.

ERAMET also has directly held subsidiaries, acting on behalf of the various entities or for the parent company. These include:

- ERAMET Services: company which includes accounting functions, payroll and IT support for the Group's French companies;
- ERAMET Research: ERAMET's Research Centre, which includes research and development activities:
- ERAMET Ingénierie: project and technology engineering company;
- ERAMET International: company that includes the ERAMET sales network for certain activities of the three divisions. ERAMET International has subsidiaries or branches throughout the world. The activity of ERAMET International is generally remunerated by agency commission contracts;

- Metal Securities: the Group's cash management company, which centralises cash surpluses and short-term requirements for the Group as a whole;
- Metal Currencies: the Group's foreign exchange management company, which carries out all foreign exchange hedging operations for the Group as a whole;
- ERAS: reinsurance company;
- Eramine: company in charge of developments in lithium:
- Sialeo: company responsible for developments in the recovery of metals from the seabed.

#### NOTE 2 MAJOR EVENTS OF THE YEAR

#### TURNAROUND PLAN FOR SOCIÉTÉ LE NICKEL (SLN)

On 23 December 2015, ERAMET granted a loan of €120 million to SLN, maturing on 31 May 2016. The total loan amount was increased from €120 million to €150 million following the decision of ERAMET's Board of Directors on 17 February 2016.

On 9 May 2016, the Board of Directors of ERAMET approved the draft cost reduction and productivity improvement plan concerning the mines and metallurgical plant. On 27 May 2016, ERAMET's Board of Directors agreed to additional funding of €40 million to cover SLN's operations until the end of June 2016.

On 11 July 2016, the Board of Directors of SLN authorised two loan agreements:

- a loan agreement of €200 million with the State, signed on 20 July 2016 and maturing on 30 June 2024. An initial drawdown of €150 million took place in late July 2016;
- an amendment to the intragroup loan of 23 December 2015, subsequently amended on 22 February 2016 and 27 May 2016, between ERAMET and SLN, increasing the loan amount to €325 million with a maturity date of 30 June 2024. This amendment was approved by ERAMET's Board of Directors on 27 July 2016.

The scheme adopted to provide power to the Doniambo facility in New Caledonia is the installation of a new natural-gas-fired electricity generation plant on the island. The project will be managed by a newly created public structure in New Caledonia. The bulk of the bank financing will be guaranteed by the State under the provisions adopted by the French Parliament in December 2016.

#### SHAREHOLDING STRUCTURE OF THE WEDA BAY NICKEL PROJECT IN INDONESIA

Following its decision to review its portfolio of mining assets, on 21 April 2016 Mitsubishi Corporation expressed its intention to exercise a put option to sell to ERAMET the stake it owns with Pacific Metals Co. Ltd (Pamco) in Strand Minerals Pte. Ltd., which controls 90% of the Indonesian project and exploration company Pt Weda Bay Nickel.

Under the terms of the agreement between the shareholders of Strand Minerals Pte. Ltd., ERAMET proceeded with the acquisition of the investment shares of Mitsubishi Corporation and Pamco. ERAMET thus became the 100% shareholder of Strand Minerals Pte. Ltd., which owns 90% of Pt Weda Bay Nickel in the amount of €71 million and repaid the advance to Mitsubishi/Pamco for €26 million.

#### ISSUE OF NET SHARE SETTLED UNDATED BONDS CONVERTIBLE INTO NEW SHARES (ODIRNAN)

The ERAMET Group strengthened its capital by €100 million by issuing net share settled undated bonds convertible into new shares by the Company (ODIRNAN) on 5 October 2016.

The nominal value of the bonds, issued at par, was set at €46.33, which represents a conversion premium of 30% over ERAMET's reference share price.

A total of 2.158.428 bonds were issued for a cumulative nominal amount of €99,999,969.24.

The Company's majority shareholders subscribed for an amount of €87 million, representing 87% of the final amount of the issue.

# FINANCIAL RESULT IMPACTED BY DEPRECIATIONS ON SECURITIES AND RELATED RECEIVABLES

The financial result is strongly negative and amounted to €136 million following depreciations on securities for a net amount of €50 million relating to Strand Minerals Pte. Ltd. securities and advances, holding the Weda Bay project in Indonesia (see above) and provisions on the subsidiaries Eralloys (€59 million) and Erasteel (€38 million) notably, in order to take account of the decline in the value of investments as a result of losses or asset depreciation. Other financial income and expenses consist of net financial interest.

#### DRAWDOWNS ON SYNDICATED LOAN

In early January 2016, ERAMET drew down €980 million on the Multicurrency Revolving Credit Facility Agreement (RCF).

# NOTE 3 ACCOUNTING PRINCIPLES, RULES AND METHODS

The financial statements of ERAMET S.A. as of 31 December 2016 were approved by the Board of Directors on 23 February 2017.

#### **REVIEW OF PRINCIPLES**

The annual accounts have been drawn up in accordance with the provisions of Regulation 2014-09 of the French Accounting Standards Authority approved by ministerial decree on 8 September 2014 in the General Accounting Plan.

The general accounting conventions have been applied in accordance with the principle of prudence, in conformity with the basic assumptions: continuity of operations, consistency of accounting methods, independence of financial years and according to the rules for drawing up and presenting the annual accounts.

The basic method used to value recorded items is the historical cost method.

#### CHANGE IN METHOD

There was no change in method compared to 31 December 2015.

# RULES AND METHODS APPLIED TO THE VARIOUS BALANCE SHEET AND INCOME STATEMENT ITEMS

## NOTE 3.1 NON-CURRENT INTANGIBLE ASSETS AND PROPERTY, PLANT & EQUIPMENT

The gross amount of assets is the amount at which the items were first recorded in the Company's ownership and includes any expenses required to bring them into working order. Non-current assets not used or whose market value is lower than the book value are generally depreciated by extraordinary depreciation and amortisation expense and additions to provisions.

Economically justified amortisation is straight-line amortisation. This amortisation is calculated according to the estimated life of the assets.

The useful lives for the amortization of property, plant & equipment are, except in exceptional cases, as follows:

• buildings: between 20 and 30 years;

• technical installations: between 12 and 20 years;

• machinery and equipment: between 3 and 10 years;

installations, fixtures and fittings:

between 5 and 10 years;

• transportation equipment: between 5 and 8 years;

• office equipment, computers

and furniture: between 3 and 8 years.

The impact of the difference between straight-line amortisation and degressive amortisation is recognised through exceptional amortisation.

#### NOTE 3.2 NON-CURRENT FINANCIAL ASSETS

Since 1 January 2006, the gross value of non-current financial assets has been increased by the purchase

price excluding incidental expenses. Loans are stated at their nominal value. At the end of the financial year, the securities are valued at their use value, which takes into account both the net asset value and profitability prospects. When the use value is less than the gross value, a provision for depreciation is the amount of the difference between the two values.

#### NOTE 3.3 ONGOING DEVELOPMENT PROJECTS

Development projects are generally initiated by ERAMET as a holding company. The costs incurred on these projects are recognised either as non-current financial assets or as assets if they are intended to be billed back to the Group's divisions or subsidiaries, or expensed. On completion of an acquisition, these costs are included in the value of the securities. If these development projects do not succeed, these costs are depreciated or recognised as extraordinary losses.

#### NOTE 3.4 INVENTORIES

Inventories of nickel-bearing products are valued at the cost price calculated on a "first-in, first-out" basis. When the value thus obtained is greater than the net realisable value (selling price less selling costs), a provision corresponding to this difference is made.

Consumable materials are valued at the cost price calculated using the weighted average price method.

Inventories of spare parts are depreciated 100% for all references whose quantity exceeds one year of consumption.

#### NOTE 3.5 RECEIVABLES AND DEBTS

Receivables and debts denominated in foreign currencies are revalued at the rate on the last day of the financial year or at the forward hedging rate, if any.

Any unrealised foreign currency gains or losses resulting from revaluations at the forward hedging rate (at the last closing day if there is no hedge) are recognised as foreign exchange gains or losses in the income statement.

Provisions for impairment of trade receivables are valued on a client-by-client basis according to the estimated risk.

#### **NOTE 3.6 INVESTMENT SECURITIES**

They are valued at acquisition cost and are subject to provisions for impairment if their net asset value (closing price) is lower. Unrealised gains are not recognised.

#### NOTE 3.7 PROVISIONS FOR CONTINGENCIES AND CHARGES

These are formed when their amount can be reliably estimated, to cover all liabilities arising from past events that are known at the reporting date and the settlement of which is likely to result in an outflow of resources representing the economic benefits necessary to settle the liability.

#### Personnel salaries and allowances

ERAMET offers its employees various long-term benefits such as end-of-career payments and other post-employment benefits, such as long-service awards.

Certain commitments are covered completely or partially by contracts with insurance companies.

In this case, commitments and hedging assets are valued independently. A provision is therefore made for the level of commitments and financial assets.

ERAMET's commitments are valued by independent actuaries. The actuarial assumptions used (ERAMET's probability of maintaining active staff, probability of mortality, retirement age, wage trends, etc.) vary according to the demographic and economic conditions prevailing in the country. The discount rates are based on the rate of government bonds or qualified companies of "Premium Quality" with a duration equivalent to the commitments at the valuation date.

The expected returns on assets over the long term have been determined taking into account the investment portfolio structure.

#### Free shares plan for employees

The corresponding provision has been valued based on the value of the treasury shares and the share price on 31 December 2016.

The provision is spread over the vesting period (from two to four years according to the plan) for ERAMET S.A. employees. For other beneficiaries (excluding ERAMET S.A.), the provision is set as of the date of allocation of the plans.

#### NOTE 3.8 SALES

Sales comprise:

- sales of ferronickel (sales and purchases of SLN products):
- nickel salts (produced at the Sandouville plant);
- services and chargeback of shared costs.

Revenue is recognised as sales when the business has transferred to the buyer the risks and rewards of property ownership.

#### NOTE 4 EXPLANATORY NOTES TO THE BALANCE SHEET

#### NOTE 4.1 NON-CURRENT ASSETS & AMORTISATION

#### NON-CURRENT INTANGIBLE ASSETS

(€ THOUSANDS)	ACQUISITION VALUES 31/12/2015	ACQUISITIONS	DISPOSALS, RETIREMENTS AND ADJUSTMENTS	ACQUISITION VALUES 31/12/2016
Patents, licences, rights and similar assets	19,662	1,445	(285)	20,822
Non-current assets under construction	19,217	2,397	(433)	21,181
Total	38,879	3,842	(719)	42,003

The increase in patents and licences is mainly due to the commissioning of Evolution software SNCC Provox on Delta from 18 January 2016 for an amount of €0.3 million and the commissioning of the Hestia 3 payment software for €0.8 million.

(€ THOUSANDS)	DEPRECIATION, AMORTISA- TION AND PROVISIONS AT 31/12/2015	DEPRECIATION AND AMORTISATION EX- PENSE AND ADDITION TO PROVISIONS	REVERSALS OF DEPRECIATION, AMORTISATION AND PROVISIONS	DISPOSALS, RETIREMENTS AND ADJUSTMENTS	DEPRECIATION, AMORTISATION AND PROVISIONS AT 31/12/2016	CARRYING AMOUNTS AT 31/12/2016
Concessions, patents, licences, trademarks, processes, rights and similar assets	16,140	2,278			18,418	2,404
Non-current assets under construction	18,555				18,555	2,626
Total	34,695	2,278	0	0	36,972	5,031

Depreciation and amortisation expenses are mainly due to the SAP software (ERP).

As a reminder, the non-current assets under construction related to the development of hydro-metallurgical technology (€18.5 million as of 31 December 2015) were fully depreciated following the decision to suspend the Weda Bay project in Indonesia, i.e. €18.5 million.

#### PROPERTY, PLANT AND EQUIPMENT

(€ THOUSANDS)	ACQUISITION VALUES 31/12/2015	ACQUISITIONS	DISPOSALS, RETIREMENTS AND ADJUSTMENTS	ACQUISITION VALUES 31/12/2016
Land	1,131			1,131
Buildings	26,592	932		27,524
Technical installations, machinery and equipment	71,835	1,497		73,332
Other	13,172	31	(3,437)	9,766
Non-current assets under construction	2,139	7,713	(1,996)	7,856
Total	114,870	10,172	(5,433)	119,609

Following the restoration of the floors of the Maine-Montparnasse Tower, fixtures and office equipment and furniture were scrapped for a gross amount of €3.4 million (net value of €0.4 million).

Non-current assets under construction were acquired for an amount of €7.7 million, mainly relating to the Nickel division, in particular the Estuaire project for €5.9 million.

(€ THOUSANDS)	DEPRECIATION, AMORTISA- TION AND PROVISIONS AT 31/12/2015	DEPRECIATION AND AMORTISATION EXPENSE AND ADDITION TO PROVISIONS	REVERSALS OF DEPRECIATION, AMORTISATION AND PROVISIONS	DISPOSALS, RETIREMENTS AND ADJUSTMENTS	DEPRECIATION, AMORTISATION AND PROVISIONS AT 31/12/2016	CARRYING AMOUNTS AT 31/12/2016
Land	-				0	1,131
Buildings	21,844	1,053			22,897	4,627
Technical installations, machinery and equipment	64,639	2,291		(85)	66,844	6,488
Other	10,689	562		(3,073)	8,178	1,588
Non-current assets under construction	-				0	7,856
Total	97,172	3,906	0	(3,158)	97,919	21,689

#### NON-CURRENT FINANCIAL ASSETS

(€ THOUSANDS)	ACQUISITION VALUES 31/12/2015	ACQUISITIONS	DISPOSALS, RETIREMENTS AND ADJUSTMENTS	ACQUISITION VALUES 31/12/2016
Investments in associates	1,638,589	70,719		1,709,308
Receivables on investments in associates	1,501,736	969,422		2,471,158
Other capitalised investments	23,474		(9,438)	14,036
Other	9,107	1,961	(123)	10,945
Total	3,172,906	1,042,102	(9,561)	4,205,447

The increase in "Investments in associates" is mainly due to the acquisition of the Strand shares for €71 million following the exercise of the put option by Mitsubishi Corporation to sell to ERAMET on 21 April 2016.

Changes in "receivables on investments in associates" are mainly due to the increase in investments at Metal Securities for €740 million following the drawdown of the syndicated loan at the beginning of January 2016,

the increase in the loan granted to Société Le Nickel for €115 million (see note 2), the increase in the Strand loan for €39.5 million following the exit of Mitsubishi (see note 2), the increase in the Erasteel loan for €50 million, the increase in the TiZir loan for €9 million (including capitalised interest) and a loan granted to EcoTitanium for an amount of €10 million.

The line "Other capitalised investments" relates to treasury shares. The decrease is mainly attributable to the allocation of free shares to employees of French and foreign companies in the 2012 and 2013 selective allocation plans and 2012 and 2014 democratic allocation plans for an amount of €6.9 million.

The shares from the buyback mandates (balance of 45,510 shares as of 31 December 2016) are intended to be distributed as part of the free share allocation plans.

(€ THOUSANDS)	DEPRECIATION, AMORTISA- TION AND PROVISIONS AT 31/12/2015	DEPRECIATION AND AMORTISATION EX- PENSE AND ADDITION TO PROVISIONS	REVERSALS OF DEPRECIATION, AMORTISATION AND PROVISIONS	DISPOSALS, RETIREMENTS AND ADJUSTMENTS	DEPRECIATION, AMORTISA- TION AND PROVISIONS AT 31/12/2016	CARRYING AMOUNTS AT 31/12/2016
Investments in associates	537,598	167,153			704,751	1,004,556
Receivables on invest- ments in associates	476,050	7,584	(31,826)		451,808	2,019,350
Other capitalised investments	20,155		(9,756)		10,398	3,638
Other	0				0	10,945
Total	1,033,804	174,737	(41,582)	0	1,166,958	3,038,489

Provisions for the depreciation of investment shares were made for the Strand shares for €70.7 million, the Eralloys Holding shares for €58.8 million and the Erasteel SAS shares for €37.6 million.

Provisions for the depreciation of receivables on investments in associates were made on the Eramine loan for €5.4 million to reflect the financial situations of the companies concerned. Provisions were reversed on the Strand Ioan for €21.5 million and on the CFED loan for €10.2 million.

Shares held as part of the market maker activities were subject to a provision reversal of €9.7 million mainly due to the allocation of free shares and the upward value of the ERAMET share as of 31 December 2016.

#### **NOTE 4.2 SCHEDULE OF RECEIVABLES**

Total	2,623,154	1,465,013	1,158,141	1,668,282
Other receivables <sup>(3)</sup>	66,341	66,341		91,969
Trade receivables	74,710	74,667	43	65,471
Other non-current financial assets	10,532	10,532		8,570
Pension plan assets <sup>(2)</sup>	413		413	536
Receivables on investments in associates <sup>(1)</sup>	2,471,158	1,313,473	1,157,685	1,501,736
(€ THOUSANDS)	GROSS AMOUNT 31/12/2016	1 YEAR OR LESS	OVER 1 YEAR	REMINDER 31/12/2015

- (1) Receivables on investments in companies: loans to Group companies.
- (2) Excess payment of contributions to the supplementary pension plan with defined benefits.
- (3) Other receivables include, among other things, a €34.8 million net corporate tax receivable, as part of the tax consolidation, the Lithium project costs of €27.4 million fully provisioned (see note 4.7).

#### DETAIL OF RECEIVABLES ON INVESTMENTS IN COMPANIES

(€ THOUSANDS)	31/12/2016	31/12/2015
Strand Minerals Ltd/Weda Bay Minerals Singapore	488,252	448,724
Aubert & Duval	253,000	253,000
Erasteel SAS	130,000	80,000
CFED	106,345	108,297
Eramine SAS	15,641	10,197
Metal Securities	1,198,377	457,915
TiZir	107,838	98,602
EcoTitanium	10,092	
SLN	161,613	45,000
Total	2,471,158	1,501,736

#### NOTE 4.3 CASH & CASH EQUIVALENTS

Cash & cash equivalents consist of marketable securities for €45 million and bank accounts receivables for €9.4 million.

#### NOTE 4.4 PREPAID EXPENSES AND ACCRUED INCOME

(€ THOUSANDS)	31/12/2016	31/12/2015
Prepaid expenses <sup>(1)</sup>	3,135	5,427
Deferred debt issue costs <sup>(2)</sup>	3,388	5,193
Total	6,522	10,620

<sup>(1)</sup> Prepaid insurance premiums amounted to €1.5 million (€2.7 million at 31 December 2015), interest on the mobilisation of the CIR and CICE tax credits with banks for an amount of €0.6 million.

#### **NOTE 4.5 NET EQUITY**

The share capital breaks down as follows:

		31/12/2016				31/12/2015				
	SHA	ARE CAPITAL	V0 <sup>-</sup>	VOTING RIGHTS		SHARE CAPITAL		TING RIGHTS		
	%	NUMBER OF SHARES	%	NUMBER OF SHARES	%	NUMBER OF SHARES	%	NUMBER OF SHARES		
Registered shares	Registered shares									
SORAME and Compagnie d'Études Industrielles du Rouvray (CEIR)	37.05	9,835,834	44.02	19,671,668	37.06	9,835,834	44.17	19,671,668		
FSI Equation (Bpifrance subsidiary)	25.65	6,810,317	30.48	13,620,634	25.66	6,810,317	30.58	13,620,634		
S.T.C.P.I.	4.03	1,070,587	4.79	2,141,174	4.03	1,070,587	4.81	2,141,173		
ERAMET S.A.	0.40	105,801	-	-	0.82	218,276	-	-		
ERAMET S.A. share fund	0.20	52,373	0.23	104,746	0.20	52,373	0.24	104,746		
Other	32.67	8,675,531	20.48	9,145,539	32.23	8,555,831	20.20	8,995,747		
Total number of shares	100.00	26,550,443	100.00	44,683,761	100.00	26,543,218	100.00	44,533,968		
of which registered shares	69.21	18,375,085	81.84	36,570,694	69.27	18,387,508	82.03	36,531,116		
of which bearer shares	30.79	8,175,358	18.16	8,113,067	30.73	8,155,710	17.97	8,002,852		

<sup>(2)</sup> Debt issue costs (syndicated loan, bond, Schuldschein, Borrowing Base) spread over the term of repayment of the loan.

In accordance with a Shareholders' Agreement of 16 March 2012, which entered into force on 16 May 2012 and was renewed on 31 December 2016 for a period of one year expiring on 31 December 2017, forming the subject of a decision and notice to the *Autorité des marchés financiers* (AMF) under the number 212C0647 at its conclusion as well as a decision and notice to the *Autorité des marchés financiers* (AMF) under the number 216C1753 concerning changes to the concert with the acquisition by the *Agence des participations de l'État* (APE) of 100% of the share capital of FSI Equation, the Company is majority-owned by a group of shareholders declared to be acting in concert, including:

- a sub-concert between SORAME and CEIR, companies wholly owned by the Duval family, under a simultaneous shareholders' agreement of 19 July 1999, which entered into force on 21 July 1999 and was amended on 13 July 2009;
- the *Agence des participations de l'État* (APE), through its subsidiary FSI Equation.

The provisions of the Shareholders' Agreement mentioned above as well as those of the sub-concert are contained in key extracts of the AMF decision and notice texts numbered 216C1753, 212C0486 and 209C1013 (amended on 13 July 2009).

Since 1 January 2002, registered shares that meet the necessary conditions benefit from double voting rights.

ERAMET's distributable reserves amounted to  $\in$ 1,121 million as of 31 December 2016 ( $\in$ 1,452 million as of 31 December 2015).

#### NET EQUITY IS BROKEN DOWN AS FOLLOWS:

(€ THOUSANDS)	NUMBER OF SHARES	SHARE CAPITAL	PREMIUMS, RESERVES AND RETAINED EARNINGS	PROFIT/(LOSS) FOR The financial year	TOTAL
Net equity at 31 December 2014	26,543,218	80,957	1,531,232	(70,550)	1,541,639
Appropriation of 2014 result			(70,550)	70,550	-
Profit/(Loss) for the 2015 financial year				(331,516)	(331,516)
Net equity at 31 December 2015	26,543,218	80,957	1,460,682	(331,516)	1,210,122
Appropriation of 2015 result			(331,516)	331,516	-
Profit/(Loss) for the 2016 financial year				(165,554)	(165,554)
Bond conversion premiums on shares as of 31 December 2016	7,225	22	313		335
Net equity at 31 December 2016	26,550,443	80,979	1,129,478	(165,554)	1,044,903

The share capital consists of 26,550,443 common shares (26,543,218 common shares as of 31 December 2015) fully paid with a nominal value of €3.05.

#### **NOTE 4.6 TREASURY SHARES**

The table below summarises the treasury share transactions:

		MARKET MAKER ACTIVITIES(1)	ALLOCATIONS TO EMPLOYEES(2)	TOTAL
Position at 31 December 2014		89,601	140,450	230,051
As a percentage of share capital	26,543,218	0.34%	0.53%	0.87%
Final allocation of free shares			(45,393)	(45,393)
Purchases/sales		33,618		33,618
Position at 31 December 2015	·	123,219	95,057	218,276
As a percentage of share capital	26,543,218	0.46%	0.36%	0.82%
Final allocation of free shares			(51,547)	(51,547)
Purchases/sales		(60,928)		(60,928)
Position at 31 December 2016		62,291	43,510	105,801
As a percentage of share capital	26,550,443	0.23%	0.16%	0.40%

<sup>(1)</sup> Liquidity contract signed with Exane BNP Paribas.

<sup>(2)</sup> Instructions to buy back 250,000 shares (ceiling reached in 2013).

The balance of 105,801 shares corresponds:

- to the shares bought under a market maker contract signed with Exane BNP Paribas and not yet registered on the date of issue of the table;
- to the shares to be allocated under the free share allocation plans.

#### NOTE 4.7 PROVISIONS FOR IMPAIRMENT OF CURRENT ASSETS

(€ THOUSANDS)	31/12/2015	ADDITIONS	REVERSALS	31/12/2016
Raw materials and other supplies <sup>(1)</sup>	19,010	4,311	(14,584)	8,737
Semi-finished and finished products	90	0	(90)	0
Trade receivables	835		(769)	65
Miscellaneous receivables <sup>(2)</sup>	20,179	7,088		27,267
Total	40,114	11,399	(15,443)	36,069

<sup>(1)</sup> Provision additions mainly relate to ferronickel stock for €2.7 million.

Provision reversals mainly relate to matte stock for €12.3 million.

#### NOTE 4.8 PROVISIONS IN LIABILITIES

			REVERSAL			
(€ THOUSANDS)	31/12/2015	ADDITIONS	USED In Financial Year	NOT USED IN FINANCIAL YEAR	ADDITIONS	31/12/2016
Provisions for price increases	16,500		(16,500)			0
Extraordinary amortisation and depreciation	15,218	137				15,355
Total regulated provisions	31,718	137	(16,500)	0	0	15,355
Personnel <sup>(1)</sup>	18,261	9,244	(6,943)		(123)	20,439
Environment <sup>(2)</sup>	9		(9)			0
Other provisions for contingencies <sup>(3)</sup>	1,702	262	(100)			1,864
Other provisions for charges <sup>(4)</sup>	9,402	8,806	(6,885)		6,885	18,208
Total provisions for contingencies and charges	29,374	18,312	(13,938)	0	6,762	40,511
Provisions for liabilities	61,092	18,449	(30,438)	0	6,762	55,866

<sup>(1)</sup> ERAMET provides for retirement and similar commitments according to the actuarial valuation carried out by an independent firm. Detailed calculations have been made as of 31 December 2016. The excess payment of contributions to the defined benefit pension plan has been reclassified to other non-current financial assets. The corridor method is applied to the calculation of pension commitments.

<sup>(2)</sup> Provision additions are mainly noted in expenses recorded under "Other receivables" for the Lithium research and exploitation project.

As of 31 December 2016, the balance relating to pension and similar commitments amounted to €18.6 million. Furthermore, this balance includes a restructuring provision of €1.9 million.

<sup>(2)</sup> Reversal of the provision for clearing the Sandouville plant waste channel before handover to the Port Authority of Le Havre.

<sup>(3)</sup> The provision for financial contingencies mainly corresponds to the potential loss on the Metal Securities bond portfolio guaranteed by ERAMET.

<sup>(4)</sup> Reversals and reclassifications relate to the free share allocation plans.

#### **EMPLOYEE-RELATED LIABILITIES**

(€ THOUSANDS)	ACTUARIAL VALUE OF BONDS	FAIR VALUE OF PLAN ASSETS	FINANCIAL POSITION SURPLUS/DEFICIT
Retirement benefits	91,012	(53,829)	37,183
Retirement package	6,881	(2,505)	4,376
Long-service bonuses and awards	4,970		4,970
Healthcare plans	6,107	-	6,107
Total	108,970	(56,334)	52,636

(€ THOUSANDS)	UNRECOGNISED ACTUARIAL (GAINS)/LOSSES	UNRECOGNISED PAST SERVICES	PROVISIONS IN THE BALANCE SHEET (ASSETS/LIABILITIES)
Retirement benefits	(22,919)	(6,212)	8,052
Retirement package	(2,830)	(765)	781
Long-service bonuses and awards	-	-	4,970
Healthcare plans	(867)	(898)	4,341
Total	(26,616)	(7,875)	18,144
Personnel provisions		18,557	
Plan assets (other non-current financial assets)		(413)	

#### Breakdown of pension fund investments

(€ THOUSANDS)	INSURANCE CONTRACTS	OTHER INVESTMENTS	TOTAL
Amounts	56,334	-	56,334
Percentages	100.00%	-	100.00%

#### Change in pension liabilities

(€ THOUSANDS)		FY 2016
At beginning of period		11,091
Expenses recognised		7,891
Service cost	3,072	
Amortisation of actuarial gains (losses) and past service cost	4,662	
Interest expenses	2,003	
Returns on hedging assets	(1,846)	
Contributions and benefits paid		(838)
At period close		18,144

#### THE ACTUARIAL ASSUMPTIONS USED FOR THE VALUATIONS ARE AS FOLLOWS:

	2016	2015
Discount rate	1.50%	2.00%
Inflation rate	1.80%	1.90%
Rate of salary increases	3.00%	Inflation +1.00%
Return on plan financial assets	3.25%	2.00%

## NOTE 4.9 PROCEEDS FROM ISSUANCES OF EQUITY SECURITIES

(€ THOUSANDS)	31/12/2016	31/12/2015
ODIRNAN	99,665	0
Total	99,665	0

ERAMET S.A. issued an ODIRNAN (net share settled undated bonds convertible into new shares) on 5 October 2016.

ODIRNAN is a perpetual bond with no maturity date. Holders do not have the option to redeem the instrument for cash in hand. The instrument can be

redeemed in the event of liquidation of the Company with the payment of accrued and deferred coupons, as applicable. The organisation of the coupon payments is left up to the Company and may be delayed as long as it has not decided on a dividend distribution since the penultimate interest payment date (or since the issue date for the first two payment dates). In case of non-payment of coupons, they will remain due and will constitute arrears which will bear interest at the applicable rate for bond coupons.

The coupon is fixed at an annual rate of 4% until October 2022. It will then switch to a variable rate from 5 October 2022, calculated at the 6-month EURIBOR rate plus a margin of 1,000 basis points ("step-up"

clause). In the event of a change of control of ERAMET S.A., the annual interest rate will be increased by 500 basis points unless the Company opts for early redemption within 45 days of the change of control.

Bond holders will receive an equity conversion right. The issuer may choose to deliver one of the following to bondholders exercising their right to receive shares:

- cash only;
- new shares only;
- or a combination of new shares and cash.

#### NOTE 4.10 BREAKDOWN OF LIABILITIES AND MATURITY SCHEDULE

NET AMOUNT (€ THOUSANDS)	31/12/2016	1 YEAR OR LESS	OVER 1 YEAR AND LESS THAN 5 YEARS	OVER 5 YEARS	31/12/2015
Other bond issues <sup>(1)</sup>	632,409	7,408	625,000		632,275
Borrowings and debt with credit institutions <sup>(2)</sup>	1,219,288	117,627	1,066,106	35,555	234,442
Miscellaneous financial borrowings and debts <sup>(3)</sup>	138,645	138,645			137,183
Trade payables <sup>(4)</sup>	76,123	76,123			63,315
Tax and payroll liabilities	15,891	15,891			17,632
Liabilities on non-current assets	26	26			283
Other miscellaneous liabilities <sup>(5)</sup>	22,441	22,441			53,366
Total	2,104,823	378,162	1,691,106	35,555	1,138,496

- (1) Other bond issues correspond to several bonds issued by ERAMET S.A. in 2013 for €400 million and during the first half of 2014 for €225 million.
- (2) Borrowings from credit institutions include a new syndicated loan for €980 million, the Borrowing Base for €70 million, tax credits for €22.7 million, a Schuldschein loan for €60 million and a loan from the European Investment Bank for €80 million.
- (3) ERAMET is financed by the Metal Securities company, an 87,92% subsidiary of ERAMET. The amount as of 31 December 2016 is €134.6 million, against €134.2 million as of 31 December 2015.
- (4) The Company has a supplier debt more than 60 days from the invoice date of  $\in$ 241 thousand.
- (5) In 2016, the fiscally integrated French subsidiaries paid ERAMET S.A. corporate tax instalments of €21.2 million.

#### MISCELLANEOUS FINANCIAL BORROWINGS AND DEBTS

NET AMOUNT		
(€ THOUSANDS)	31/12/2016	31/12/2015
Current accounts with Metal Securities	134,594	134,252
Borrowing from Weda Bay Minerals, Inc.	1,912	1,795
Deposits received	130	460
Syndicated loan utilisation/non-utilisation fee	1,008	676
ODIRNAN interest	1,000	
Total	138,645	137,183

#### NOTE 4.11 BREAKDOWN OF LIABILITIES AND ACCRUED EXPENSES

Total	115,077	134,596
Unearned income	596	0
Other miscellaneous liabilities	22,441	53,366
Liabilities on non-current assets	26	283
Tax and payroll liabilities	15,891	17,632
Trade payables	76,123	63,315
GROSS AMOUNT (€ THOUSANDS)	31/12/2016	31/12/2015

#### NOTE 4.12 INFORMATION ON RELATED COMPANIES

#### **BALANCE SHEET**

(€ THOUSANDS)	31/12/2016	31/12/2015
Investments in associates	1,709,308	1,638,589
Financial receivables	2,341,063	1,501,736
Trade receivables	9,921	19,774
Miscellaneous receivables	64	15,648
Miscellaneous financial borrowings	(136,507)	(136,048)
Trade payables	(62,277)	(38,555)
Other liabilities	(21,577)	(36,926)

#### INCOME STATEMENT

(€ THOUSANDS)	31/12/2016	31/12/2015
Operating income	59,008	68,307
Operating expenses	(493,632)	(477,611)
Financial income	51,679	41,280
Financial expenses	(2,369)	(839)

#### **NOTE 5 EXPLANATORY NOTES TO THE INCOME STATEMENT**

#### NOTE 5.1 SALES

(€ THOUSANDS)	TOTAL	FRANCE	FOREIGN
Sale of goods and merchandise <sup>(1)</sup>	530,513	8,944	521,569
Income from ancillary activities	54,576	28,257	26,319
Sales	585,089	37,201	547,888

<sup>(1)</sup> Sales include a positive currency difference of €3.8 million, mainly due to hedges in USD.

#### NOTE 5.2 INCREASES AND REDUCTIONS IN FUTURE TAX LIABILITIES

(€ THOUSANDS)		31/12/2016	31/12/2015
Increases in taxable base	*	•	
Regulated provisions		15,355	31,718
Translation adjustment losses at close			
Deferred expenses			
Reductions in taxable base			
Provisions not deductible during the financial period		(19,340)	(16,558)
Accrued expenses		(339)	(224)
Translation adjustment gains at close			
Unrealised financial income			
Tax loss carry-forwards		(410,779)	(344,371)
Reductions in taxable base		(415,103)	(329,435)
Increase in future taxation		(142,920)	(113,424)
		34.43%	34.43%
(€ THOUSANDS)	GROSS AMOUNT	TAX OWED	NET PROFIT/(LOSS)
Current profit/(loss)	(170 1/10)		(170 /110)

(€ IHUUSANDS)	GRUSS AMOUNT	IAX OWED	NET PROFIT/(LUSS)
Current profit/(loss)	(179,149)		(179,419)
Extraordinary items	6,333		6,333
Employee profit-sharing and incentives			
Impact of tax consolidation and research tax credit		8,821	8,821
Total	(172,815)	8,821	(163,994)

#### **CORPORATE TAXES**

The tax consolidation agreement signed between ERAMET and its subsidiaries respects the principle of neutrality and places the subsidiaries in the situation that would have been theirs in the absence of consolidation. Each subsidiary determines its tax as if it were not part of the consolidated tax group and pays its corporate tax contribution to ERAMET as the group leader. The subsidiaries keep their deficits to determine the amount of the corporate tax contribution they have to pay ERAMET.

As a result of the tax consolidation, the corporate income tax account can be broken down as follows:

- +€10.6 million in tax income of the consolidated tax group (including +€6.6 million in 2016 tax credits, +€1.9 million from the adjustment of Group tax credits in 2015, +€2 million from tax adjustment for the Group in 2011 (Stéria Order);
- +€5.2 million in tax consolidation income (including +€5.2 million in 2016 corporate tax of the consolidated subsidiaries);
- -€7 million of tax consolidation expenses (including tax credits returned to subsidiaries: -€1 million in 2015 adjustment and -€6 million of 2016 tax credit).

#### NOTE 5.3 TAX CONSOLIDATION

All French subsidiaries that are at least 95% owned are consolidated for tax purposes, ERAMET being the Group's parent company. The scope of tax consolidation in France includes the following companies:

TAX-CONSOLIDATED COMPANIES	31/12/2016	31/12/2015	31/12/2014	31/12/2013	31/12/2012
Consolidated companies	•	•	•	•	
ERAMET	Х	х	х	х	Х
Metal Securities	X	х	х	х	Х
Metal Currencies	X	х	х	Х	Х
ERAMET Holding Nickel (EHN)	X	х	х	Х	X
Eramine	X	х	х	х	Х
Eurotungstène Poudres	X	х	х	х	Х
ERAMET Holding Manganese (EHN)	X	х	х	х	х
ERAMET Holding Alliages (formerly SIMA)	X	х	x	х	х
ERAMET Alliages	X	х	х	Х	Х
Aubert & Duval (AD)	X	х	х	х	Х
Airforge				Х	X
Erasteel	X	х	х	х	X
Erasteel Champagnole	X	х	х	х	Х
ERAMET Ingénierie (formerly TEC)	X				
ERAMET Research (formerly CRT)	X				
ERAMET Services	X				
Valdi	X	х	х	Х	X
Non-consolidated companies					
ERAMET International	Х	х	х	х	Х
ERAMET Ingénierie (formerly TEC)		x	x	х	х
ERAMET Research (formerly CRT)		х	х	х	X
Forges de Montplaisir	X	х	х	х	Х
Supa	X	х	х	х	х
Brown Europe	X	х	х	х	Х
ERAMET Services		х	х	х	X
ERAMET Sandouville	X				
AD TAF	X	х	х	х	X
Campus ERAMET	X	Х	Х	Х	

The deficits of the tax consolidation Group that can be used as of 31 December 2016 amount to €411 million.

#### NOTE 5.4 NET FINANCIAL INCOME (LOSS)

(€ THOUSANDS)	31/12/2016	31/12/2015
Dividends from associates		37
Interest from associates <sup>(1)</sup>	61,448	45,840
Other dividends and interest	1,598	3,659
Reversals of provisions <sup>(2)</sup>	34,774	360
Exchange differences <sup>(3)</sup>	7,228	68,586
Net gains on disposal of marketable securities	242	247
Financial income	(105,290)	118,729
Depreciation and amortisation expense and addition to provisions <sup>(4)</sup>	(173,063)	(263,496)
Interest and similar expenses <sup>(5)</sup>	(60,797)	(46,661)
Exchange differences <sup>(3)</sup>	(6,974)	(74,195)
Financial expenses	(240,834)	(384,352)
Net financial income (loss)	(135,544)	(265,623)

- (1) Interest income on current account loans of the Group (€55.9 million).
- (2) Reversal of depreciation of treasury shares relating to the liquidity contract for €2.9 million and reversal of depreciation of the Strand loan for €21.5 million and of the CFED loan for €10.2 million.
- (3) Net exchange difference of €0.2 million mainly resulting from the revaluation of Group loans and borrowings in foreign currencies.
- (4) Provisions for depreciation of securities of subsidiaries (€167.1 million) and provision for impairment of receivables from investments in associates (€5.4 million), see note 4.1, compared with €87.3 million in provisions for depreciation of securities of subsidiaries (Eralloys and Erasteel) and €170 million for impairment of receivables from investments in associates (notably Strand/Weda Bay and CFED loans) in 2015.
- (5) Interest expense on financial debt (syndicated loan, Metal Securities, bond, Schuldschein, ODIRNAN).

#### NOTE 5.5 EXTRAORDINARY ITEMS

(€ THOUSANDS)	31/12/2016	31/12/2015
Gains on capital transactions <sup>(1)</sup>	285	1,248
Reversal of provisions and expense transfer <sup>(2)</sup>	29,413	30,829
Extraordinary income	29,699	32,077
Expenses on management operations <sup>(3)</sup>	(6,043)	(3,207)
Expenses on capital transactions <sup>(4)</sup>	(7,564)	(12,405)
Extraordinary depreciation and amortisation expense and addition to provisions <sup>(5)</sup>	(9,758)	(29,629)
Extraordinary expenses	(23,365)	(45,241)
Extraordinary items	6,334	(13,164)

- (1) Gain on the transfer of the Hestia 3 payroll software to the subsidiaries.
- (2) Reversal of provision for the 2010 price increase of €16.5 million, reversal of provision for free share allocation plan of €6.9 million and reversal of provision for the departure plan in line with the expenses incurred for €6 million.
- (3) Recognition as an extraordinary expense of the costs of the 2016 departure plan for €6 million.
- (4) Net book value of non-current assets transferred for €0.6 million and proceeds from the transfer of free shares under the plan allocated in 2016 for €6.9 million.

#### NOTE 5.6 WORKFORCE

	FY 2016	FY 2015
Managers	149	177
ETAM (employees, technicians and supervisors)	148	171
Workers	39	41
Workforce at end of period	336	389
Average number of employees	355	388

#### NOTE 6 OFF-BALANCE-SHEET COMMITMENTS

(€ THOUSANDS)	31/12/2016	31/12/2015
Commitments made	•	
Endorsements, guarantees and deposits	100,643	100,681
Collateral security	-	-
Forward/future sales in USD	-	-
Commitments received	-	
Endorsements, guarantees and deposits	-	-
Collateral security	-	-
Internal exchange contracts USD (MCUR)	473,987	-
Credit facilities	-	1,038,000
Reciprocal commitments	•	
Currency hedge via Metal Currencies	-	52,747

The table above does not include current orders for the business or commitments on non-current asset orders related to investment projects.

#### **NOTE 7 RISK MANAGEMENT**

#### **NOTE 7.1 EXCHANGE RISKS**

 $\label{thm:exposed} \mbox{ERAMET is exposed to exchange risk on two levels:}$ 

 by way of its Nickel business, ERAMET receives its income mainly in US dollars, while its costs are mainly denominated in Euros (Sandouville fees and nickel purchases at SLN). Hedging transactions are therefore carried out on the basis of multi-annual budgets and forecasts, with a maximum horizon of 36 months. As part of the technical assistance between ERAMET and its subsidiary SLN, all commercial hedges are made on behalf of SLN and billed back directly to SLN under the marketing agreement;  by way of its Holding business, ERAMET puts in place loans in foreign currencies for the benefit of Group companies and may make foreign exchange hedges.
 As of 31 December 2016, there is no currency hedging on long-term loans.

#### NOTE 7.2 RISKS ON RAW MATERIALS

ERAMET is exposed to the volatility of commodity prices at the level of its sales. ERAMET may be required to set up term hedges on a limited portion of nickel sales.

These hedges are made on behalf of SLN, a producer of ferronickel. As part of the technical assistance contract, the result of these hedges is charged to SLN's monthly bills. As of 31 December 2016, 338 tonnes were

hedged with a fair value of -83 thousand (31 December 2015: 443 tonnes for a fair value of -1,566 thousand).

#### NOTE 7.3 CREDIT OR COUNTERPARTY RISK

The counterparty risks of ERAMET relate mainly to its commercial operations and, by extension, to trade receivables. Thus, ERAMET may be exposed to credit risk in the event of a counterparty default. To limit this risk of which the maximum exposure is equal to the net receivables recognised in the balance sheet, ERAMET uses different tools: gathering information ahead of financial transactions (from rating agencies, published financial statements, etc.), credit insurance and the establishment of letters of credit and documentary credits in order to prevent certain specific risks inherent to, for example, the geographical situation of clients.

Furthermore, ERAMET's client portfolio mainly consists of large international groups in the fields of metallurgy whose insolvency risks are more limited.

#### NOTE 7.4 RATE RISK

As of 31 December 2016, a hedge of €60 million at a fixed rate of 1.67% vs. EURIBOR 6 months is in place to fix the variable rate of the *Schuldschein* loan of €60 million until its maturity.

#### **NOTE 7.5 LIQUIDITY RISK**

ERAMET must ensure that it maintains a sufficient level of liquidity to meet its contractual obligations, including servicing its bank and bond debt.

In this context, ERAMET anticipates the regular renewal of its current financing (credit facilities, bonds, leases, etc.) and establishes new modes of financing (ODIRNAN in 2016) according to the opportunities available.

ERAMET also aims to diversify its sources of funding, particularly between the bond and banking markets.

#### REVOLVING CREDIT FACILITY

On 16 January 2017, ERAMET signed a renegotiation agreement concerning its Revolving Credit Facility (RCF) of €981 million, extending its maturity by two years. The original instalments of €85 million in January 2017 and €896 million in January 2018 are now €115 million in January 2018, €85 million in January 2019 and €781 million in January 2020. This facility has a single financial covenant (gearing), subject to cross-default.

This credit facility was drawn down in its entirety in early January 2016.

#### FINANCIAL LIABILITIES ARE SUBJECT TO BANK COVENANTS DESCRIBED BELOW:

TYPE OF CREDIT FACILITY		RATIO	AMOUNTS
Revolving credit facility	Net debt decreased by the SLN loan from the French State/shareholders' equity	<1	€981 million
Deutsche Bank (Schuldschein) Ioan	Restated net debt/shareholders' equity-Group share	<1	€60 million
Euro private placement	Net debt/shareholder's equity	<1	€100 million
European Investment Bank	Net debt/shareholder's equity	<1	€80 million

ERAMET's covenants are determined on the basis of the published consolidated accounts. As of 31 December 2016, the covenants showed no circumstances of accelerated maturity. Moreover, at 31 December 2016, no cases of cross-default likely to impact funding at ERAMET level were recorded.

#### NOTE 8 CONSOLIDATION OF THE FINANCIAL STATEMENTS OF THE COMPANY

ERAMET S.A. is consolidated in the ERAMET Group, of which it is the parent company.

(€ THOUSANDS)	FY 2016	FY 2015
Short-term benefits	· · · · · · · · · · · · · · · · · · ·	
Fixed compensation	2,415	2,727
Variable compensation	1,913	954
• Directors' fees	700	700
Other benefits		
Post-employment benefits	673	82
Total	5,701	4,463

The account for the 10 most highly paid people shows a total of €7.2 million in 2016.

## NOTE 9 EMPLOYEE CHARGES AND BENEFITS

- Two new free share allocation plans were granted on 27 May 2016:
  - one plan for all employees for an initial total of 24,906 shares;
- one plan open to certain employees and corporate officers, where:
- part of the shares are subject to two performance conditions—an internal condition and an external condition—for an initial total of 93,909 shares, and
- part of the shares are not subject to performance conditions, for an initial total of 40.418 shares.

The criteria for share awards and the assessment of the accounting expense are the same as those described above.

The characteristics of the two new free share allocation plans on the first half of 2016 are as follows:

		NUMBER OF SHARES	EXERCISE PRICE (€)	MATURITY (YEARS)(1)	RISK-FREE RATE	AVERAGE DIVIDEND YIELD	FAIR VALUE OF OPTION $(\in)^{(2)}$
Plan open to all employees	France	10,010	free	2+2	-0.44%	0.00%	27.45
	World	14,896	free	4+0	-0.30%	0.00%	28.89
Plan open to certain employees and corporate officers	France	106,327	free	3+2	-0.38%	0.00%	27.75/13.52
	World	28,000	free	4+0	-0.30%	0.00%	28.89/14.24

<sup>(1)</sup> Maturity = vesting period + lock-in period.

• The change in the number of free shares in the 2016 financial year was as follows:

NUMBER OF FREE SHARES	31/12/2016	31/12/2015
At beginning of period	441,191	409,940
New plans 2016/2015	159,233	160,096
Definitive allocations	(51,547)	(45,393)
Prescribed shares	(7,879)	(5,544)
Lapsed shares	(127,289)	(77,908)
At period close	413,709	441,191
Distribution by year of allocation		
2016		109,683
2017	98,453	141,650
2018	129,279	145,974
2019	143,351	43,884
2020	42,626	-

## NOTE 10 EVENTS SUBSEQUENT TO THE FINANCIAL YEAR CLOSING

## TWO-YEAR EXTENSION TO SYNDICATED LOAN MATURITY

On 16 January 2017, ERAMET signed a renegotiation agreement concerning its Revolving Credit Facility (RCF) of €981 million, extending its maturity by two years. The original instalments of €85 million in January 2017 and €896 million in January 2018 are now

€115 million in January 2018, €85 million in January 2019 and €781 million in January 2020.

## SIGNING OF A FRAMEWORK AGREEMENT FOR A PARTNERSHIP ON THE WEDA BAY PROJECT

ERAMET has signed a framework agreement with the Chinese steel group Tsingshan with a view to determining the conditions for a partnership to increase the value of the asset. The Tsingshan Group is the leading stainless steel producer worldwide.

This partnership would involve the production, in a pyrometallurgical process, of a nickel ferroalloy in Indonesia from the Weda Bay ore for a volume of about 30,000 tonnes of nickel content per year.

The entry of the Tsingshan Group in Strand Minerals Pte. Ltd. would therefore result in a change in its shareholding. ERAMET would hold a 43% interest and the Tsingshan Group 57%.

<sup>(2)</sup> Free share allocation plans whose share allocations are subject to two performance conditions have two fair values: the first being the intrinsic condition and the second being the external condition.

#### SUBSIDIARISATION OF "NICKEL MATTE" **BUSINESS: ERAMET SANDOUVILLE**

The Boards of ERAMET and SLN decided in 2016 to end the integrated matte subsidiary, which consisted of supplying the Sandouville plant from matte from New Caledonia ore with the aim of producing nickel metal and nickel salts.

This resulted, on the one hand, in the shutdown of the matte manufacturing workshops at the Doniambo plant in August 2016 and, on the other hand, in the signing of a long-term matte supply contract with a third-party European supplier for the Sandouville plant.

This change in supply requires an adaptation of the equipment at the Sandouville plant, which is currently underway and is expected to be completed by June 2017. In the context of these changes in industrial flows, Sandouville's nickel metal and salt production business, which until now has been an ERAMET S.A. establishment, was made a subsidiary on 1 January 2017 by the simple transfer of assets to the company ERAMET Sandouville SAS with capital of €30 million.

To the best of the Company's knowledge, there are no other events occurring after the reporting date.

#### NOTE 11 SUBSIDIARIES AND INVESTMENTS IN ASSOCIATES TABLE

#### AT 31 DECEMBER 2016

(IN THOUSANDS OF EUROS OR		CAPITAL	OWN FUNDS Other than Capital	SHARE OF Capital Held	GROSS CARRYING AMOUNT OF SHARES HELD	NET CARRYING AMOUNT OF SHARES HELD	LOANS AND ADVANCES Granted and Not Repaid	ENDORSE- MENTS AND GUARANTEES GIVEN	DIVIDENDS RECEIVED IN THE PERIOD	TOTAL SALES OF PAST FINANCIAL YEAR	PROFIT/ (LOSS) IN LAST FINANCIAL YEAR CLOSING
CURRENCIES, EXCEPT XAF IN MILLIONS)		CURRENCY	CURRENCY	%	EUR	EUR	EUR	EUR	EUR	CURRENCY	CURRENCY
I. Detailed information on each sec	urity (gro	ss value of mo	re than 1% of t	he capital of	the Company)						
Subsidiaries (at least 50% of capital held)											
ERAS	EUR	2,000	0	100.00	1,986	1,986				0	0
ERAMET Ingénierie	EUR	525	2,449	100.00	838	838				8,658	(347)
ERAMET Research	EUR	1,410	16,832	100.00	1,161	1,161				5,402	(9,937)
ERAMET International	EUR	160	2,879	100.00	892	892				7,412	534
ERAMET Holding Nickel	EUR	227,104	12,232	100.00	229,652	229,652				0	(4,714)
Weda Bay Mineral Inc.	USD	35,505	682	100.00	3,616	0				0	0
Strand Minerals Pte. Ltd.	USD	0	(240,957)	100.00	70,718	0	488,252			0	(5,167)
Weda Bay Mineral Singapore Ltd	USD	347,743	(347,807)	19.75	52,570	0				0	(12)
ERAMET Holding Manganèse	EUR	310,156	101,858	100.00	310,156	310,156				0	(3,434)
Eralloys Holding	NOK	12,800	1,133,599	100.00	419,445	96,501				480	(1,144)
ERAMET Holding Alliages (formerly SIMA)	EUR	148,000	26,291	100.00	329,584	305,100				5,141	2,675
Erasteel	EUR	75,661	(38,203)	100.00	223,169	2,749	130,000			133,055	(40,004)
					1,643,788	949,037					
Investments in associates (b	etween	10% and 50	0% owned)								
Comilog	XAF	40,812	287,980	23.22	53,407	53,407				360,142	7,353
					53,407	53,407					
II. General information on other securities (gross value at most equal to 1% of the capital of the Company)											
French subsidiaries	EUR				11,657	1,657	1,214,018				
Foreign subsidiaries	EUR										
Investments in associates	EUR				456	456	161,613	17,356	107		
Total					1,709,308	1,004,556	1,993,883	17,356	107		

Comilog

N/A

	SIREN BUSINESS IDENTIFIER	ADDRESS OF REGISTERED OFFICE
I. Detailed information on each secu	urity (gross value of more	e than 1% of the capital of the Company)
Subsidiaries (at least 50% of cap	ital held)	
ERAS	N/A	6B, route de Trèves L-2633 Senningerberg R. C Luxembourg B 35 721
ERAMET Ingénierie	301 570 214	1, avenue Albert Einstein-78190 Trappes
ERAMET Research	301 608 634	1, avenue Albert Einstein-BP 120-78193 Trappes
ERAMET International	398 932 939	Tour Maine-Montparnasse-33, avenue du Maine-75755 Paris Cedex
ERAMET Holding Nickel	335 120 515	Tour Maine-Montparnasse-33, avenue du Maine-75755 Paris Cedex
Weda Bay Mineral Inc.	N/A	14 <sup>th</sup> floor, 220 Bay Street-Toronto-Ontario M5J2W4 Canada-018981
Strand Minerals Pte. Ltd.	N/A	8, Marina Boulevard # 05-02-Marina Bay Financial Centre-Singapore 018981
Weda Bay Mineral Singapore Ltd	N/A	8, Marina Boulevard # 05-02-Marina Bay Financial Centre-Singapore 018981
ERAMET Holding Manganèse	414 947 275	Tour Maine-Montparnasse-33, avenue du Maine-75755 Paris Cedex
Eralloys Holding	N/A	Eralloys Holding A.S Strandv 50 1366 Lysaker-Norway
ERAMET Holding Alliages (formerly SIMA)	562 013 995	Tour Maine-Montparnasse-33, avenue du Maine-75755 Paris Cedex
Erasteel	352 849 137	Tour Maine-Montparnasse–33, avenue du Maine–75755 Paris Cedex
Investments in associates (between	en 10% and 50% owne	d)

Ogooué Mining Company-Z.I de Moanda-BP 27-28 Gabon

## 6.2.5 AUDITORS' REPORT ON THE ANNUAL ACCOUNTS

#### YFAR FNDFD 31 DFCFMBFR 2016

To the Shareholders.

In compliance with the assignment entrusted to us by your General Meeting, we hereby report to you, for the year ended 31 December 2016, on:

- the audit of the accompanying financial statements of ERAMET S.A.;
- the justification of our assessments;
- the specific verifications and information required by law.

These financial statements have been approved by the Board of Directors. Our role is to express an opinion on these financial statements based on our audit.

#### I. Opinion on the financial statements

We conducted our audit in accordance with professional standards applicable in France; those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit involves performing procedures, using sampling techniques or other methods of selection, to obtain audit evidence about the amounts

and disclosures in the financial statements. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made, as well as the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

In our opinion, the financial statements give a true and fair view of the assets and liabilities and of the financial position of the Company as at 31 December 2016 and of the results of its operations for the year then ended in accordance with French accounting principles.

#### II. Justification of our assessments

In accordance with the requirements of Article L. 823-9 of the French Commercial Code, we bring to your attention the following matter.

#### INVESTMENTS IN SUBSIDIARIES

Investments in subsidiaries are measured at their acquisition cost and impaired on the basis of their value in use using the methods and procedures set out in Note 3.2. Our work consisted in appraising the data that provides the basis for these values in use in particular the likely returns estimated by the operational divisions of the Company and in re-examining the calculations made by the Company. During our audit we satisfied ourselves as to the reasonable nature of those estimates.

These assessments were made as part of our audit of the financial statements, taken as a whole, and therefore contributed to the opinion we formed which is expressed in the first part of this report.

#### III. Specific verifications and information

We have also performed, in accordance with professional standards applicable in France, the specific verifications required by French law.

We have no matters to report as to the fair presentation and the consistency with the financial statements of the information given in the management report of the Board of Directors, and in the documents addressed to the shareholders with respect to the financial position and the financial statements.

Concerning the information given in accordance with the requirements of Article L. 225-102-1 of the French Commercial Code ("Code de commerce") relating to remunerations and benefits received by the directors and any other commitments made in their favour, we have verified its consistency with the financial statements or with the underlying information used to prepare these financial statements and, where applicable, with the information obtained by your Company from companies controlling your Company or controlled by it. Based on this work, we attest the accuracy and fair presentation of this information.

In accordance with French law, we have verified that the required information concerning the purchase of investments and controlling interests and the identity of the shareholders or holders of the voting rights has been properly disclosed in the management report.

French original signed by
The Statutory Auditors

Paris-La-Défense, 27 February 2017

KPMG Audit

Division of KPMG S.A.

Denis Marangé

Partner

Paris-La-Défense, 27 February 2017 **Ernst & Young Audit** 

Jean-Roch Varon *Partner* 

#### 6.2.6 SPECIAL AUDITORS' REPORT ON THE REGULATED AGREEMENTS AND COMMITMENTS

#### YEAR ENDED 31 DECEMBER 2016

To the Shareholders,

In our capacity as Statutory Auditors of your Company, we hereby present our report on regulated agreements and commitments.

It is our duty to inform you, based on the information provided to us, of the essential terms and conditions and the justification of the importance for the Company of agreements and commitments brought to our attention or which we may have discovered during the course of our engagement, without expressing an opinion on their usefulness or merit, or identifying the existence of any other agreements and commitments. It is your responsibility, pursuant to Article R. 225-31 of the French Commercial Code, to assess the interest for the Company of concluding these agreements with a view to their approval.

Furthermore, we are required to provide you with the information stipulated in Article R. 225-31 of the French Commercial Code relating to the execution, during the past financial year, of any agreements and commitments previously approved by the General Shareholders' Meeting.

We have implemented the procedures we considered necessary in accordance with the professional standards of the national auditing body (Compagnie nationale des commissaires aux comptes) relating to this engagement. "These procedures consisted of verifying the concordance of the information given to us with the basic documents from which it was derived."

#### AGREEMENTS AND COMMITMENTS SUBMITTED TO THE APPROVAL OF THE GENERAL SHAREHOLDERS' MEETING

In accordance with Article L. 225-40 of the French Commercial Code, we were informed of the following agreements and commitments that were previously authorised by your Board of Directors.

#### 1 With SORAMF and CFIR

#### Persons concerned

Édouard Duval, Georges Duval, Cyrille Duval and Nathalie de La Fournière.

#### Nature and purpose

Commitment to subscribe to an offering, authorised by the Board of Directors on 23 September 2016, of Net Share Settled Undated Senior Unsecured Bonds Convertible into New Shares (ODIRNAN) for a principal amount of €100 million in proportion to the share capital of your Company (37.1%) held by SORAME and CEIR.

#### **Terms**

The final terms of the ODIRNAN are set out in an offering memorandum, which was approved by the Autorité des marchés financiers (AMF) under visa No. 16-448. The ODIRNAN offering was fully subscribed and the settlement date was 5 October 2016. There are no special financial conditions attached to the subscription commitment made by SORAME and CEIR.

#### Justification of the importance of the Agreement for the Company

Your Board of Directors explained this agreement in the following way: The commitment by Sorame and CEIR to subscribe to the offering was an essential element for the success of the issue. Consequently, the conclusion and implementation of this agreement are in line with the corporate interest of the Company, to the extent that it was able to strengthen its capital.

#### 2. With FSI Equation

#### Person concerned

Alexis Zajdenweber

#### **Nature and purpose**

Commitment to subscribe to and guarantee an offering, authorised by the Board of Directors on 23 September 2016, of Net Share Settled Undated Senior Unsecured Bonds Convertible into New Shares (ODIRNAN) for a principal amount of €100 million in proportion to the share capital of your Company (25.7%) held by FSI Equation (acting on behalf of the French State) and up to a maximum amount of approximately €63 million.

#### Terms

The final terms of the ODIRNAN are set out in an offering memorandum, which was approved by the Autorité des marchés financiers (AMF) under visa No. 16-448. The ODIRNAN offering was fully subscribed and the settlement date was 5 October 2016. There are no special financial conditions attached to the subscription commitment and guarantee given by FSI Equation.

#### Justification of the importance of the Agreement for the Company

Your Board of Directors explained this agreement in the following way: The commitment by FSI Equation to subscribe to the offering was an essential element for the success of the issue and the guarantee commitment has given the Company the assurance of raising matching funds. Consequently, the conclusion and implementation of this agreement are in line with the corporate interest of the Company, to the extent that it was able to strengthen its capital.

#### 3 With Société Le Nickel-SLN

#### Persons concerned

Patrick Buffet and Édouard Duval.

#### a) Nature and purpose

Amendment to the existing marketing agreement between your Company and the Société Le Nickel-SLN authorised by the Board of Directors on 9 May 2016.

#### **Terms**

Setting conditions for partial or total advance payment on the fourth business day of the month, with remuneration at the 1month EURIBOR rate plus 2.10%. Entered into force on 9 May 2016.

## Justification of the importance of the Agreement for the Company

Your Board of Directors explained this agreement in the following way: This amendment is in line with the corporate interest of your Company as it complies with the conditions of one of its financing contracts known as "Borrowing Base".

#### b) Nature and purpose

Intercompany loan agreement concluded on 23 December 2015 (authorised by the Board of Directors on 22 December 2015 and approved by the General Shareholders' Meeting of 27 May 2016) for an initial amount of €120 million, modified by the following amendments:

- Amendment No. 1 of 22 February 2016 (authorised by the Board of Directors of 17 February 2016 and approved by the General Shareholders" Meeting of 27 May 2016) increasing the loan amount to €150 million;
- Amendment No. 2 of 27 May 2016 (authorised by the Board of Directors of 9 May 2016) increasing the loan amount to €190 million and the maturity date to 31 December 2016;
- Amendment No. 3 of 27 July 2016 (authorised by the Board of Directors of 27 July 2016) increasing the loan amount to €325 million and the maturity date to 30 June 2024; Moreover, the interest rate was

increased to 4% plus a performance participation rate based on the EBITDA of SLN.

#### Terms

At end December 2016, €160 million was drawn down on the loan.

Interest was calculated on the basis of a 5% rate until 27 July 2016 and a 4% rate as from that date. It should be noted that the performance participation is zero for the period.

The amount of interest charged amounted to €6,217,397.26 in respect of the 2016 financial year, as opposed to €55,479.45 in respect of 2015.

## Justification of the importance of the Agreement for the Company

Your Board of Directors explained this agreement in the following way: The conclusion and implementation of this agreement are in line with the corporate interest of the Company, to the extent that it acts in accordance with the logic of mutual economic interest which characterises its relationship with Société Le Nickel-SLN, thus allowing the Société Le Nickel-SLN to address the sharp fall in cash flow and the financing needs of its business operations.

#### AGREEMENTS AND COMMITMENTS ALREADY APPROVED BY THE GENERAL SHAREHOLDERS' MEETING

## AGREEMENTS AND COMMITMENTS APPROVED IN PREVIOUS FINANCIAL YEARS

## A) THE IMPLEMENTATION OF WHICH CONTINUED IN THE LAST YEAR

Pursuant to Article R. 225-30 of the French Commercial Code, we were informed that execution of the following agreements and commitments previously approved by the General Shareholders' Meeting continued during the past year.

#### 1. With Patrick Buffet, Georges Duval (until 22 April 2016) and Philippe Vecten (until 22 April 2016), corporate officers

#### Nature, purpose and terms

The Company's executive corporate officers' membership of the supplementary healthcare plan and supplementary disability and life insurance scheme of ERAMET group.

This commitment was authorised by the Board of Directors on 17 February 2010 and approved by the General Shareholders' Meeting of 20 May 2010 (third resolution).

#### 2. With Société Le Nickel-SLN

#### Persons concerned

Patrick Buffet and Édouard Duval.

#### a) Nature and purpose

As part of the technical support agreement signed in 1999, your Company provides Société Le Nickel-SLN with general support in strategic, industrial, financial, tax and human resources management. This agreement was amended with retroactive effect from 1 January 2010.

#### Terms

Benefits are paid based on the actual costs incurred by your Company for these services, plus a margin of 8%. The amount charged in this respect amounted to €7,021,000.05 for 2016 as opposed to €7,896,322.18 in 2015.

#### b) Nature and purpose

The marketing agreement between your Company and Société Le Nickel-SLN in 1985, under which your Company provides marketing of Société Le Nickel-SLN's products (excluding ores), was also amended with retroactive effect to 1 January 2010.

#### **Terms**

Pursuant to this agreement, your Company purchased nickel matte and ferronickel from Société Le Nickel-SLN based on a purchase price that allowed your Company to achieve a profit margin of 3% plus a bonus whose calculation method and the price trigger threshold were redefined

The total amount of purchases invoiced by Société Le Nickel-SLN to your Company amounted to €483,127,234.53 in 2016 as opposed to €472,730,620 in 2015. As part of that agreement, ERAMET invoiced Société Le Nickel-SLN for a contribution to other costs as a substitute to the standard fee, covering the fixed costs of nickel matte processing incurred by your Company in preparation for the marketing of finished products. The amount charged to Société Le Nickel-SLN amounted to €18 million in 2016, against €17,965,798.36 in 2015.

As part of that agreement and its amendment retroactive to 1 January 2015, your Company invoiced Société Le Nickel-SLN a 1.5% commission on sales of low to mid-grade ores or washing by-products as an agent of Société Le Nickel-SLN. The amount charged in this respect amounted to €319,172.70 in 2016 against €374,204 in 2015. This amendment allows the Société Le Nickel-SLN to avail itself of the expertise of the sales teams and the international network of your Company to optimise and improve the promotion of sales of ores, thereby receiving additional financial income, net of the agent's commission of 1.5% paid to Your Company in line with market practices for this type of service.

#### B) NOT IMPLEMENTED DURING THE LAST YEAR

We have been informed of the continuation of the following agreements and commitments already approved by the General Shareholders' Meeting in previous financial years but which were not executed in during the past financial year.

> **KPMG Audit** Division of KPMG S.A. Denis Marangé

1. With Patrick Buffet, Georges Duval (until 22 April 2016) and Philippe Vecten (until 22 April 2016), corporate officers

#### Nature and purpose

Defined benefit pension plan. This scheme is applicable to executive corporate officers of the ERAMET group.

#### Terms

This arrangement was authorised by the Board of Directors on 30 July 2008 and approved by the General Shareholders' Meeting of 13 May 2009 (third resolution), at the proposal of the Remuneration Committee, to reflect regulatory changes relating to defined benefit pension plans, known as "Article 39".

#### 2. With Patrick Buffet, Chairman and CEO

#### Nature and purpose

Compensation related to leaving a post.

#### **Terms**

Pursuant to the provisions of Article L. 225-42-1 of the French Commercial Code, this arrangement, which is described in the report of the Chairman of the Board of Directors was authorised by the Board meeting of 20 February 2008 and approved by the General Shareholders' Meeting of 16 April 2008 (fourth resolution), then as part of the renewal of the term of office, it was authorised by the Board of Directors on 27 July 2011 and approved by the General Shareholders' Meeting of 15 May 2012 (fourth resolution). Following the reappointment of the Chairman and CEO to that role, decided by the Board of Directors on 29 May 2015, and on the recommendation of the Remuneration Committee, on 29 May 2015 the Board of Directors, with the Chairman and CEO abstaining, voted unanimously to retain all elements of the remuneration of the Chair-

> Paris-La-Défense, 27 February 2017 French original signed by The Statutory Auditors

man and CEO and all the provisions of his corporate officer contract dated 20 February 2008 (incorporating all the amendments decided since by the Company's Board of Directors at the recommendation of the Remuneration Committee). However, two changes were made to the severance pay falling due to the Chairman and CEO in the event of his departure from the Company (as a result of forced resignation, cancellation or non-renewal of his term of office or modification of the conditions under which he originally joined the ERAMET group):

- The amount of severance pay which may fall due is equal to twice (instead of three times, as it was previously) the last gross annual fixed remuneration plus twice (instead of three times) the average gross annual variable remuneration received in the last three complete years prior to his departure.
- The severance pay benefit, provided for in his corporate officer contract, is subject to compliance with performance conditions: the total gross variable remuneration amount (itself subject to specific performance conditions) received over the final three full financial years of his term of office must be 35% or more of the total gross annual fixed remuneration received during the same threeyear period-instead of 20% as it was previously. Consequently, these arrangements rule out the payment of such a benefit should the Chairman and CEO fail to achieve his targets. In accordance with the provisions of Article L. 225-42-1 of the French Commercial Code, these modified arrangements were the subject of a resolution put before the Annual General Shareholders' Meeting of 29 May 2016 (fifth resolution).

Ernst & Young Audit

Jean-Roch Varon

#### 6.2.7 TABLE OF THE FINANCIAL RESULTS OF THE COMPANY OVER THE PAST FIVE FINANCIAL YEARS

	2012	2013	2014	2015	2016
Share capital at financial year end	<del>-</del>	4	4		
a) Share capital (€)	80,956,815	80,956,815	80,956,815	80,956,815	80,978,851
b) Number of shares issued	26,543,218	26,543,218	26,543,218	26,543,218	26,550,443
Transactions and profit/(loss) for the financial year ( $\in$ thousand)					
a) Sales excluding tax	880,306	707,732	779,892	626,232	585,089
b) Profit/(Loss) before tax, employee profit-sharing, depreciation, amortisation and provisions	278,523	243,083	(40,061)	(43,866)	(44,605)
c) Income tax	(27,790)	(9,594)	(2,897)	659	(8,821)
d) Employee profit-sharing	0	0	0	0	0
e) Profit/(Loss) after tax, employee profit-sharing, depreciation, amortisation and provisions	321,062	(133,006)	(70,550)	(331,516)	(165,554)
f) Proposed dividend amount	34,506	0	0	0	0
Earnings per share (€)			•	•	•
a) Profit/(Loss) after tax, employee profit-sharing, but before depreciation, amortisation and provisions	11.54	9.52	(1.40)	(1.68)	(1.35)
b) Profit/(Loss) after tax, employee profit-sharing, depreciation, amortisation and provisions	12.10	(5.01)	(2.66)	(12.49)	(6.24)
c) Proposed dividend per share	1.30	0	0	0	0
Personnel		***************************************	***************************************		•
a) Average number of employees	432	439	418	388	355
b) Total wage bill (€ thousand)	33,259	34,373	33,141	32,600	32,361
c) Amount paid out in employee benefits (€ thousand)	27,845	23,716	25,177	11,054	24,853

#### **6.2.8 SUPPLIER PAYMENT TERMS**

The Company has a supplier debt more than 60 days from the invoice date of €241 thousand.

#### 6.2.9 REINCORPORATION OF GENERAL COSTS AND SUMPTUARY EXPENSES

Not applicable.

## 6.3 CONSOLIDATED ACCOUNTS FOR DISTRIBUTION THE YEARS 2015 POLICY **AND 2014**

Pursuant to Article 28 of the Commission Regulation (EC) No. 809/2004, the following information is included in reference in this Reference Document:

- a) the 2015 consolidated accounts, the corresponding audit report and the overview of the articles figuring respectively in paragraphs 6.1, 6.1.3 and 2 of the Reference Document of the year 2015 filed with the AMF on 7 April 2016.
- b) the 2014 consolidated accounts, the corresponding audit report and the overview of the articles figuring respectively in paragraphs 6.1, 6.1.3 and 2 of the Reference Document of the year 2014 filed with the AMF on 25 March 2015.

The parts not included from the 2015 and 2014 Reference Documents are either not applicable to the investor or covered by another part of this Reference Document.

The two Reference Documents mentioned above are available on the Company website (www.eramet.com) and the AMF website (www.amf-france.org).

# DIVIDEND

#### 6.4.1 TERMS OF PAYMENT OF **DIVIDENDS**

The payment of dividends shall be made annually at the time and place fixed by the General Meeting or, failing that, by the Board of Directors within a maximum period of nine months from the end of the financial year. Dividends regularly received may not be subject to repayment.

An interim dividend payment may be made with respect to the payment of the dividend before the date of the Shareholders' Meeting by fixing the amount. following a decision by the Board of Directors under the conditions set out in Article L. 232-12, paragraph 2, of the Commercial Code.

It may be proposed to the shareholder, in whole or in part, to opt for payment in new Company shares, under the conditions of Article L. 232-18, paragraph 1, of the Commercial Code.

In accordance with the provisions in force in France, the limitation period for unclaimed dividends is five years from their date of payment. Unclaimed sums shall be paid to the French State, in accordance with the applicable provisions.

#### 6.4.2 ALLOCATION AND DISTRIBUTION OF RESULTS (ARTICLE 24 OF THE ARTICLES OF ASSOCIATION)

"From the net profits, as defined by law, less any previous losses, 5% shall be deducted to constitute the reserve fund provided for by law until the fund reaches a tenth of the share capital.

The distributable income consists of the net profit for the financial year, less the previous losses and the deduction envisaged above and increased by profits carried forward. From the distributable profit, the Ordinary General Meeting may withdraw any amount it deems appropriate, either to be carried forward again to the following financial year or to be transferred to one or more general or special reserve funds for which it determines the allocation or use.

The surplus, if any, shall be distributed uniformly among all shares.

The General Meeting has the right to grant each shareholder, for all or part of the distributed dividend, an option consisting of the payment of the dividend in shares under legal conditions or in cash."

#### 6.4.2.1 2016 PROFIT ALLOCATION TABLE

The proposed allocation for the 2016 result is included in the second resolution proposed at the next Meeting in Chapter 8 of this document.

#### 6.4.2.2 DIVIDEND DISTRIBUTION POLICY

#### TERMS OF PAYMENT

The Company does not normally distribute an interim dividend; dividends are paid annually after the Meeting called to approve the management and accounts for the previous financial year At the option of the shareholder, it may be possible to offer mixed distribution, in cash and in shares.

#### AMOUNT OF THE DIVIDEND

The Company endeavours to pay a regular and significant dividend. No dividend is proposed for the May 2017 Meeting.

#### 6.4.2.3 DIVIDENDS PAID ON THE LAST THREE YEARS

!	2016	2015	2014	2013
Number of paid shares	26,550,443	26,543,218	26,543,218	26,543,218
Net profit/(loss) Group share	(€179 million)	(€714 million)	(€159 million)	(€370 million)
Dividends per share	€0	€0	€0	€0
Total distribution	€0 million	€0 million	€0 million	€0 million

## 6.5 FEES PAID TO THE AUDITORS

The complete inventory of fees for the last two years by type of benefits paid to the various firms is included in the notes to the consolidated accounts.



### Chapter 7

## **INFORMATION ON THE COMPANY AND ITS CAPITAL**

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## 7.1 COMPANY'S MARKET SHARES

#### 7.1.1 LISTING MARKET

The Company's shares are traded at Euronext on the Euronext Paris market (ISIN code: FR0000131757).

No shares of another Group company are admitted for trading on another stock exchange.

#### 7.1.2 PRICE TRENDS

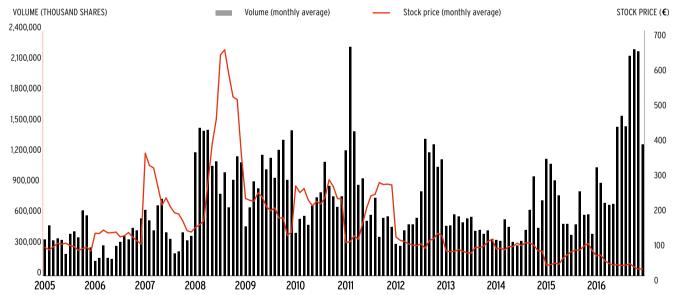
The ERAMET share closed at €56.7 per share in 2016, an increase of 92% over the year, which is one of the biggest increases on the Paris stock exchange in 2016. The performance of the share was positively impacted

by the rebound in the commodities market following a particularly depressed year in 2015 in this sector. This stock progress is linked to the rise in the second half of the year in manganese prices and, to a lesser extent, that of nickel prices. Nickel prices and the price of manganese ore increased by 13.8% and 300% respectively between December 2015 and December 2016.

Following a first-quarter continuation of the downward trend observed in 2015, the ERAMET share price recovered strongly over the rest of the year. In parallel with this reversal of the share price trend, volumes increased from 8,234,536 shares in 2015 to 16,346,892 shares in 2016, i.e. approximately 64,000 shares traded per session (compared with 32,000 shares/2015 session).

#### TRENDS IN VOLUMES AND THE ERAMET SHARE PRICE





#### STOCK MARKET DATA

	PRICE (€)				
	PERIOD EXTREMES			MARKET CAPITALISATION AS AT 31/12	VOLUME
	UPPER	LOWER	CLOSING AT 31/12	(€ MILLION)	(AVG./DAY)
2004	72.90	36.70	66.20	1,704	15,953
2005	94.90	66.10	81.00	2,089	19,319
2006	147.40	79.00	121.40	3,142	14,806
2007	391.26	114.00	350.00	9,067	24,022
2008	669.98	96.06	138.00	3,618	52,945
2009	272.30	108.00	220.75	5,821	47,589
2010	298.40	193.70	256.50	6,801	33.419
2011	276.65	80.05	94.50	2,505	46,402
2012	139.90	75.95	110.95	2,944	36,742
2013	116.00	63.76	70.29	1,866	22,927
2014	102.00	65.85	76.50	2,031	22,980
2015	94.39	23.05	29.50	783	32,166
2016	66.72	15.36	56.74	1,506	63,607

		PRICE (€)		VOLUME (X 1,000)
	LOWER	UPPER	AVERAGE (CLOSING)	(AVG./MONTH)
2016				
December	51.45	66.72	58.38	1,056.8
November	39.43	60.89	49.54	904.7
October	35.50	45.35	41.15	706.3
September	31.20	36.48	33.42	686.2
August	30.09	35.47	32.98	697.0
July	28.02	37.00	33.45	1,450.7
June	24.42	34.80	29.33	1,559.5
May	26.44	35.70	28.85	1,457.2
April	20.92	35.55	26.13	2,146.2
March	19.32	27.46	23.38	2,211.9
February	15.36	21.15	17.71	2,190.5
January	18.95	29.70	22.64	1,279.8
2015				
December	23.05	32.60	26.93	1,139.9
November	28.75	37.48	31.81	1,087.8
October	32.06	44.44	37.88	925.9
September	32.97	50.89	40.47	780.4
August	45.08	60.70	53.89	501.8
July	59.76	70.44	63.24	499.0
June	69.48	76.36	72.80	395.0
May	73.00	79.00	75.08	498.0
April	73.06	86.15	78.62	820.7
March	84.75	94.25	88.87	590.7
February	71.40	94.39	81.78	594.6
January	69.06	80.10	72.99	400.6

Source: NYSE Euronext.

#### 7.1.3 SHARE SERVICE

The Company's share register is maintained by:

#### **BNP Paribas Securities Services**

GCT-Issuer Services

Grands Moulins de Pantin-9, rue du Landing-93761 Pantin Cedex

The implementation of the liquidity contract was entrusted to Exane BNP Paribas.

## 7.2 SHARE CAPITAL

#### 7.2.1 SUBSCRIBED CAPITAL

#### 7.2.1.1 REPRESENTATIVE AMOUNT AND SHARES

The share capital, as of 31 December 2016 amounted to  $\leq$ 80,978,851.15, represented by 26,550,443 shares with a nominal value of  $\leq$ 3.05, all of the same class and fully paid.

#### 7.2.1.2 RIGHTS ATTACHED TO THE SHARES

Each share entitles the holder, in the ownership of the Company's assets and in the sharing of profits, to a share equal to the portion of the share capital it represents, taking into account, where appropriate, the amortised and unamortised capital, paid and unpaid, of the nominal amount and the rights of the shares of different classes.

Each share shall give the right, during the Company's life and in the event of liquidation, to payment of the same net amount in any allocation or redemption, such that all shares shall be considered together, where applicable, regardless of any tax exemptions or any taxation likely to be assumed by the Company.

#### 7.2.1.3 SUBSCRIBED CAPITAL NOT YET PAID

None.

#### 7.2.2 SECURITIES NOT REPRESENTING CAPITAL

#### 7.2.2.1 FOUNDERS' SHARES, VOTING CERTIFICATES

None

#### 7.2.2.2 OTHER SECURITIES-POTENTIAL CAPITAL

The potential capital consists of ODIRNAN.

On 5 October 2016, the Company issued 2,158,428 perpetual bonds with an option to repay in cash and/or new shares (ODIRNAN) for a total amount of €99,999,969,24.

Total amount of the issue	€100 million
Maturity	Indefinite
Number of bonds issued	2,158,428
Number of bonds 31/12/2016	2,158,203
Nominal value (with a 30% premium based on the reference price of €35.64)	€46.33
Fixed interest rate until 4 October 2022	4%

The ODIRNAN are admitted to trading on the regulated market of Euronext Paris (ISIN code FR0013204492).

The purpose of the ODIRNAN issue was to strengthen ERAMET's balance sheet structure by accounting treatment of shareholders' equity and the proceeds from the issue will be used to finance the Group's general needs.

The nominal unit value of ODIRNAN was set at €46.33, showing a conversion premium of 30% over the reference price of the Company's share at €35.64 on the Euronext Paris regulated market.

The ODIRNAN were issued at par 5 October 2016, the settlement date. The bonds constitute direct, general, unconditional, non-subordinated, and unsecured obligations,

From the date of issue until 4 October 2022, the ODIRNANs will bear interest at the annual nominal rate of 4%, payable semi-annually in arrears on 5 October and 5 April of each year, and for the first time on 5 April 2017, subject to suspension of interest payment. Effective from 5 October 2022, the ODIRNANs will bear interest at a rate deducted on the basis of the six-month EURIBOR variable interest rate plus 1,000 basis points, expressed on an annual basis, payable semi-annually in arrears on 5 October and 5 April of each year, and for the first time on 5 April 2023, subject to a suspension of interest payment.

Subject to early amortisation at the option of the Company, the ODIRNANs will only be redeemable in the event of liquidation of the Company or at the end of the lifetime specified in the Company's Articles of Association (23 September 2062), unless this period of life is extended under the conditions provided for by the applicable legislation. The refund will be, in both cases, equal to par.

The holders of ODIRNAN may exercise their share allotment right at any time from the date of issue (inclusive) until the 18<sup>th</sup> trading day (exclusive) preceding 5 October 2022, or any earlier date of early redemption. In the event of the exercise of the share

allotment right, the holders of ODIRNAN will receive, at the option of the Company, either an amount in cash or a combination of an amount in cash and new shares or of new shares only.

The *Autorité des Marchés Financiers* (French Financial Markets Regulation) has affixed to the prospectus visa No. 16-448 dated 26 September 2016.

The Company has not issued any other currently valid financial instruments—that do not represent a share in capital—but are likely to give access to capital in the future or by option.

However, authorisations exist to do so, by decision of the Board. This has not been used to date.

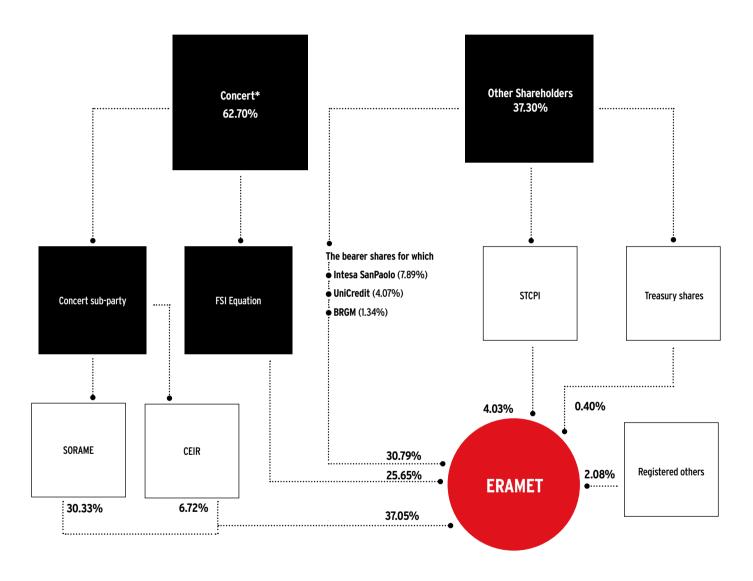
## 7.2.3 RECENT DEVELOPMENT OF THE SHARE CAPITAL AND ITS DISTRIBUTION

Since the close of the financial year, the Company has not been informed of any significant change in shareholding

#### 7.2.4 CAPITAL DISTRIBUTION

#### 7.2.4.1 CONTROL ORGANISATION CHART

SHAREHOLDERS OF THE COMPANY AS OF 31 DECEMBER 2016 (IN % OF SHARES)



<sup>\*</sup> Pursuant to a Shareholders' Agreement which was the subject of a decision and information from the AMF published on 12 April 2012 under the number 212C0486 at the time of its conclusion and a decision and information of the AMF published on 28 July 2016 financial under the number 216C1753, relating to the changes in the Group at the time of the acquisition of the entire FSI Equation capital by the Agence des Participations de l'État (French State Shareholding Agency).

#### 7.2.4.2 AS OF 31 DECEMBER 2016 (INCLUDING SHAREHOLDERS HOLDING-OR THOSE LIKELY TO HOLD-AT LEAST 1% OF CAPITAL OR VOTING RIGHTS, AND **KNOWN TO THE COMPANY)**

MAJOR SHAREHOLDERS	SHARES	% CAPITAL	THEORETICAL VOTING RIGHTS	PERCENTAGE OF THEORETICAL VOTING RIGHTS	VOTING RIGHTS Exercisable at AG	PERCENTAGE OF VOTING RIGHTS EXERCISABLE AT AG
SORAME <sup>(1)</sup>	8,051,838	30.33%	16,103,676	35.95%	16,103,676	36.04%
CEIR <sup>(1)</sup>	1,783,996	6.72%	3,567,992	7.97%	3,567,992	7.98%
Total for the SORAME/CEIR subgroup <sup>(1)</sup>	9,835,834	37.05%	19,671,668	43.92%	19,671,668	44.02%
FSI Equation (held by the French State)(1)	6,810,317	25,65%	13,620,634	30.41%	13,620,634	30.48%
State (direct ownership)	100	Not significant	200	Not significant	200	Not significant
Group total (SORAME/CEIR/FSI) <sup>(1)</sup>	16,646,251	62.70%	33,292,502	74.33%	33,292,502	74.51%
Intesa SanPaolo <sup>(2)</sup>	2,094,146	7.89%	2,094,146	4.68%	2,094,146	4.69%
UniCredit <sup>(2)</sup>	1,080,000	4.07%	1,080,000	2.41%	1,080,000	2.42%
STCPI	1,070,587	4.03%	2,141,174	4.78%	2,141,174	4.79%
BRGM <sup>(3)</sup>	356,044	1.34%	356,044	0.79%	356,044	0.80%
Employees (ERAMET share fund) <sup>(4)</sup>	52,373	0.20%	104,746	0.23%	104,746	0.23%
Company officers	30,786	Not significant	48,765	Not significant	48,765	Not significant
ERAMET treasury shares	105,801	0.40%	105,801	0.24%	0	0.00%
Other	5,114,455	19.38%	5,566,384	12.54%	5,566,384	12.57%
Total Shares	26,550,443	100.00%	44,789,562	100.00%	44,683,761	100.00%
Total Registered Shares Total Bearer Shares	18,375,085 8,175,358	69.21% 30.79%	36,570,694 8,175,358	81.65% 18.25%	36,508,403 8,175,358	81.70% 18.30%

<sup>(1)</sup> The companies SORAME, CEIR and FSI Equation are signatories to a Shareholders' Agreement constituting a joint action and have been the subject of a decision and information of the Autorité des Marchés Financiers under the number 212CO486.

<sup>(2)</sup> Since the last declaration concerning the crossing of Intesa SanPaolo thresholds No. 2016C2860 of 20 December 2016 and of Unicredit of 19 December 2016.

<sup>(3)</sup> Estimate based on last TPI survey.

<sup>(4)</sup> According to the new drafting of Article L. 225-102 of the French Commercial Code, issued after Article 135 of the Law 2015-990 of 6 August 2015 (Macron law), the share of capital held by employees on the last day of the year includes, in addition to the shares allocated to a salary savings plan or an FCPE, free registered shares and issued from free share plans authorised by a General Assembly subsequent to the entry into force of the law is as of 8 August 2015. As of 31 December 2016, there are no bonus shares corresponding to this definition. The share capital held by employees as of 31 December 2016 is equal to 52,373 shares, corresponding to 0.20% of capital.

#### 7.2.4.3 AS OF 31 DECEMBER 2015 (INCLUDING SHAREHOLDERS HOLDING-OR THOSE LIKELY TO HOLD-AT LEAST 1% OF CAPITAL OR VOTING RIGHTS, AND KNOWN TO THE COMPANY)

MAJOR SHAREHOLDERS	SHARES	% CAPITAL	THEORETICAL VOTING RIGHTS	PERCENTAGE OF THEORETICAL VOTING RIGHTS	VOTING RIGHTS Exercisable at ag	PERCENTAGE OF VOTING RIGHTS EXERCISABLE AT AG
SORAME <sup>(1)</sup>	8,051,838	30.33%	16,103,676	35.98%	16,103,676	36.16%
CEIR <sup>(1)</sup>	1,783,996	6.72%	3,567,992	7.97%	3,567,992 <sup>(5)</sup>	8.01%
Total for the SORAME/CEIR subgroup <sup>(1)</sup>	9,835,834	37.06%	19,671,668	43.96%	19,671,668	44.17%
FSI Equation (Bpifrance subsidiary) <sup>(1)</sup>	6,810,317	25.66%	13,620,634	30.44%	13,620,634(6)	30.58%
Group total (SORAME/CEIR/Bpifrance)	16,646,151	62.71%	33,292,302	74.39%	33,292,302(7)	74.76%
Carlo Tassara France (company belonging to the Romain Zaleski group) <sup>(2)</sup>	3,394,146	12.79%	3,394,146	7.58%	3,394,146	7.2%
STCPI	1,070,587	4.03%	2,141,173	4.78%	2,141,173	4.81%
BRGM <sup>(3)</sup>	356,044	1.34%	356,044	0.80%	356,044	0.80%
BlackRock Investment Management UK Ltd <sup>(2)</sup>	541,866	2.04%	541,866	1.21%	541,866	1.22%
Employees (ERAMET share fund) <sup>(4)</sup>	52,373	0.20%	104,746	0.23%	104,746	0.24%
Company officers	27,504	Not significant	44,536	Not significant	44,536	Not significant
ERAMET treasury shares	218,276	0.82%	218,276	0.49%	0	0.00%
Other	4,236,271	16.06%	4,659,155	10.51%	4,659,155	10.56%
Total Shares	26,543,218	100.00%	44,752,244	100.00%	44,533,968	100.00%
Total Registered Shares	18,387,508	69.27%	36,596,534	81.78%	36,501,477	81.96%
Total Bearer Shares	8,155,710	30.73%	8,155,710	18.22%	8,032,491	18.04%

<sup>(1)</sup> The companies SORAME, CEIR and FSI Equation are signatories to a Shareholders' Agreement constituting a joint action and have been the subject of a decision and information of the Autorité des Marchés Financiers under the number 212CO486.

<sup>(2)</sup> Since the last threshold crossing statement of Carlo Tassara France, No. 207C0134 of 17 January 2007.

<sup>(3)</sup> Estimated in light of the latest Thomson Reuters survey.

<sup>(4)</sup> According to the new drafting of Article L. 225-102 of the French Commercial Code, issued after Article 135 of the Law 2015-990 of 6 August 2015 (Macron law), the share of capital held by employees on the last day of the year includes, in addition to the shares allocated to a salary savings plan or an FCPE, free registered shares and issued from free share plans authorised by a General Assembly subsequent to the entry into force of the law is as of 8 August 2015. As of 31 December 2015, there are no bonus shares corresponding to this definition. The share capital held by employees as of 31 December 2015 is therefore equal to 52,373 shares, corresponding to 0.20% of the share capital.

<sup>(5)</sup> Of which, 720,866 voting rights are not exercisable until 21 July 2016 (see AMF Decision No. 214C1461 of 21 July 2014).

<sup>(6)</sup> Of which 2,751,872 voting rights are not exercisable until 21 July 2016 (see AMF Decision No. 214C1461 of 21 July 2014).

<sup>(7)</sup> Of which, 3,472,738 voting rights are not exercisable until 21 July 2016 (see AMF Decision No. 214C1461 of 21 July 2014).

## 7.2.4.4 AS OF 31 DECEMBER 2014 (INCLUDING SHAREHOLDERS HOLDING-OR THOSE LIKELY TO HOLD-AT LEAST 1% OF CAPITAL OR VOTING RIGHTS, AND KNOWN TO THE COMPANY)

MAJOR SHAREHOLDERS	SHARES	% CAPITAL	THEORETICAL VOTING RIGHTS	PERCENTAGE OF THEORETICAL VOTING RIGHTS	VOTING RIGHTS Exercisable at AG	PERCENTAGE OF VOTING RIGHTS EXERCISABLE AT AG
SORAME <sup>(1)</sup>	8,051,838	30.33%	16,103,676	35.98%	16,103,676	36.17%
CEIR <sup>(1)</sup>	1,783,996	6.72%	3,567,992	7.97%	3,567,992	8.01%
Total for the SORAME/CEIR subgroup <sup>(1)</sup>	9,835,834	37.06%	19,671,668	43.96%	19,671,668	44.18%
FSI Equation (Bpifrance subsidiary) <sup>(1)</sup>	6,810,317	25.66%	13,620,634	30.43%	13,620,634	30.59%
Group total (SORAME/CEIR/ Bpifrance)	16,646,151	62.71%	33,292,302	74.39%	33,292,302	74.77%
Carlo Tassara France (company belonging to the Romain Zaleski group)**	3,394,146	12.79%	3,394,146	7.58%	3,394,146	7.2%
STCPI	1,070,587	4.03%	2,141,173	4.78%	2,141,173	4.81%
BRGM <sup>(3)</sup>	356,044	1.34%	356,044	0.80%	356,044	0.80%
BlackRock Investment Management UK Ltd <sup>(2)</sup>	1,165,441	4.39%	1,165,441	2.60%	1,165,441	2.62%
Employees (ERAMET share fund)	52,373	0.20%	104,746	0.23%	104,746	0.24%
Company officers	23,127	Not significant	36,603	Not significant	36,603	Not significant
ERAMET treasury shares	230,051	0.87%	230,051	0.51%	0	0,00%
Other	3,605,298	13.67%	4,033,067	9.09%	4,033,067	9.14%
Total Shares	26,543,218	100.00%	44,753,573	100.00%	44,523,522	100.00%
Total Registered Shares	18,449,298	69.51%	36,659,653	81.91%	36,519,203	82.02%
Total Bearer Shares	8,093,920	30.49%	8,093,920	18.09%	8,004,319	17.98%

<sup>(1)</sup> The companies SORAME, CEIR and FSI Equation are signatories to a Shareholders' Agreement constituting a joint action and have been the subject of a decision and information of the Autorité des Marchés Financiers under the number 212C0486.

To the best of the Company's knowledge, there are no other shareholders directly or indirectly holding more than 1% of the Company's capital or voting rights and there are no pledged securities. Except for the treasury-held shares mentioned in the table above, there are no other treasury shares. The holding of shares by Company officers is detailed in the Governance Chapter.

## 7.2.4.5 FORESEEABLE CHANGES TO VOTING RIGHTS

At 31 December 2016, 92,000 shares registered for less than two years in registered form, do not benefit from the double voting right. Should these shares qualify for double voting rights, double voting rights would be increased to a total of approximately 36,570,000, to which the simple voting rights of the bearer shares should be added i.e. 8,175,358 additional rights as of 31 December 2016.

## 7.2.5 STOCK OPTION PLANS AND FREE SHARES

As of the date of this Reference Document, there are no other dilutive instruments (convertible or exchangeable negotiable securities or any negotiable securities with warrants) issued by the Company that the ODIRNANS described in paragraph 7.2 above.

The free shares allocated, of which the details of the granted and remaining plans open as of 31 December 2016, are presented in Note 11 to the consolidated accounts of ERAMET described in Chapter 6 of this document. There are no other stock-option plans in force.

<sup>(2)</sup> Since the last threshold crossing statement of Carlo Tassara France, No. 207C0134 of 17 January 2007.

<sup>(3)</sup> Estimated in light of the latest Thomson Reuters survey. Blackrock Investment Management (UK) Ltd reported that BlackRock Global Funds had 1,303,888 shares (4.92% of the share capital) as of 13 March 2012.

#### 7.2.6 SUMMARY TABLE OF FINANCIAL AUTHORISATIONS-SUPPLEMENTARY REPORT OF THE BOARD OF DIRECTORS ON THE **ISSUANCE OF ODIRNAN**

AUTHORISED CAPITAL INCREASES	
A - By issuing shares, other securities and/or warrants, with preferential subscription rights for the shareholders. Art. The 225-129 CC	
By the EGM for an amount of €24 million	29 May 2015 (27 <sup>th</sup> resolution)
Duration of the delegation	26 months until 28/07/2017
Using the authorisation	None.
B - By issuing shares, various securities and/or warrants, without preferential subscription rights for part of a public offering.	
By the EGM for an amount of €16 million	29 May 2015 (28th resolution)
Duration of the delegation	26 months until 28/07/2017
Using the authorisation	2,158,428 perpetual bonds with a redemption option in cash and/or new shares (ODIRNAN), a total nominal amount issued of €99,999,969.24, which may lead to the issuance by the Company of a maximum number of 2,158,428 new ordinary shares, upon exercise of the right to receive shares under ODIRNAN
C - By issuing shares, other securities and/or warrants, with the cancellation of the preferential subscription rights of the shareholders in the context of an offer referred to in II of Article L. 411-2 of the Monetary and Financial Code.	
By the EGM for an amount of €16 million	29 May 2015 (29 <sup>th</sup> resolution)
Duration of the delegation	26 months until 28/07/2017
Using the authorisation	None.
D - By issuing shares, with the cancellation of shareholders' preferential subscription rights, as a result of subsidiaries issuing securities which give access to the Company's capital.	
By the EGM for an amount of €16 million	29 May 2015 (30 <sup>th</sup> resolution)
Duration of the delegation	26 months until 28/07/2017
Using the authorisation	None.
E - By incorporation of reserves, profits, premiums or otherwise, the capitalisation of which would be permitted.	
By the EGM for an amount of €24 million	29 May 2015 (26 <sup>th</sup> resolution)
Duration of the delegation	26 months until 28/07/2017
Using the authorisation	None.
F- By issuing shares, other securities, as compensation for contributions in kind granted to the Company, with cancellation of the preferential subscription rights of the shareholders. Art. The 225-147 6 <sup>th</sup> paragraph CC	
By the EGM for an amount of 10% of the capital i.e. €8,086,607	29 May 2015 (31 <sup>th</sup> resolution)
Duration of the delegation	26 months until 28/07/2017
Using the authorisation	None
Limiting the amount of emissions (Total $A + B + C + D + E$ )	
By the EGM	29 May 2015 (32 <sup>th</sup> resolution)
Maximum amount	€24 million
Use of authorisations	2,158,428 perpetual bonds with a redemption option in cash and/or new shares (ODIRNAN), a total nominal amount issued of €99,999,969.24, which may lead to the issuance by the Company of a maximum number of 2,158,428 new ordinary shares, upon exercise of the right to receive shares under ODIRNAN

AUTHORISED CAPITAL INCREASES	
Capital increase reserved for employees	
G - By the EGM	29 May 2015 (33 <sup>th</sup> resolution)
Duration of the delegation	26 months until 28/07/2017
Maximum amount	€500,000
Using the authorisation	None
Capital reduction	
H - By the EGM	29 May 2015 (34 <sup>th</sup> resolution)
Duration of the delegation	26 months until 28/07/2017
Maximum amount	10% of capital
Using the authorisation	None
Allocation of free shares (Art. L. 225-197-1 and L. 225-197-2 CC)	
By the EGM	May 27, 2016 (14 <sup>th</sup> resolution)
Maximum total number	550,000 shares
Duration of authorisation	38 months until 26/07/2019
Used in 2016	134,327
Available balance	415,673

## 7.2.7 SUPPLEMENTARY REPORT OF THE BOARD OF DIRECTORS ON THE ISSUANCE OF OPEN-ENDED BONDS WITH A REDEMPTION OPTION IN CASH AND/OR NEW SHARES (ODIRNAN)

Ladies and Gentlemen.

Pursuant to the provisions of Articles L. 225-129-5 and R. 225-116 of the Commercial Code, the ERAMET Board of Directors ("ERAMET" or "the Company") informs shareholders of the decisions taken at its meeting of 23 September 2016, acting in accordance with the resolutions of the general meeting of shareholders held on 29 May 2015 (the "General Assembly").

## 7.2.7.1 DELEGATION OF THE GENERAL ASSEMBLY

The Board of Directors recalls that the General Assembly, in its twenty-eighth and thirty-second resolutions, conforms to Articles L. 225-129-2, L. 225-135, L. 225-136 and L. 228-92 of the Commercial Code:

- delegated to the Board of Directors, with the option
  to sub-delegate under the conditions provided for
  by law, the power to decide, with the cancellation
  of shareholders' preferential subscription rights,
  to increase the share capital of the Company by
  issuing, one or more times, both in France and
  abroad, shares and securities other than shares
  giving rights, directly or indirectly, by conversion,
  exchange, redemption, presentation of a warrant or
  in any other form of attribution, at any time or on
  fixed dates, of securities which, for this purpose, will
  be issued to represent a share of the share capital;
- decided that the maximum nominal amount of the Company's capital increases that may be realised, either immediately or in the future, under this authorisation, is set at €16 million, it being understood that this amount is charged against the overall ceiling of €24 million set at the thirty-second resolution, and that it does not take into account, as the case may be, the nominal amount of the shares to

be issued in addition, in the event of new financial transactions, to preserve the rights of the holders of securities giving access to the capital;

- decided to cancel the preferential subscription rights of the Company's shareholders for the ordinary shares or securities which give access to the Company's share capital, issued pursuant to this delegation and to propose these shares in the context of a public offer under the conditions and maximum legal limits provided by laws and regulations, by giving the Board of Directors the power to establish for shareholders a right of priority, irreducible and, as the case may be, reducible, for all or part of the issue, during the period and under the conditions that it shall determine in accordance with legal and regulatory provisions and which must be exercised in proportion to the number of ordinary shares held by each shareholder, that right of priority may not give rise to the creation of negotiable and transferable rights: and
- decided that this delegation was conferred for a period of 26 months from 29 May 2015.

## 7.2.7.2 DECISION TO ISSUE AND DELEGATION OF THE BOARD OF DIRECTORS

At its meeting on 23 September 2016, the Board of Directors:

- resolved, pursuant to the delegation granted by the Shareholders' Meeting in its twenty-eighth and thirty-second resolutions, (i) the issue, without preferential subscription rights but with an irreducible period of priority for the benefit of shareholders, and by way of private placement and public offering and (ii) the admission to trading on the regulated Euronext Paris stock market ("Euronext Paris") of a bond issue with a nominal amount of approximately €100 million, represented by bonds of indefinite duration with an option for cash redemption and/ or new shares (ODIRNAN) of the Company (the "Bonds"): and
- delegated to the CEO, with authority to sub-delegate the necessary powers, including, in particular:
  - to decide the launch of the issue and its timing,

- to fix the final terms of the Bonds, in particular the amount of the issue, the number of Bonds, the nominal unit value of the Bonds, the conversion premium for the Bonds,
- to record completion of the issue of the Bonds,
- until the redemption of the last outstanding Bond, record completion of each of the capital increases resulting from the issue of shares issued in redemption of the Bonds and in payment of capitalised interest in shares, if necessary, and proceed with the corresponding modification of the Articles of the Company,
- to finalise and sign any documents related to issue of the Bonds,
- to complete all steps needed to admit the Bonds for trading on Euronext Paris and the shares issued in repayment of the Bonds to trading on Euronext Paris
- to carry out all required publicity formalities and declarations and to request any authorisations which would prove necessary for the completion and the successful completion of the issue of the Bonds, and
- more generally take all appropriate measures and enter into all agreements to permit the issue of the Bonds

## 7.2.7.3 DECISIONS OF THE CEO AND THE DEFINITIVE TERMS OF THE BONDS

The CEO, exercising the powers granted to him by the Board of Directors in the aforementioned delegation, has in particular:

- pursuant to a decision dated 26 September 2016, has adjusted the indicative terms of the Bonds contained in the draft memorandum of understanding submitted to the Board of Directors;
- pursuant to a decision dated 27 September 2016, to which the prospectus referred to by the AMF on 26 September 2016 (visa No. 16-448) is appended, decided to proceed with the issue of the Bonds for one nominal amount of approximately €100 million and to set out the indicative terms thereof; and
- pursuant to a decision dated 30 September 2016 made at the end of the private placement, decided to finalise the terms of the Bonds as follows:

Principal amount of the loan	€99,999,969.24
Nominal unit value/Conversion premium	The Bonds have a nominal unit value of €46.33, showing a conversion premium of 30% compared to the arithmetic average of the weighted average prices by the daily volumes of the share on Euronext Paris during the three trading sessions from 27 September 2016 to 29 September 2016
Number of Bonds issued	2,158,428 bonds
Right to the allocation of shares	<ul> <li>(i) Bondholders may exercise their right to allocate shares at any time from the issue date (inclusive) until the 18<sup>th</sup> trading day (exclusive) preceding 5 October 2022, or any earlier date of early redemption;</li> <li>(ii) In the event of the right to allocate shares, the Bond holders will receive, at the option of the Company, either an amount in cash or a combination of an amount in cash and new shares or of new shares only.</li> </ul>
Maturity	Loans of indefinite duration
Form	The Bonds will be in registered or bearer form at the option of the bondholders.
Interest	<ul> <li>(i) From 5 October 2016 to 4 October 2022, the Bonds will bear interest at a nominal annual rate of 4% payable semi-annually in arrears on 5 October and 5 April of each year and for the first time on 5 April 2017, subject to the suspension of the payment of interest;</li> <li>(ii) Effective 5 October 2022, the Bonds will bear interest at a rate deducted on the basis of the variable interest rate shown below, expressed annually, payable semi-annually in arrears on each interest payment date, and for the first time on 5 April 2023, subject to the suspension of the payment of interest.</li> <li>The variable interest rate for the relevant interest period will be equal to the six-month EURIBOR rate as determined by the calculation agent, plus 1,000 basis points.</li> </ul>
Reimbursement	Subject to early amortisation at the option of the Company, the Bonds will only be redeemable in the event of liquidation of the Company or at the end of the lifetime specified in the Company's Articles of Association (23 September 2062), unless this period of life is extended under the conditions provided for by the applicable legislation. The refund will be, in both cases, equal to par.
Expected date of settlement	5 October 2016
Quote	Euronext Paris
Leading banks	BNP Paribas, Crédit Agricole Corporate and Investment Bank, Natixis, Société Générale, BRED Banque Populaire, Crédit Industriel et Commercial SA, Deutsche Bank AG, London Branch, Nomura International plc, and SMBC Nikko Capital Markets Limited.
Finance Officer	BNP Paribas Securities Services
Calculation Agent	Conv-Ex Advisors Limited
Applicable law	French law

The maximum capital increase that may be carried out would be 2,158,428 new shares of a nominal value of €3.05, or €6,583,205.4

#### 7.2.7.4 IMPACT OF THE BONDS ISSUE

#### ON THE BASIS OF CONSOLIDATED SHAREHOLDERS' EQUITY

#### In the event of the issue of new shares only

#### The impact of the issue on the portion of the shareholders' equity

For illustrative purposes, if the Company elects to deliver only shares in the event of the exercise of the shares allotment right, the impact of the issue and conversion into Shares upon the exercise of the share allotment right for all of the Bonds in the Group's portion of consolidated shareholders' equity per share would be as follows:

Calculations based on consolidated shareholders' equity from 30 June 2016, as shown in the consolidated financial statements for the six months ended 30 June 2016, and the number of shares making up the share capital of the Company on that same date, after deduction of the treasury shares, of a share price of €35.6380 (arithmetic average of the weighted average prices per share on the Euronext Paris stock exchange for a period of three trading days, i.e. from 27 September 2016 to 29 September 2016 inclusive) and a conversion premium of 30%.

	SHARE OF Shareholders' Equity (€)
Before issue of the Bonds	53.36
After issue of the Bonds and exercise of the right to share allocation <sup>(1)</sup>	52.83

(1) In the event of the exercise of the right to share allotment with respect to all outstanding Bonds in the event that the Company elects to deliver only shares in case of exercise of the said right to the allotment of shares.

#### Impact of the issue on the shareholder's situation

For illustrative purposes, in the event that the Company elects to deliver only new shares in the event of the exercise of the right to allocate shares, the impact of the issue of new shares during the exercise of the right to allocate shares for all of the Bonds on the capital of a shareholder holding 1% of the Company's share capital prior to the issue and who does not subscribe to the present issue would be as follows:

Calculations based on the number of shares constituting the share capital of the Company as of 30 June 2016, of a share price of €35.6380 (arithmetic average of the average prices weighted by the daily trading volumes of the share as recorded on Euronext Paris during a period of three trading days, 29 September 2016 inclusive) and a conversion premium of 30%.

	SHAREHOLDER Interest (%)
Before issue of the Bonds	1,00%
After issue of the Bonds and exercise of the right to the allocation of shares <sup>(1)</sup>	0.92%

(1) In the event of the exercise of the right to the allocation of shares with respect to all of the outstanding Bonds in the event that the Company elects to deliver

## In the event of delivery of an amount in cash and new shares

## The impact of the issue on the portion of the shareholders' equity

For illustrative purposes, assuming that the Company elects to remit an amount in cash corresponding to the nominal value per unit of the Bonds and an amount in shares corresponding to the difference between the conversion value and the nominal unit value in the event of the exercise of the share allotment right (knowing that the Company may opt for any other combination of payment in shares and cash), the impact of the issue of new shares upon exercising the right to share allotment for all of the Bonds in the Group's portion of consolidated shareholders' equity per share would be as follows:

Calculations based on consolidated shareholders' equity from 30 June 2016, as shown in the consolidated financial statements for the six months ended 30 June 2016, and the number of shares making up the share capital of the Company on that same date, after deduction of the treasury shares, of a share price of €35.6380 (arithmetic average of the weighted average prices per share on the Euronext Paris stock exchange for a period of three trading days, i.e. from 27 September 2016 to 29 September 2016 inclusive) and a conversion premium of 30%.

	SHARE OF SHAREHOLDERS' EQUITY (€)			
	AN AVERAGE SHARE PRICE EQUAL TO 110% OF THE NOMINAL UNIT VALUE OF THE BOND, I.E. €50.96	AN AVERAGE SHARE PRICE EQUAL TO 150% OF THE NOMINAL UNIT VALUE OF THE BOND, I.E. €69.50	AN AVERAGE SHARE PRICE EQUAL TO 200% OF THE NOMINAL UNIT VALUE OF THE BOND, I.E. €92,66	
Before issue of the Bonds	53.36	53.36	53.36	
After issue of the Bonds and exercise of the right to share allocation	53.34	53.79	54.91	

#### Impact of the issue on the shareholder's situation

For illustrative purposes, assuming that the Company elects to remit an amount in cash corresponding to the nominal value per unit of the Bonds and an amount in shares corresponding to the difference between the conversion value and the nominal unit value in the event of the exercise of the share allotment right (knowing that the Company may opt for any other combination of payment in shares and cash), the impact of the issue of new shares upon exercising the right to share allotment for all of the Bonds on the capital interest of a shareholder holding 1% of the Company's share capital of prior to the issue and who does not subscribe to it would be as follows:

Calculations based on the number of shares constituting the share capital of the Company as of 30 June 2016, of a share price of €35.6380 (arithmetic average of the average prices weighted by the daily trading volumes of the share as recorded on Euronext Paris during a period of three trading days, 29, September 2016 inclusive) and a conversion premium of 30%.

	SHAREHOLDER INTEREST (%)			
	AN AVERAGE SHARE PRICE EQUAL TO 110% of the nominal Unit Value of the Bond, i.e. €50.96	AN AVERAGE SHARE PRICE EQUAL TO 150% OF THE NOMINAL UNIT VALUE OF THE BOND, I.E. €69.50	AN AVERAGE SHARE PRICE EQUAL TO 200% OF THE NOMINAL UNIT VALUE OF THE BOND, I.E. €92.66	
Before issue of the Bonds	1,00%	1,00%	1,00%	
After issue of the Bonds and exercise of the right to share allocation	0.99%	0.97%	0.96%	

## ON THE BASIS OF COMPANY SHAREHOLDERS'

#### In the event of the issue of new shares only

#### The impact of the issue on the portion of the shareholders' equity

For illustrative purposes, if the Company elects to deliver only shares in the event of the exercise of the shares allotment right, the impact of the issue and conversion into Shares upon the exercise of the share allotment right for all of the Bonds in the Group's portion of Company shareholders' equity per share would be as follows:

Calculations based on Company shareholders' equity from 30 June 2016, as shown in the consolidated financial statements for the six months ended 30 June 2016, and the number of shares making up the share capital of the Company on that same date, after deduction of the treasury shares, of a share price of €35.6380 (arithmetic average of the weighted average prices per share on the Euronext Paris stock exchange for a period of three trading days, i.e. from 27 September 2016 to 29 September 2016 inclusive) and a conversion premium of 30%.

	SHARE OF Shareholders' Equity (€)
Before issue of the Bonds	43.28
After issue of the Bonds and exercise of the right to share allocation <sup>(1)</sup>	43.51

(1) In the event of the exercise of the right to share allotment with respect to all outstanding Bonds in the event that the Company elects to deliver only shares in case of exercise of the said right to the allotment of shares.

#### Impact of the issue on the shareholder's situation

For illustrative purposes, in the event that the Company elects to deliver only new shares in the event of the exercise of the right to allocate shares, the impact of the issue of new shares during the exercise of the right to allocate shares for all of the Bonds on the capital of a shareholder holding 1% of the Company's share capital prior to the issue and who does not subscribe to the present issue would be as follows:

Calculations based on the number of shares constituting the share capital of the Company as of 30 June 2016, of a share price of €35.6380 (arithmetic average of the average prices weighted by the daily trading volumes of the share as recorded on Euronext Paris during a period of three trading days, 29 September 2016 inclusive) and a conversion premium of 30%.

	SHAREHOLDER INTEREST (%)
Before issue of the Bonds	1.00%
After issue of the Bonds and exercise of the right to the allocation of shares <sup>(1)</sup>	0.92%

(1) In the event of the exercise of the right to the allocation of shares with respect to all of the outstanding Bonds in the event that the Company elects to deliver only new shares in case of the exercise of said right to share allocation.

## In the event of delivery of an amount in cash and new shares

## The impact of the issue on the portion of the shareholders' equity

For illustrative purposes, assuming that the Company elects to remit an amount in cash corresponding to the nominal value per unit of the Bonds and an amount in shares corresponding to the difference between the conversion value and the nominal unit value in the event of the exercise of the share allotment right (knowing that the Company may opt for any other combination of payment in shares and cash), the impact of the issue of new shares upon exercising the right to share allotment for all of the Bonds in the portion of Company shareholders' equity per share would be as follows:

Calculations based on corporate shareholders' equity from 30 June 2016, as shown in the corporate financial

statements for the six months ended 30 June 2016, and the number of shares making up the share capital of the Company on that same date, after deduction of the treasury shares, of a share price of €35.6380 (arithmetic average of the weighted average prices per share on the Euronext Paris stock exchange for a period of three trading days, i.e. from 27 September 2016 to 29 September 2016 inclusive) and a conversion premium of 30%.

	SHARE OF SHAREHOLDERS' EQUITY (€)		
	AN AVERAGE SHARE PRICE EQUAL TO 110% OF THE NOMINAL UNIT VALUE OF THE BOND, I.E. €50.96	AN AVERAGE SHARE PRICE EQUAL TO 150% OF THE NOMINAL UNIT VALUE OF THE BOND, I.E. €69.50	AN AVERAGE SHARE PRICE EQUAL TO 200% OF THE NOMINAL UNIT VALUE OF THE BOND, I.E. €92.66
Before issue of the Bonds	43.28	43.28	43.28
After issue of the Bonds and exercise of the right to share allocation	43.34	43.98	45.22

#### Impact of the issue on the shareholder's situation

For illustrative purposes, assuming that the Company elects to remit an amount in cash corresponding to the nominal value per unit of the Bonds and an amount in shares corresponding to the difference between the conversion value and the nominal unit value in the event of the exercise of the share allotment right

(knowing that the Company may opt for any other combination of payment in shares and cash), the impact of the issue of new shares upon exercising the right to share allotment for all of the Bonds on the capital interest of a shareholder holding 1% of the Company's share capital of prior to the issue and who does not subscribe to it would be as follows:

Calculations based on the number of shares constituting the share capital of the Company as of 30 June 2016, of a share price of €35.6380 (arithmetic average of the average prices weighted by the daily trading volumes of the share as recorded on Euronext Paris during a period of three trading days, 29 September 2016 inclusive) and a conversion premium of 30%.

	SHAREHOLDER INTEREST (%)		
	AN AVERAGE SHARE PRICE EQUAL TO 110% OF THE NOMINAL UNIT VALUE OF THE BOND, I.E. €50.96	AN AVERAGE SHARE PRICE EQUAL TO 150% OF THE NOMINAL UNIT VALUE OF THE BOND, I.E. €69.50	AN AVERAGE SHARE PRICE EQUAL TO 200% OF THE NOMINAL UNIT VALUE OF THE BOND, I.E. €92.66
Before issue of the Bonds	1.00%	1.00%	1.00%
After issue of the Bonds and exercise of the right to share allocation	0.99%	0.97%	0.96%

#### THEORETICAL IMPACT ON THE MARKET VALUE OF THE ERAMET SHARE

For guidance, we indicate below the theoretical impact of the bond issue on the current market value of the ERAMET share, as it results from the average of the last 20 trading prices preceding the issue.

	NUMBER OF SHARES	MARKET VALUE (€)
Before issue of the bonds	26,543,218	32.77
After issue of the bonds and exercise of the right to share allocation	28,701,646	33.79

The stock market value was obtained by taking the market capitalisation before the transaction, corresponding to the average share price per share of the 20 trading days prior to the issue decided on 27 September 2016 (€32.77), multiplied by the number of shares issued on 31 August 2016, to which was added the proceeds from the number of shares underlying the bonds (i.e. 2,158,428 shares) and the issue price (i.e. €46.33) and dividing this by the sum of the number of shares and shares underlying the Bonds.

It is stated that this theoretical approach is given purely for guidance and does not prejudge the future development of the share.

Compiled in Paris, 9 November 2016

The Board of Directors

# 7.2.8 SUPPLEMENTARY REPORT BY THE STATUTORY AUDITORS ON THE OFFERING OF NET SHARE SETTLED UNDATED BONDS CONVERTIBLE INTO NEW SHARES (ODIRNAN) WITHOUT PREFERENTIAL SUBSCRIPTION RIGHTS

To the Shareholders,

In our capacity as Statutory Auditors of your Company and in compliance with Article R. 225-116 of the French Commercial Code, we hereby present a report that supplements our report of 20 February 2015 on the issue, without preferential subscription rights and by public offering, of (a) ordinary shares of the Company, or (b) securities other than shares, giving the right, directly or indirectly, by conversion, exchange, redemption, presentation of a warrant or in any other way to the allocation, at any time or on set dates, of securities which, for this purpose, will be issued in respect of a share of the share capital, or (c) warrants that give their holders the right to subscribe for securities representing a share of the share capital of the Company, it being specified that these securities may be issued to remunerate securities that would be tendered to the Company as part of a public exchange offer for securities meeting the conditions laid down in Article L. 225-148 of the French Commercial Code, authorised by your General Shareholders' Meeting of 29 May 2015.

This Meeting had delegated to the Board of Directors, with the right to sub-delegate, the authority to decide on such a transaction within a period of twenty-six months, for a maximum nominal amount of €16,000,000.

**KPMG Audit** Denis Marangé Making use of this delegation, the Board of Directors decided at its meeting of 23 September 2016 (i) to proceed with the issue, without preferential subscription rights but with a priority subscription period for shareholders, and by public offering and (ii) the admission to trading on the Euronext Paris regulated market of a bond issue, represented by net share settled undated bonds convertible into new shares ("ODIRNAN") with a nominal value of approximately €100,000,000, and sub-delegated to the Chairman and CEO the necessary powers to decide on the launch of the issue and its timing.

Making use of this sub-delegation, the Chairman and CEO, in his decision of 27 September 2016, decided to issue the ODIRNAN offering for a nominal amount of approximately  $\[ \in \]$  100,000,000. The maximum capital increase that may result from this issue amounts to  $\[ \in \]$  6,583,205.4.

Your Board of Directors, in its meeting of 9 November 2016, noted the final completion of the transaction.

It is the responsibility of the Board of Directors to establish a supplementary report in accordance with Articles R. 225-115 *et seq.* of the French Commercial Code. It is our responsibility to give our opinion on the accuracy of the figures taken from the interim financial statements, on the proposed cancellation of preferential subscription rights and on certain other information concerning the issue, provided in this report.

We have implemented the procedures we considered necessary in accordance with the professional standards of the national auditing body (Compagnie nationale des commissaires aux comptes) relating to this engagement. These procedures included the verification of:

 the accuracy of the figures taken from the interim financial statements of the Company and of the consolidated interim financial position prepared

> Paris-La Défense, 23 November 2016 French original signed by The Statutory Auditors

under the responsibility of the Board of Directors to 30 June 2016, using the same methods and the same layout as the previous annual and consolidated accounts. These interim financial statements entailed work on our part consisting of interviews with members of management responsible for financial and accounting matters to verify that they have been prepared using the same accounting principles and the same evaluation and presentation methods as those used in the preparation of the previous annual and consolidated accounts and to implement analytical procedures;

- compliance of the terms of the transaction with the delegation given by the General Shareholders' Meeting;
- the information provided in the supplementary report of the Board of Directors on the choice of elements for calculating the issue price of the shares and the final amount.

We have no comment to make on:

- the accuracy of the figures taken from these interim financial statements and provided in the report of the Board of Directors;
- compliance of the terms of the transaction with the delegation given by your General Shareholders' Meeting of 29 May 2015 and the information provided to shareholders:
- the choice of elements for calculating the issue price of the shares and the final amount;
- the presentation of the impact of the issue on the situation of holders of shares and securities convertible into shares valued relative to equity and the market value of the share;
- the cancellation of preferential subscription rights upon which you had previously voted.

Ernst & Young Audit

Jean-Roch Varon

# 7.2.9 DESCRIPTION OF THE SHARE BUY-BACK PROGRAMME

# 7.2.9.1 REVIEW OF THE 2016 BUY-BACK PROGRAMME

The Combined General Assembly of 27 May 2016 authorised the Company to repurchase its own shares within the limit of 10% of the share capital and for a maximum purchase price of €300 per share, the maximum amount payable by the Company being €796,296,300. This authorisation expires at the Ordinary General Assembly calling to approve the 2016 financial statements and has been given for the purpose of:

- supporting the share price via a liquidity contract with a market maker, in accordance with the AMAFI code of conduct recognised by the AMF;
- their retention or remittance (by way of exchange, payment, or otherwise) in the context of external growth transactions;
- the delivery of shares upon the exercise of rights attached to securities giving access to the share capital by redemption, conversion, exchange or otherwise:
- The implementation of any stock option plan of the Company pursuant to the provisions of Articles
   L. 225-177 and following the Commercial Code;

- The granting of free shares under the provisions of Articles L. 225-197-1 and following of the Commercial Code:
- The allocation or the transfer of shares to the employees with respect to their participation in the benefits of the expansion of the Company, or the implementation of any employee savings plan under the conditions stipulated by the law, in particular, the Articles L. 3332-1 et seq. the Labour Code;
- their cancellation, in accordance with the 34<sup>th</sup> resolution of the Combined General Assembly of 29 May 2015, authorising the reduction of the share capital of the Company for a period of twenty-six months.

#### 7.2.9.2 DETAILS OF THE PURCHASE AND SALE OF TREASURY SHARES DURING THE YEAR (ARTICLE L. 225-211 OF THE FRENCH COMMERCIAL CODE)

The table below summarises the treasury stock transactions that were made by the Company between 1 January and 31 December 2016.

		MARKET MAKER <sup>(1)</sup>	ALLOCATIONS FOR EMPLOYEES(2)	TOTAL
Position as of 1 January 2015		89,601	140,450	230,051
As a percentage of capital	26,543,218	0.34%	0.53%	0.87%
Final allocation of free shares			(45,393)	(45,393)
Purchases		218,088		218,088
Sales		(184,470)		(184,470)
Position as of 31 December 2015		123,219	95,057	218,276
As a percentage of capital	26,543,218	0.46%	0.36%	0.82%
Final allocation of free shares			(51,547)	(51,547)
Purchasess		336,428		336,428
Sales		(397,356)		(397,356)
Position as of 31 December 2016	,	62,291	43,510	105,801
As a percentage of capital	26,550,443	0.23%	0.16%	0.40%

<sup>(1)</sup> Liquidity contract signed with Exane BNP Paribas.

During the year, 336,428 shares were purchased at an average price of  $\in$  33.80 and 397,356 shares were sold at an average price of  $\in$  35.04.

The book value of the portfolio of 105,801 shares with a nominal value of €3.05 per share, held as of 31 December 2016, amounted to €14.0 million, with a market value, on the same date, of €56.74 per share, or €6.0 million.

The Company does not use derivatives during the year

#### 7.2.9.3 LIQUIDITY CONTRACT

To ensure minimum liquidity at any time of its title, the Company has implemented a liquidity contract with Exane BNP Paribas since 18 July 2003. This liquidity contract complies with the AMAFI charter. The summary of the stock market operations is given in the details of the purchase and sale transactions carried out above. With a close-out date of 31 December 2016, the following means were included in the liquidity account: 58,974 ERAMET shares and €4,832,159.

# 7.2.9.4 DESCRIPTION OF THE 2016 SHARE BUYBACK PROGRAMME

#### LEGAL FRAMEWORK

In accordance with the provisions of Article 241-2 of the general regulations of the *Autorité des Marchés Financiers* (French Financial Markets Regulatior), the aim of this description is to state the purposes, terms and conditions of the Company's share buyback program. This programme, which falls within the scope of Article

<sup>(2)</sup> Instructions to buy back 250,000 shares (ceiling reached in 2013).

L. 225-209 of the Commercial Code, will be subject to authorisation by the General Assembly of 23 May 2017, meeting the quorum and majority requirements in ordinary matters.

# NUMBER OF SHARES AND PORTION OF CAPITAL HELD BY THE COMPANY

As of 31 December 2016, the share capital consisted of 26,550,443 shares.

On that date, the Company held 105,801 treasury shares, representing 0.40% of share capital.

# BREAKDOWN BY EQUITY SECURITIES OBJECTIVES HELD BY THE COMPANY

As of 31 December 2016, 105,801 treasury shares held by the Company were distributed as follows by objective:

- Market maker (liquidity contracts): 62,291 shares;
- Allocation to employees: 43,510 shares.

# OBJECTIVES OF THE NEW SHARE BUYBACK PROGRAMME

The objectives of this programme are:

- supporting the share price via a liquidity contract with a market maker, in accordance with the AMAFI code of conduct recognised by the AMF;
- the delivery of shares upon the exercise of rights attached to securities giving access to the share capital by redemption, conversion, exchange or otherwise;
- the implementation of any stock option plan of the Company pursuant to the provisions of Articles L. 225-177 and following the Commercial Code;
- the allocation of free shares under the provisions of Articles L. 225-197-1 et seq. the French Commercial Code;
- the allocation or the transfer of shares to the employees with respect to their participation in the benefits of the expansion of the Company, or

the implementation of any employee savings plan under the conditions stipulated by the law, in particular, the Articles L. 3332-1 *et seq.* the Labour Code;

 their cancellation, in accordance with the 26<sup>th</sup> resolution of the Combined General Assembly of 23 May 2017, authorising the reduction of the share capital of the Company for a period of twenty-six months.

#### MAXIMUM SHARE OF CAPITAL, MAXIMUM NUMBER AND CHARACTERISTICS OF EQUITY SECURITIES

10% of the share capital as of 31 December 2016, being 2,655,044 shares before deducting the shares held by the Company

The ERAMET shares are listed on Euronext Paris (ISIN code: FR0000131757).

The maximum purchase price would be €300 per share.

The maximum amount allocated to these acquisitions would be €796,513,200 for 2,655,044 shares representing 10% of the Company's share capital.

#### TERMS OF REPURCHASE

Shares, disposals, and transfers may be made by any means on the market or over the counter, including by transactions in blocks of securities or via derivatives, provided that the resolution proposed to the vote of the shareholders does not limit the part of the programme which can be realised by purchase of blocks of titles.

The Company specifies that in the event of the implementation of derivatives, the objective of the Company would cover optional positions taken by the issuer (purchase options or subscription of shares granted to Group employees, debt securities giving access to the capital of the issuer) The use of derivatives will more specifically consist of buying call options and the Company will not be required to use sales of put options.

#### DURATION OF THE BUYBACK PROGRAMME

The validity of the programme is limited to a period ending with the General Assembly approving the accounts for the year 2017.

# 7.3 INFORMATION ABOUT THE COMPANY

# 7.3.1 CORPORATE NAME (ARTICLE 2 OF THE BYLAWS)

ERAMET. In this document, the Society is called "the Company" or "the issuer"; the Group consists of ERAMET and its subsidiaries are designated as "the Group".

# 7.3.2 REGISTRATION NUMBER OF THE COMPANY

The Company is registered in the Paris Trade and Companies Register under the number 632 045 381 and under the SIRET number 632 045 381 000 27. Its industry is research and exploitation of mineral deposits of any nature, metallurgy of all metals and alloys, and their trading.

# 7.3.3 DATE OF INCORPORATION AND DURATION OF THE COMPANY (ARTICLE 5 OF THE BYLAWS)

The Company has been incorporated for a period of 99 years commencing on 23 September 1963, expiring 23 September 2062, except in the case of early dissolution or extension.

# 7.3.4 HEADQUARTERS (ARTICLE 4 OF THE BYLAWS)

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# 7.3.5 LEGAL FORM AND APPLICABLE LAW

ERAMET is a limited company under French law, the Board of Directors, governed by the provisions of Articles L. 224-1 and the following of the Commercial Code (Legislative and regulatory section) and the provisions of its statutes.

# 7.3.6 LEGAL AUDIT OF THE COMPANY (ARTICLE 19 OF THE BYLAWS)

According to the law, the legal audit of the Company is provided by two Statutory Auditors and two alternate Statutory Auditors.

According to Article 19 of the bylaws, the Auditors must be nationals of one of the states of the European Union.

# 7.3.7 CORPORATE PURPOSE (ARTICLE 3 OF THE BYLAWS)

"The object of the Company in all countries is the research and exploitation of mineral deposits of all kinds, the metallurgy of all metals and alloys, and their trading.

To this end, it operates directly, or indirectly, by way of participation in the following activities:

research, acquisition, leasehold, alienation, concession and operation of all mines and quarries of any nature whatsoever;

- treatment, processing and sale of all ores, mineral substances, and metals, as well as their by-products, alloys, and all derivatives;
- the manufacture and marketing of all products in the composition of which the aforesaid materials or substances are incorporated;
- more generally, all operations directly or indirectly related to the above items, or still to promote the development of corporate interests.

To achieve this objective, the Company may:

- create, acquire, sell, exchange, take or lease, with or without a promise to sell, manage and exploit directly or indirectly all industrial and commercial establishments, factories, sites, and premises, movable and immovable objects;
- obtain or acquire any patents, licenses, processes and trademarks, use, assign, or bring them, grant licenses in any country;
- generally carry out all commercial, industrial, financial, movable or immovable transactions, which may relate, directly or indirectly, to the Company's purpose or which may facilitate its implementation. It may act, directly or indirectly, on its own behalf or on behalf of third parties and either alone or in association, partnership, or Company, with any other companies or persons and carry out, directly or indirectly, in France or abroad, under whatever form it may be, the operations falling within its purpose. It may take, in any form, all interests and participations, in all companies or enterprises, French or foreign, such as to favour the development of its own affairs."

# 7.3.8 FISCAL YEAR (ARTICLE 23 OF THE BYLAWS)

The financial year, of twelve months, begins on 1 January and ends on 31 December of each year.

#### 7.3.9 GENERAL ASSEMBLY

# 7.3.9.1 CONVENING AND CONDITIONS FOR ADMISSION (ARTICLES 20 TO 22 OF THE BYLAWS)

#### COMPOSITION

The General Assembly is composed of all the shareholders of the Company, regardless of their number of shares.

#### CONVOCATIONS

The General Assembly is convened and deliberates in accordance with the provisions of the Commercial Code and Articles 20 to 22 of the bylaws.

Meetings are held at the headquarters office or any other place within the same department specified in the meeting notice.

#### CONDITIONS OF ADMISSION

Any shareholder has the right to participate in the Assemblies, either on his own behalf or by being represented by another shareholder, his spouse, the partner with whom he has entered into a civil union, or by any other natural or legal person of his choice under the conditions provided for by the regulations in force.

Holders of registered shares and holders of bearer shares must complete the formalities prescribed by the regulations in force. These formalities must have been completed no later than the second business day preceding the Assembly at midnight Paris time prior to the convening of the Assembly. Shareholders are also entitled to vote by correspondence in accordance with Articles L. 225-107 and R. 225-75 et seq. of the French Commercial Code, by means of a form to be sent to the Company at least three days before the meeting.

If the Board of Directors decides at the time of the convening of the Assembly, the participation in the Assembly by videoconference or by any means of telecommunication and remote transmission, including the Internet, is authorised in accordance with the regulations. If applicable, this decision is communicated in the meeting notice published in the Bulletin of Mandatory Legal Notices.

# 7.3.9.2 UNDIVIDED, SPLIT, PLEDGED OR SEQUESTERED SHARES

In the absence of specific statutory provisions, and pursuant to the provisions of Article L. 225-110 of the Commercial Code, any holder of an undivided share, a split share (bare owner and beneficiary), a pledged share or a sequestrated share, is called to the Assembly and may attend, subject to compliance with the legal or statutory provisions below with respect to the exercise of voting rights.

# 7.3.9.3 CONDITIONS FOR EXERCISE OF VOTING RIGHTS (ARTICLES 8 AND 20 OF THE BYLAWS)

Each shareholder has as many votes as the shares he owns or represents, subject to the double voting rights attached to certain shares. The Extraordinary Shareholders' Assembly convened on 21 July 1999 has in fact, conferred a double voting right to each fully paid-up share for which a nominal registration has been valid for at least two years in the name of the same shareholder, in effect from 1 January 2002,

Shares granted free of charge, with respect to an incorporation of reserves, profits, or issue premiums, on the basis of old shares with double voting rights, also confer double voting rights at the end of a period of two years.

Double voting rights cease for any share which has been converted into bearer form or transferred, except by law, to any transfer by succession, liquidation of community property between spouses or a family donation, or a merger or division of the shareholding company.

In accordance with the law, double voting rights may only be abolished by a decision of the Extraordinary General Assembly and after ratification by the Special Shareholders' Assembly.

#### **ELECTRONIC VOTING**

Any shareholder may also, if the Board of Directors so decides at the time of the convening of the Assembly, transmit a vote by correspondence or proxy, by any means of teletransmission, including the Internet, in accordance with the regulations applicable at the time of use.

In the case of the use of an electronic form, the signature of the shareholder may take the form either of a secure signature or of a reliable identification process

guaranteeing its connection with the act to which it relates, specifically consisting of an identifier and a password. If applicable, this decision is communicated in the meeting notice published in the Bulletin of Mandatory Legal Notices.

Proxies or votes expressed electronically in this way before the meeting, and the confirmation of receipt given in reply, shall be regarded as irrevocable written instructions enforceable on all parties, it being stipulated that if the shares are sold before midnight, Paris time, on the second business day preceding the meeting, the Company shall invalidate or amend, as the case may be, proxies or votes expressed before such date and time.

## UNDIVIDED, SPLIT, PLEDGED OR SEQUESTERED SHARES

In the absence of specific statutory provisions and pursuant to the provisions of Article L. 225-110 of the Commercial Code, the voting right is exercised by the usufructuary at the Ordinary General Assembly, by the bare owner in the Extraordinary General Assembly, by one of the undivided co-owners or by a single representative in the case of co-owners of undivided shares and by the owner of securities pledged or under escrow.

#### 7.3.10 TRANSMISSION OF SHARES

Since the elimination of the approval clause adopted by the Assembly of 15 June 1994, shares are exchanged freely subject to compliance with the rules applicable to companies whose shares are admitted to trading on a regulated market.

# 7.3.11 IDENTIFICATION OF SHAREHOLDERS

# 7.3.11.1 CROSSING THRESHOLDS/DECLARATION OF INTENT

#### LEGAL DECLARATIONS

Under Articles L. 233-7 to L. 233-11 of the Commercial Code, any natural or legal person, acting alone or in

concert, holding a number of shares representing more than one twentieth, one tenth, three-twentieths, one fifth, one quarter, three-tenths, one third, one half, two thirds, eighteen twentieths or nineteen twentieths of the Company's capital and/or voting rights must inform, on time, the *Autorité des Marchés Financiers* (French Financial Markets Regulator) and the Company-by registered letter with acknowledgement of receipt—the total number of shares and/or voting rights in his possession. The same people are also required to inform the Company, when their participation falls below any of the above mentioned thresholds.

Finally, this reporting obligation is supplemented by the legal obligation to report, on time, the objectives over the next six months for any person crossing, upward or downward, the above mentioned thresholds of one tenth, three-twentieths, one fifth, or one quarter.

In the event of non-compliance with these reporting obligations, the provisions of Article L. 233-14 of the said Code shall be applied.

#### ADDITIONAL STATUTORY DECLARATIONS

Since the amendment of Article 9 of the bylaws by the Assembly on 15 June 1994, any natural or legal person, acting alone or in concert, who comes to hold or ceases to hold a fraction equal to 1% of the capital and/or voting rights, or any multiple thereof, is required to inform theCompany within ten days by registered letter with acknowledgement of receipt addressed to the Company's headquarters office, including the number of shares and voting rights held.

Failure to do so results in the deprivation of voting rights for the shares or voting rights exceeding the fraction that should have been declared for a period of two years commencing from the regularisation and on request, at an Assembly, of one or more shareholders owning 5% of capital or voting rights of an Assembly.

#### 7.3.11.2 IDENTIFIABLE BEARER SHARES

Pursuant to Article L. 228-2 of the Commercial Code and Article 9 of the bylaws, the Company may at any time appeal to Euroclear SA for the procedure for identifying the holders of bearer shares called "identifiable bearer share" (TPI).

#### 7.3.11.3 PUBLICLY MADE DECLARATIONS OF THRESHOLD CROSSING

DATE	AMF DECISION NO°	SUBJECT
03/08/1999	199C1045	Declaration of threshold crossing (ERAP-CEIR-SORAME). Declaration of intent.  Appointment of five people qualified as directors. Reminder: exemption from the obligation to file a public tender offer.
29/12/1999	199C2064	Declaration of threshold crossing COGEMA replaces ERAP.
30/12/1999	199C2068	Declaration of threshold crossing AFD replaces ERAP.
25/07/2001	199C0921	Draft amendment to the shareholders agreement: reclassification of ERAMET shares held by COGEMA at CEA Industrie.
12/09/2001	201C1140	Declaration of threshold crossing Amendment to the shareholders' agreement following the substitution of COGEMA by AREVA.
20/12/2004	204C1559	Declaration of threshold crossing and declaration of intent. Substitution of Maaldrift BV by Carlo Tassara International.
14/02/2006	206C0296	Declaration of threshold crossing upward of 5.0034% of capital and 2.98% of the voting rights of M & G Investment Management Limited.
17/01/2007	207C0134	Declaration of threshold crossing upward of 13.16% of capital and 7.74% of the votes and declaration of intent by Carlo Tassara France.
18/01/2007	207C0137	Declaration of threshold crossing downward of (0%) by Carlo Tassara International.
24/07/2007	207C1569	Declaration of threshold crossing downward of 4.14% of capital and 4.81% of voting rights of STCPI.
30/05/2008	208C1042	Addendum to the Shareholder Agreement (CEIR-SORAME-AREVA) of 17/06/99
03/06/2008	208C1083	Declaration of threshold crossing downward of 4.95% of capital and 2.93% of the voting rights of M & G Investment Management Limited.
21/07/2009	209C1013	Amendment to the SORAME-CEIR Agreement of 19/07/99
20/03/2012	212C0416	Declaration of the threshold crossing upward and downward (4.92% of the capital and 2.94% of the voting rights) of BlackRock Inc.
12/04/2012	212C0486	Advertising of the SORAME-CEIR-FSI Shareholders' Agreement clauses
21/05/2012	212C0634	Declaration of threshold crossing downward of AREVA-End of SORAME-CEIR AREVA Shareholders' Agreement.
23/05/2012	212C0647	Declaration of threshold crossing upward for FSI
22/07/2013	213C1027	Declaration of threshold crossing upward of BPI Group through BPIfrance Participations (ex-FSI)
22/07/2013	213C1028	Declaration of participation of the Caisse des Dépôts et Consignations through the BPI Groupe
21/07/2014	214C1461	Declaration of threshold crossing upward of Caisse des Dépôts et Consignations and BPI Group, through BPI France Participations, as a result of the allocation of double voting rights.
28/07/2016	216C1753	Consideration of the consequences of the change within the Group (change of control of FSI Equation without affecting the equilibrium of the controlling group ERAMET, the SORAME-CEIR-FSI Equation shareholder agreement remaining unchanged)
02/09/2016	216C1953	Declaration of threshold crossing upward of the Agence de Participations de l'État, together with the FSI Equation which it controls and the companies SORAME and CEIR
02/09/2016	216C1957	Declaration of threshold crossing downward of Bpifrance, through the intermediary Bpifrance Participations and the end of collaborative action with FSI Equation, SORAME and CEIR
05/09/2016	216C1971	Declaration of threshold crossing downward of Caisse des Dépôts et Consignations, through the intermediary Bpifrance Participations
20/12/2016	216C2860	Declaration of threshold crossing upward of Intesa SanPaolo S.p.A.
21/12/2016	216C2884	Declaration of threshold crossing downward of Carlo Tassara France SAS

# 7.3.12 ELEMENTS LIKELY TO HAVE AN IMPACT IN THE EVENT OF A PUBLIC OFFER

In addition to the information on threshold crossings, double voting rights, shareholder agreements and commitments detailed in this Chapter, the following items are to be noted.

# 7.3.12.1 ABILITY TO USE THE CAPITAL INCREASE AUTHORISATIONS DURING PUBLIC OFFERS

According to the new wording of Article L. 233-32 of the Commercial Code, by the Law No. 2014-384 of 29 March 2014, the capital increase authorisations of the nineteenth to twenty-third resolutions put to vote at the General Assembly in May 2017 to increase the capital-authorisations with preferential subscription rights (19th), without preferential subscription rights through a public offering (20th) or private placement (21st) by subsidiaries (22nd) or in consideration of contributions in kind (23rd), within the limit of a nominal amount of €24 million for resolutions 19 to 23 (i.e. a little less than a third of the share capital)-will be used during a takeover bid or exchange by the Board of Directors, subject to the powers expressly granted to general meetings and within the limits of the corporate interest of the Company.

#### 7.3.12.2 LOANS

The Multicurrency Revolving Credit Facility Agreement (RCF) described in Note 7 to the consolidated accounts (Chapter 6.1), which was drawn up at the beginning of January 2016 for an amount of €980 million, provides for the possibility for each bank, in the event of a change of control of the Company, to notify the cancellation of its commitment and the early repayment of its participation in the advances in progress.

In addition, the bond loan with an option to repay in cash and/or new shares (ODIRNAN) in the amount of

approximately €100 million described in Note 7 to the consolidated financial statements provides:

- the possibility of early redemption at the option of the Company within forty-five days following the change of control of the Company for all outstanding bonds;
- in the event that the Company decides not to proceed with the early repayment of the bonds following the change of control, an automatic surcharge of 500 basis points of the nominal rate will apply as of the first interest period following said change of control.

The bond loans described in Note 7 to the consolidated financial statements for a total amount of €625 million include a change of control clause that could lead to the mandatory early redemption of bond loans at the request of each bondholder in the event of a change of control of the Company.

# 7.4 SHAREHOLDERS' AGREEMENT

Pursuant to a Shareholders' Agreement concluded on 16 March 2012, which entered into force on 16 May 2012 and renewed on 31 December 2016 for a period of one year expiring on 31 December 2017, which was the subject of a decision and information from the Autorité des Marchés Financiers (French Financial Markets Regulator) under number 212C0647 at the time of its conclusion, and a decision and information from the Autorité des Marchés Financiers under number 216C1753 relating to the development of the Group during the acquisition by the Agence des Participations de l'État of the entire share capital of FSI Equation, the Company is majority controlled by a group of shareholders having declared together, including:

- a subgroup between SORAME and CEIR, companies controlled by the Duval family, under a concurrent shareholders' agreement dated 19 July 1999, which came into force on 21 July 1999 and was the subject of an addendum On 13 July 2009;
- the *Agence de Participation de l'État* (APE), through its subsidiary FSI Equation.

The Shareholders' Agreement provides that the Board of Directors includes five directors proposed by SORAME/CEIR, three directors nominated by the APE, five directors must be natural persons, including three individuals proposed by the subgroup SORAME/CEIR and two proposed by the APE, selected on the basis of their competence and independence, two directors nominated by the Société Territoriale Calédonienne de Participation Industrielle (hereinafter "STCPI"), a director proposed by agreement between SORAME/CEIR and APE and a director called upon to chair the ERAMET Board of Directors.

The provisions of the Shareholders' Agreement referred to above as well as those of the subgroup are contained in the main extracts of the AMF's decision and information texts No. 216C1753, No. 212C0486 and No. 209C1013 (addendum of 13 July 2009) reproduced below (the full text of these texts is available on the AMF website).

# 7.4.1 DECISION AND INFORMATION NO. 216C1753 OF 28 JULY 2016

On 29 August 2016, the *Agence des Participations de l'État*, acting on behalf of the French State, acquired the entire capital of FSI Equation, which holds 6,810,317 ERAMET shares, i.e. 25.66% of the capital of this Company.

In this context, Agence des Participations de l'Etat filed a request for dismissal of a proposed public offer for the ERAMET shares with the AMF, which issued a decision No. 216C1753 on 28 July 2016, the terms of which are reproduced below.

"At its meeting of 13 July 2016, the Autorité des Marchés Financiers (AMF) considered a request to dismiss a proposed public offer for the ERAMET shares, which is part of the amendment to the shareholding of this company<sup>(1)</sup>. The group consists of SORAME<sup>(2)</sup> and CEIR<sup>(3)</sup> (both controlled by the Duval family) and the FSI Equation company<sup>(4)</sup> which holds 16,646,151 ERAMET shares, representing 33,292,302 voting rights, or 62.71% of the capital and 74.34% of voting rights of this company<sup>(5)</sup>, apportioned as follows:

	SHARES	% CAPITAL	VOTING RIGHTS	% VOTING RIGHTS
SORAME	8,051,838	30.33%	16,103,676	35.96%
CEIR	1,783,996	6.72%	3,567,992	7.97%
SORAME/CEIR subtotal	9,835,834	37.06%	19,671,668	43.93%
FCI Faccation	6 010 317	25 6604	12 (20 (24	30.41%
FSI Equation	6,810,317	25.66%	13,620,634	30.41%

The Agence des Participations de l'État, (APE), acting on behalf of the French State, intends to acquire, in the second half of 2016, the entire capital of FSI Equation, which holds 6,810,317 ERAMET shares, i.e. 25.66% of the share capital of this company. As a result of the APE acquisition of the entire share capital of FSI Equation, the direct shareholding of ERAMET will not be changed, so that the above-mentioned shareholding table will remain unchanged. Nevertheless, the APE replacing Bpifrance Participations in the control of FSI Equation and within the group formed with the SORAME-CEIR subgroup, it will indirectly increase the threshold of 30% of the voting rights of ERAMET and in collaboration with the subgroup SORAME-CEIR, the thresholds of 30% of the capital and voting rights of this company.

In this context, the APE has asked the Autorité des Marchés Financiers to note that there is no reason to file a public offer for the shares of ERAMET, particularly on the basis of Article 234-7 of the General Regulation.

In particular, the applicant contends that:

- ERAMET is controlled by a group composed of SORAME, CEIR and FSI Equation, which holds 74.34% of ERAMET's voting rights (including 30.41% of the voting rights held by FSI Equation), being the majority of voting rights in the Company;
- the subgroup SORAME-CEIR is predominant within the group it forms with FSI Equation<sup>(6)</sup> and the result of the proposed substitution operation

with the capital of the FSI Equation company, this predominance of the subgroup SORAME-CEIR will not be called into question insofar as the balance of the interests between the said shareholders in the capital of the ERAMET company will remain unchanged;

 the transaction will not entail any change in the terms of the exercise of power within ERAMET due to the absence of any modification of the provisions of the shareholders' agreement concluded on 16 March 2012 between the current collaborators, which provides, in particular, for the composition of the corporate bodies and the rules for consultation<sup>(6)</sup>.

On this basis, the AMF noted (i) that the change of control of the FSI Equation company, in favour of the APE, shall carry no implication about the balance of the group controlling the ERAMET company within which SORAME and CEIR companies remain predominant over FSI-equation, (ii) the shareholders' agreement between the subgroup SORAME-CEIR and FSI-equation remains unchanged, particularly with regard to modalities of the exercise of governance in ERAMET and, therefore, on the basis of Article 2347 of the general regulations there was no need for the compulsory filing of a draft public offer.

In the event of a modification of the agreements concluded or the respective interests of the collaborators, the AMF should be informed in order to assess the consequences of these changes with regard to the obligation to file a public offer."

# 7.4.2 DECISION AND INFORMATION NO. 212CO486 OF 12 APRIL 2012

The main clauses of the said agreement are as follows:

## COMPOSITION OF THE ERAMET BOARD OF DIRECTORS

The Board of Directors will be made up of five directors proposed by SORAME/CEIR, three directors proposed by the FSI, four directors who must be natural persons, of which two natural persons will be proposed by the SORAME/CEIR subgroup and two proposed by the FSI, selected on the basis of their competence and independence, two directors nominated by the Société Territoriale Calédonienne de Participation Industrielle (hereinafter "STCPI") and a director called upon to chair the Board of ERAMET.

This composition must be maintained except (i) a capital change of more than 10% of the share capital of ERAMET of the capital interests held at the signing of the Agreement, either by SORAME and CEIR or by the FSI, or (ii) participation of STCPI in ERAMET, in capital, constituting a reduction below 635,372 ERAMET shares.

<sup>(1)</sup> See, in particular, the communication issued by the French State (APE) on 27 July 2016.

<sup>(2)</sup> Research and Metallurgical Applications Company controlled by the Duval family.

<sup>(3)</sup> Compagnie d'Études Industrielles du Rouvray, controlled by the Duval family.

<sup>(4) 100%</sup> owned by Bpifrance Participations, itself 100% owned by Bpifrance SA, which is jointly controlled 50% by the public institution Bpifrance and 50% by the Caisse des Dépôts et Consignations.

<sup>(5)</sup> Based on a share capital of 26,543,218 shares representing 44,783,479 voting rights, under the second paragraph of Article 223-11 of the general regulations.

<sup>(6)</sup> See, in particular, D&I notices 212C0486 dated 12 April 2012 and 212C0647 dated 23 May 2012.

#### CHAIR, BOARD COMMITTEES

The parties (i.e. SORAME, CEIR and FSI) plan to consult before any appointment of a Chairman of the Board, a managing director, or a deputy CEO, or appointment of leaders of each of the three divisions of the ERAMET group The composition and duties of the committees of the Board of Directors, namely the selection committee, the remuneration committee, and the audit committee, are also defined. In the event of failure of the collaboration, the rules of general law apply.

#### STABILITY OF THE GROUP

#### COMMITMENT OF THE COLLABORATION

The parties agree to consult before any meeting of the ERAMET Board of Directors and general meeting of shareholders with a view to a concerted exercise of their voting rights, and the implementation of a common policy vis-à-vis it, and provide that, in instances of disagreement on a matter before the Board, they will ensure that its decision be postponed to its next meeting.<sup>(1)</sup>

#### **COMMITMENT TO HOLD**

The companies SORAME and CEIR undertake to hold the first 70% and the second 30% of their total interest in ERAMET and, as long as the FSI does not increase its overall interest in ERAMET, to retain 2% more of the ERAMET capital than FSI, which ensures the overall group the retention of 51% of the ERAMET voting rights as long as the participation of the FSI in ERAMET will remain equal to 25.68% of the capital. However, the SORAME/CEIR subgroup remains free to sell at least 80% of its interest in ERAMET, and its commitment to retention ceases if the ISF exercises its option to purchase the ERAMET shares from SORAME.

#### OBLIGATIONS IN CASE OF PUBLIC OFFER

Each party undertakes to make or execute in due time the declarations and obligations to which it is bound, to bear only the penalties for their possible non-performance, and to deposit and assume alone the mandatory public tender offer for its possible acquisitions of ERAMET shares, or any of its acts, or a breach of one of its obligations.

# OPTIONS TO BUY AND SELL THE ERAMET SHARES OF SORAME AND CEIR

SORAME grants to the FSI an indivisible purchase option for its ERAMET shares, exercisable in the event of a transfer of shares or one or more shares of general partners or of any transaction on SORAME that results in the Duval family losing control of SORAME. CEIR grants the FSI an indivisible purchase option for all of its ERAMET shares, and the FSI grants it an indivisible put option for all of its ERAMET shares. These two options will be exercisable upon exercise by the FSI of its option to purchase the ERAMET shares held by SORAME.

#### RIGHTS OF RECIPROCAL FIRST REFUSAL (PRE-Emption)

The parties agree to a right of reciprocal first refusal, (i) in case of a firm intention to sell on the market to unidentified third parties on an *ad hoc* basis or by accelerated bookbuilding (ABB) or by a fully marketed offer (FMO), a specified number of ERAMET shares; (ii) In the event of a proposed assignment to one or more identified third parties of one or more ERAMET share blocks, by application or off the market; and in the case of plans to contribute all or part of its interest in ERAMET, paid for by the shares of the company benefiting from the contribution.

Avoid the right of first refusal:

- transfers in the market: For SORAME and CEIR, as long as the commitment to retain and the FSI are respected, provided that it retains 20% of ERAMET's capital.
- transfers to a third party or several third parties identified or proposed contribution: for SORAME and CEIR, as long as the commitment to retain is respected and that a block of more than 5% of the capital is not sold to the same group of investors and for the ISF, as long as it keeps 20%

of the ERAMET capital and that more than 5% of the capital is not sold to the same group of investors.

Generally, they are exempt from the obligation of notification and rights of first refusal (i) free transmissions, upon death or *inter vivos*, to individuals, (ii) assignments within the subgroup SORAME/CEIR, provided that the first retains at least 70%, and the second 30% at most of their overall participation in ERAMET, (iii) in case of merging SORAME and CEIR, if SORAME is the absorbent and remains controlled by the Duval family and (iv) in case of the FSI makes a transfer or contribution of its ERAMET shares to one of its subsidiaries, provided that the recipient adheres to the shareholders agreement and replaces the FSI in the resulting rights and obligations.

#### **DURATION**

The pact will enter into force on the actual transfer by AREVA to the FSI of the interest it holds in ERAMET. It is concluded for a fixed term ending 31 December 2016, and extends beyond by tacit agreement for periods of one year, failing its denunciation by one of the parties to the other, at least one month before the expiration of the current period The pact will cease immediately and automatically in the event of (i) a change of predominance within the global group due to acquisitions or share subscriptions by the FSI, (ii) transfer or contribution or transfer by one of the parties of more than 80% of its stake in ERAMET, or (iii) reduction to less than 15% of FSI's direct or indirect stake in ERAMET capital.

Consequently, the companies SORAMET and CEIR decided by addendum No. 2, concluded on 16 March 2012, to amend the duration clause of the shareholders' agreement which they concluded on 17 June 1999, already amended by an addendum No. 1 of 13 July 2009.

Finally, it is specified that the companies SORAME and CEIR have committed to the ISF to convert the required number of ERAMET shares to bearer so that the current interest of the SORAME/CEIR subgroup is not bound by more than 2% as a result of the loss of the double voting rights attached to the ERAMET shares sold to the FSI. After the sale of ERAMET shares, the companies SORAME and CEIR and the FSI will ask ERAMET to re-register all of their ERAMET shares in order to recover the double voting rights two years later.

(1) It is specified that in such a case, the parties are not required to agree and remain free to exercise their voting rights as they wish; in particular, they did not provide veto rights.

# 7.4.3 DECISION AND INFORMATION NO. 209C1013 OF 21 JULY 2009

By letter dated 16 July 2009, the AMF has been the recipient of a shareholder agreement entitled "Amendment No.1 to the ERAMET Shareholders' Agreement of 19 July 1999 between SORAME and CEIR" concluded on 13 July 2009 between the company SORAME, partnership limited by share capital, and the company CEIR, by simplified joint-stock.

A/ It is recalled that the companies SORAME and CEIR (companies controlled by the Duval family) concluded on 19 July 1999 a shareholders' agreement establishing them in concert for 10 years, effective 21 July 1999.

This pact planned, in particular:

- the inalienability of their ERAMET shares for five years, The inalienability of their ERAMET shares for five years, except for each of them, up to a maximum of 1.5% of the ERAMET share capital;
- complete freedom to sell between themselves their ERAMET shares, provided that SORAME continues to hold at least 70% of the ERAMET shares held by their collaboration and CEIR, a maximum of 30%, with the commitment to maintain this distribution between them in case of an increase in their holdings;
- reciprocal pre-emption rights over their ERAMET shares:
- a commitment to collaborate prior to any General Assembly of ERAMET, with a view to the concordant exercise of their voting rights for the implementation of a common policy for that company.

B/ It is further recalled that the companies SORAME and CEIR, certain members of the Duval family and AREVA are united by a shareholders' agreement establishing them in collaboration with ERAMET, which results from a private agreement as of 17 June 1999, and the supplementary agreement of 27 July 2001, having substituted AREVA for COGEMA, itself already substituted for ERAP on 1 December 1999, pursuant to the provisions of the said agreement.

Addendum No. 2 to the aforementioned private deed of 17 June 1999 was signed on 29 May 2008, by which the parties extended their agreement of collaboration until 31 December 2008, and made various modifications to it, and for that reason substituted, as of 29 May 2008, a new wording to the previous drafting of their shareholders' agreement as of 17 June 1999.

In the absence of denunciation by the parties before 15 December 2008 and then on 15 June 2009, the new agreement was tacitly extended twice, the last time from 1 July 2009, for a period of six months ending on 31 December 2009.

As of 16 July 2009, the parties to the agreement together hold 61.57% of the capital and 73.57% of the voting rights of ERAMET, broken down as follows:

	SHARES	% CAPITAL	VOTING RIGHTS	% VOTING RIGHTS
SORAME	7,818,919	29.37	15,637,838	35.16
CEIR	1,783,996	6.70	3,567,992	8.02
SORAME/CEIR subtotal	9,602,915	36.07	19,205,830	43.18
AREVA	6,787,277	25.39	13,514,554	30.63
Concert total	16,390,192	61.57	32,720,384	73.57

C/ CEIR and SORAME signed on 13 July 2009, an amendment to the agreement of 19 July 1999 described in point A above, by which it extended until 21 July 2014 their agreement of collaboration, by providing different modifications, and substituted for it as of 13 July 2009, a new wording to that of the shareholders' agreement of 19 July 1999.

The main clauses of the amendment between SORAME and CEIR are the following:

Stability of the group SORAME/CEIR: except in the
event of a sale representing at least 80% of the
group's interest in ERAMET and as long as AREVA
does not increase its stake in ERAMET by more than
2%, the parties undertake to retain the number of
shares and voting rights required for their subgroup
to remain predominant in the overall collaboration.

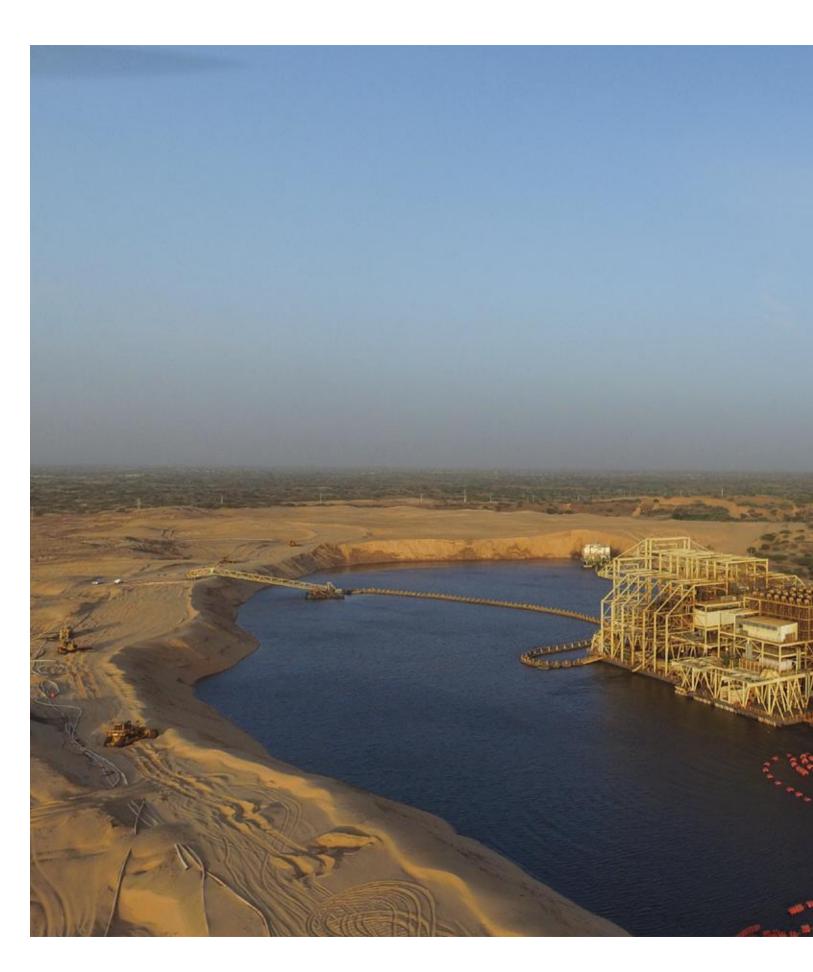
- Transfer of ERAMET shares between SORAME and CEIR: any sale of ERAMET shares may be carried out freely between the parties, provided that SORAME continues to hold at least 70% of ERAMET shares held by the subgroup and CEIR, a maximum of 30%.
- Increase in holdings by SORAME and CIER in ERAMET: the parties are free to increase their participation in ERAMET, provided that they do not increase their shareholding by more than 2% of the capital or voting rights in less than twelve months.
- Commitment to collaborate between the parties prior to any ERAMET General Assembly, with a view to the concordant exercise of their voting rights for the implementation of a common policy for ERAMET.

This agreement replaces the agreement of 19 July 1999. It shall be concluded for a period expiring on 21 July 2014 and shall thereafter be tacitly renewed for periods of two years, in the absence of its denunciation notified by either party with one month's notice before the expiry of the period in progress.

It shall cease, as well as the concerted action between the parties, in the event of the sale by one of the parties of more than 80% of its interest in ERAMET.

Furthermore, the distribution of directors on the Board and committees is detailed in Chapter 4 Governance of this document.

To the knowledge of ERAMET, there is no other agreement or pact.



#### **Chapter 8**

# GENERAL SHAREHOLDERS' MEETING-WORDING OF DRAFT RESOLUTIONS

300...... **8.1** Explanatory Note

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# 8.1 EXPLANATORY NOTE

Dear Shareholders,

Please find below an explanatory note regarding the resolutions proposed for voting at your General Meeting.

The **resolutions 1 and 2** concern the approval of the individual and consolidated financial statements for the previous year. The financial statements are set out in detail in the documents submitted to shareholders and are also commented on in the management report.

In the **resolution 3**, you are asked to approve the special report prepared by the Company's Statutory Auditors concerning the agreements referred to in Articles L. 225-38 *et seq*. of the French Commercial Code for the financial year ended 31 December 2016. This report provides an account of agreements previously made by your General Meeting which were ongoing in the previous financial year. Having already received approval from your General Meeting, these agreements will not be submitted to a vote at this Meeting.

The **resolution 4** proposes to the General Meeting to allocate the loss for the year to "retained earnings".

The **resolution 5** concerns the ratification of the co-option as director of Jean-Yves Gilet, nominated by the *Agence des Participations de l'État* (APE) and decided at the Board meeting of 23 September 2016, as a result of the resignation of Alexis Zajdenweber from his directorship with effect from 1 September 2016.

Until 1 September 2016, Jean-Yves Gilet was the permanent representative of FSI Equation, a subsidiary of the *Agence des participations de l'état* (APE). He was replaced by Alexis ZAJDENWEBER, Director of Energy Shareholdings at the *Agence des participations de l'État* (APE), who resigned from his position as ERAMET Director on the same date.

The **resolutions 6, 7, and 8** concern the reappointment of directors for a four-year term, whose current terms of office expire at the end of this meeting:

- reappointment of Michel Antsélévé, Special Advisor to the President of the Gabonese Republic, Head of the Mines, Hydrocarbon, Energy and Hydraulic Resources Department;
- reappointment of Philippe Gomès, member of parliament of the second constituency of New Caledonia;
- reappointment of Catherine Ronge (independent director), CEO of Weave Air, a strategy consultancy firm

The **resolution 9** proposes the appointment of Christine Coignard as a new director, replacing Frédéric Tona whose current term of office expires at the end of this meeting. Ms. Coignard is managing director and founding partner of Coignard & Haas GmbH, a strategy and development consulting firm.

The **resolution 10** concerns the appointment of Christel Bories as a new director, replacing Patrick Buffet, who is resigning with effect from the end of this meeting. Ms. Bories was appointed Deputy CEO by the Board of Directors on 23 February 2017 and will be proposed for appointment to succeed Patrick Buffet as Chairman and CEO at the end of this meeting.

After the vote on these resolutions, the composition of the Board will be as follows:

- Michel Antsélévé;
- Christel Bories;
- Christine Coignard (independent director);
- Édouard Duval;
- Georges Duval;
- SORAME, represented by Cyrille Duval;
- CEIR, represented by Nathalie Fournière;
- Marie-Axelle Gautier (director representing employees);
- FSI Equation, represented by Alexis Zajdenweber;

- Jean-Yves Gilet;
- Philippe Gomès:
- Manoëlle Lepoutre (independent director);
- Miriam Mäes (independent director);
- Pia Olders (director representing employees);
- Ferdinand Poaouteta:
- Catherine Ronge (independent director);
- Sonia Sikorav (independent director);
- Claude Tendil (independent director);
- Antoine Treuille.

In accordance with the provisions of new Article L. 225-37-2 of the French Commercial Code (laid down by Law 2016-1691 of 9 December 2016, known as "Sapin II"), the General Shareholders' Meeting is called upon to approve the **resolutions 11 and 12** concerning the principles and criteria for the determination, distribution and allocation of the fixed, variable and exceptional elements that make up the total remuneration and benefits of any kind attributable to Patrick Buffet and Christel Bories for financial year 2017. These elements are contained in Section 4 of the Registration Document, "Corporate Governance".

In accordance with the wording of Article L. 225-37-2, the General Shareholders' Meeting is required to approve any change to the above elements, including at each renewal of the term of office. If the General Shareholders' Meeting does not approve the resolution, the principles and criteria previously approved by shareholders continue to apply. In the absence of principles and criteria approved by the General Shareholders' Meeting, the remuneration is determined in accordance with the remuneration assigned in the previous year or, in the absence of remuneration assigned in the previous year, in accordance with existing practices within the Company. The payment of the variable and exceptional remuneration elements related to financial year 2017 is subject to approval by a General Shareholders' Meeting to be held in 2018 of the remuneration elements of the person concerned, in accordance with the new wording of Article L. 225-100 of the French Commercial Code laid down by Law 2016-1691.

By voting on the **resolutions 13, 14, and 15,** you are asked to approve the remuneration components falling due or granted to each Executive Corporate Officer, for the financial year ended 31 December 2016.

Pursuant to the recommendation of paragraph 26.2 of the AFEP-MEDEF Code as revised in November 2016 which, in accordance with Article L. 225-37 of the French Commercial Code, is the code of reference applicable to the Company, shareholders are invited to vote on the remuneration items falling due or granted for the financial year ended 31 December 2016 to each executive corporate officer of the Company, as set out in Section 4 of the registration document, "Corporate Governance".

Accordingly, in the **resolution 13**, you are invited to issue a favourable opinion on the following remuneration items falling due or granted to Patrick Buffet, Chairman and CEO, for the financial year ended 31 December 2016.

In the **resolution 14**, you are also invited to issue a favourable opinion on the following remuneration items falling due or granted to Georges Duval, Deputy CEO, whose term of office ended on 22 April 2016.

Finally, in the **resolution 15**, you are invited to issue a favourable opinion on the following remuneration items falling due or granted to Philippe Vecten, Deputy CEO, whose term of office ended on 22 April 2016.

The **resolution 16**, pursuant to the provisions of Article L. 225-209 of the French Commercial Code, requests the General Shareholders' Meeting to authorise the Board to renew the Company's share buyback programme in accordance with legal and regulatory provisions, by any means, including during a public offer period. The maximum buyback amount is 10% of the share capital and the maximum purchase price is €300 per share. This resolution concerns the annual renewal of this authorisation. The purpose of this authorisation is to allow the existing liquidity contract to continue, and to implement free share awards to employees through the allocation of existing shares.

The **resolution 17** is to adapt the global amount of attendance fees to the increase in the number of Board members since 2013 and to the market practice

in SBF 120 stock exchange index companies with a comparable workforce, as the median amount of fees paid by said companies is above the existing amount at ERAMET. Global amount is therefore increased from  $\[ \in \]$ 700,000 to  $\[ \in \]$ 950,000.

The 18<sup>th</sup>, 19<sup>th</sup>, 20<sup>th</sup>, 21<sup>st</sup>, 22<sup>nd</sup> and 23<sup>rd</sup> resolutions propose the renewal of authorisations previously agreed by the General Shareholders' Meeting of 29 May 2015 permitting the Board of Directors to carry out one or more capital increases:

- by incorporation of reserves or earnings up to a maximum par value of €24,000,000 (18<sup>th</sup> resolution);
- in cash with preferential subscription rights, up to a maximum par value of €24,000,000 (19<sup>th</sup> resolution);
- in cash without preferential subscription rights, up to a maximum par value of €16,000,000, via a public offer (20th resolution);
- in cash without preferential subscription rights, up to a maximum par value of €16,000,000, via a private placement (21st resolution);
- in cash without preferential subscription rights, up to a maximum par value of €16,000,000, via the issue of securities, by subsidiaries, granting access to the Company's share capital (22nd resolution);
- in consideration for a contribution in kind without preferential subscription rights, up to a maximum of 10% of the share capital (23<sup>rd</sup> resolution).

The powers delegated under **resolutions 19 to 23** are subject to an overall par value limit of €24,000,000 (that is, slightly less than one third of the share capital) proposed in the **24**<sup>th</sup> **resolution.** This resolution concerns the renewal of the arrangement approved by the General Shareholders' Meeting of 29 May 2015.

The issue of €100,000,000 of ODIRNAN shares, which received AMF approval (visa No. 14-448) on 26 September 2016, was carried out in accordance with the 28<sup>th</sup> resolution of the General Shareholders' Meeting of 29 May 2015 (capital increase in cash without preferential subscription rights up to a maximum nominal amount of €16,000,000 via a public offering).

According to the new wording of Article L. 233-32 of the French Commercial Code, imposed by Law No. 2014-384 of 29 March 2014, it is proposed that the capital increase authorisations specified in resolutions 19 to 23 to be submitted to the General Shareholders' Meeting-authorisations to increase share capital with preferential subscription rights (19th), without preferential subscription rights by a public offer (20th) or by a private placement (21st), by subsidiaries (22nd) or in consideration for contributions in kind (23rd), up to a par value limit of €24 million for resolutions 19 to 23 (that is, slightly less than one third of share capital)may be used during a public purchase or exchange offer by the Board of Directors, subject to the powers expressly assigned to General Shareholders' Meetings and within the limits of the Company's corporate interests

The 25<sup>th</sup> resolution proposes a capital increase reserved for employees for a maximum amount of €500,000 (0.6% of the share capital), in compliance with the statutory obligation arising when a General Shareholders' Meeting is called to vote to authorise a capital increase in cash (L. 225-129-6 of the French Commercial Code). This proposal is for the same amount as the authorisation given by the General Shareholders' Meeting of 29 May 2015 (33<sup>rd</sup> resolution), the latter authorisation having remained unutilised. At 31 December 2016, employees held approximately 0.20% of the share capital under collective management.

The **26<sup>th</sup> resolution** concerns the renewal upon expiry of the reduction in the Company's share capital authorised on 29 May 2015, up to a maximum of 10% of the share capital and in accordance with legal provisions.

The **27<sup>th</sup> resolution** proposes an amendment to the current wording of Article 10.7 of the Articles of Association concerning the requirement for directors to hold Company shares, in accordance with the current wording of Article L. 225-25 of the French Commercial Code.

The **28<sup>th</sup> resolution** authorises the fulfilment of formalities involved in implementing the other resolutions passed by the combined Ordinary and Extraordinary General Shareholders' Meeting.

The Board of Directors

# 8.2 WORDING OF DRAFT RESOLUTIONS—WITHIN THE REMIT OF THE ORDINARY GENERAL SHAREHOLDERS' MEETING

# WITHIN THE REMIT OF THE ORDINARY SHAREHOLDERS' MEETING

# FIRST RESOLUTION (2016 annual financial statements)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, having heard the report of the Board of Directors and the report of the Statutory Auditors on the financial statements for the year ended 31 December 2016, approves said financial statements as presented to it and the transactions reflected in those financial statements or summarised in these reports.

# SECOND RESOLUTION (2016 consolidated financial statements)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, having heard the report of the Board of Directors and the report of the Statutory Auditors on the consolidated financial statements for the year ended 31 December 2016, approves said consolidated financial statements as presented to it and the transactions reflected in those financial statements or summarised in these reports.

# THIRD RESOLUTION (Related-party agreements)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, having heard the special report established by the Statutory Auditors on the agreements covered by Articles L. 225-38 *et seq.* of the French Commercial Code, approves said report and the agreements set out therein.

# FOURTH RESOLUTION (Allocation of result)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, resolves to allocate the losses for the past financial year, amounting to €165,554,066.07, to retained earnings, thus decreasing the amount in that account from €493,894,189.97 to €328,340,123.90.

The General Shareholders' Meeting, acting as an Ordinary Shareholders' Meeting, notes that the dividends per share paid out with respect to the past financial year and the three previous financial years, were as follows:

	2013	2014	2015	2016
Number of shares subject to dividends	26,543,218	26,543,218	26,543,218	26,550,443
Dividend (€)	0	0	0	0

#### FIFTH RESOLUTION

#### (Ratification of the co-option of a director)

The General Shareholders' Meeting ratifies the co-option of Jean-Yves GILET as director, approved by the Board of Directors at its meeting of 23 September 2016, replacing Alexis Zajdenweber who resigned with effect from 1 September 2016, for the remaining term of office of the latter, that is until the end of the General Shareholders' Meeting called to approve the financial statements for 2018.

#### SIXTH RESOLUTION

#### (Reappointment of a director)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, renews the directorship, expiring at this meeting, of Michel Antsélévé for a four-year term, that is until the General Shareholders' Meeting called to approve the financial statements for 2020 to be held in 2021.

#### SEVENTH RESOLUTION

#### (Reappointment of a director)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, renews the directorship, expiring at this meeting, of Philippe Gomès for a four-year term, that is until the General Shareholders' Meeting called to approve the financial statements for 2020 to be held in 2021.

#### FIGHTH RESOLUTION

#### (Reappointment of a director)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, renews the directorship, expiring at this meeting, of Catherine Ronge for a four-year term, that is until the General Shareholders' Meeting called to approve the financial statements for 2020 to be held in 2021

#### NINTH RESOLUTION

#### (Appointment of a director)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, noting the expiry of the term of office as director of Frédéric Tona at the end of this meeting, appoints Christine COIGNARD as director for a four-year term, that is until the General Shareholders' Meeting called to approve the financial statements for 2020 to be held in 2021.

# TENTH RESOLUTION (Appointment of a director)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, noting the resignation of Patrick Buffet at the end of this meeting, appoints Christel Bories as director for a four-year term, that is until the General Shareholders' Meeting called to approve the financial statements for 2020 to be held in 2021.

#### **ELEVENTH RESOLUTION**

(Approval of the principles and criteria for determination, distribution and allocation of the fixed, variable and exceptional elements that make up the total remuneration and benefits of any kind attributable to the Chairman and CEO)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, approves the principles and criteria for determination, distribution and allocation of the fixed, variable and exceptional elements that make up the total remuneration and benefits of any kind attributable to the Chairman and CEO and relating to financial year 2017, as set out in the report of the Board of Directors on the remuneration policy for executive corporate officers, prepared pursuant to Article L. 225-37-2 of the French Commercial Code and included in the 2016 registration document in Section 4 "Corporate Governance", under the paragraph heading "Remuneration of corporate officers" on page 111 and 112.

#### TWELFTH RESOLUTION

(Approval of the principles and criteria for determination, distribution and allocation of the fixed, variable and exceptional elements that make up the total remuneration and benefits of any kind attributable to Christel Bories, appointed Deputy CEO on 23 February 2017 and proposed for appointment as Chairman and CEO at the General Shareholder's Meeting of 23 May 2017)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, approves the principles and criteria for determination, distribution and allocation of the fixed, variable and exceptional elements that make up the total remuneration and benefits of any kind, relating to financial year 2017 attributable to Christel Bories, appointed Deputy CEO on 23 February 2017 and to be proposed for appointment as Chairman and CEO at the close of the General Shareholders' Meeting of 23 May 2017, as set out in the in the report of the Board of Directors on the remuneration policy for executive corporate officers, prepared pursuant to Article L. 225-37-2 of the French Commercial Code and included in the 2016 registration document in Section 4 "Corporate Governance", under the paragraph heading "Remuneration of corporate officers" on page 113 and 114.

#### THIRTEENTH RESOLUTION

(Approval of the remuneration items falling due or granted to Patrick Buffet, Chairman and CEO, for the financial year ended 31 December 2016)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, consulted pursuant to the recommendation of paragraph 26.2 of the AFEP-MEDEF Code as revised in November 2016 which, in accordance with Article L. 225-37 of the French Commercial Code, is the code of reference applicable to the Company, gives a favourable opinion on the remuneration items falling due or granted for the financial year ended 31 December 2016 to Patrick Buffet, Chairman and CEO, as set out in the 2016 registration document in Section 4 "Corporate Governance", under the paragraph heading "Remuneration of corporate officers" on page 105 to 107.

#### FOURTEENTH RESOLUTION

# (Approval of the remuneration items falling due or granted to Georges Duval, Deputy CEO, for the financial year ended 31 December 2016)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, consulted pursuant to the recommendation of paragraph 26.2 of the AFEP-MEDEF Code as revised in November 2016 which, in accordance with Article L. 225-37 of the French Commercial Code, is the code of reference applicable to the Company, gives a favourable opinion on the remuneration items falling due or granted for the financial year ended 31 December 2016 to Georges Duval, Deputy CEO, as set out in the 2016 registration document in Section 4 "Corporate Governance", under the paragraph heading "Remuneration of corporate officers" on page 108.

#### FIFTEENTH RESOLUTION

# (Approval of the remuneration items falling due or granted to Philippe Vecten, Deputy CEO, for the financial year ended 31 December 2016)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, consulted pursuant to the recommendation of paragraph 26.2 of the AFEP-MEDEF Code as revised in November 2016 which, in accordance with Article L. 225-37 of the French Commercial Code, is the code of reference applicable to the Company, gives a favourable opinion on the remuneration items falling due or granted for the financial year ended 31 December 2016 to Philippe Vecten, Deputy CEO, as set out in the 2016 registration document in Section 4 "Corporate Governance", under the paragraph heading "Remuneration of corporate officers" on page 109 and 110.

# SIXTEENTH RESOLUTION (Authorisation to trade in the Company's shares)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for ordinary shareholders' meetings, having reviewed the report of the Board of Directors and the description of the Company's share buyback programme, exercising the option provided for in Article L. 225-209 of the French Commercial Code, authorises the Board of Directors to buy, or to arrange the purchase of the Company's shares up to a limit of 10% of the share capital, in order to:

- support the share price via a liquidity agreement with an investment services provider, in accordance with the AMAFI code of conduct recognised by the Autorité des marchés financiers ("AMF");
- provide shares upon the exercise of rights attached to securities granting access to share capital through redemption, conversion, exchange or any other means;
- implement any share purchase option plan concerning the Company's shares pursuant to the provisions of Articles L. 225-177 et seq. of the French Commercial Code;
- allocate free shares pursuant to the provisions of Articles L. 225-197-1 et seq. of the French Commercial Code;
- allocate or transfer shares to employees as their share in the profits of the business or for the purpose of implementing any employee savings plan under the statutory provisions, with particular reference to Articles L. 3332-1 et seq. of the French Labour Code:
- cancel those shares, in accordance with the twentysixth resolution of the General Shareholders' Meeting of 23 May 2017, authorising a reduction in the Company's share capital for a period of 26 months.

Such shares may be purchased, sold, transferred or exchanged, by any means, in the market or over the counter, including, where appropriate, by means of derivatives. The capital that may be acquired or transferred in the form of blocks of securities may amount to the entire share buy-back programme.

Such transactions may also be carried out during a public offer period if the purchase offer for the Company's shares is fully paid in cash.

Payment may be made by any means.

The maximum purchase price may not exceed €300 per share.

This authorisation is granted for a period that will end at the General Shareholders' Meeting called to approve the financial statements for 2017.

Based on the number of shares comprising the share capital at **31 December 2016**, assuming a price of €**300** per share, the maximum theoretical investment would amount to €**796**,513,200.

For the purposes of implementing this resolution, the Board of Directors is granted full powers and may, in turn, delegate those powers, in order to:

- place any stock market orders, entering into any agreements particularly with regard to the keeping of share purchase and sale records;
- make all relevant filings with the AMF;
- assign or reassign the acquired shares to the various objectives in line with the applicable legal and regulatory provisions;
- carry out all other formalities and generally do whatever is necessary.

# SEVENTEENTH RESOLUTION (Directors' fees)

The General Shareholders' Meeting, adopting resolutions under the conditions of quorum and majority required for ordinary general shareholders' meetings, fixes the maximum amount of directors' fees which may be allocated annually to the Board of Directors at €950,000. This provision shall be applicable for the first time to fees paid for the 2017 financial year.

#### WITHIN THE REMIT OF THE EXTRAOR-DINARY SHAREHOLDERS' MEETING

# EIGHTEENTH RESOLUTION (Delegation of authority to the Board of Directors for the incorporation of reserves, profits, premiums or any other amounts that may be capitalised)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for extraordinary shareholders' meetings pursuant to Article L. 225-130 of the French Commercial Code, having reviewed the report of the Board of Directors in accordance with the provisions of Articles L. 225-129-2 and L. 225-130 of the French Commercial Code:

 Delegates to the Board of Directors the authority to increase the share capital of the Company on one or more occasions, in the amounts and at the times it sees fit, either by the incorporation of reserves,

- profits, premiums or any other amounts that may be capitalised, or in combination with a cash increase carried out pursuant to the nineteenth resolution, in the form of an allocation of free shares or by increasing the par value of existing shares, or a combination of both:
- Decides that the maximum aggregate par value
  of the capital increases that may be undertaken
  immediately or in the future under the terms of this
  delegation of authority is set at €24 million.
- Decides that the Board of Directors will have full powers, with the option to sub-delegate such powers, under the conditions provided by law, to implement this delegation, in particular to:
  - determine all the terms and conditions of the authorised transactions and in particular to set the amount and nature of the reserves and premiums to be capitalised, set the number of new shares to be issued or the amount by which the par value of existing shares comprising the share capital will be increased, set the vesting date for the new shares, which may be retroactive, or the date on which the increase in par value will take effect, as well as to make any appropriate deductions from the issue premium, including any costs incurred by these issues;
  - decide, if necessary, in the event of free share distributions, in accordance with the provisions of Article L. 225-130 of the French Commercial Code, that fractional rights will not be negotiable and the corresponding shares will be sold, the proceeds of the sale being allocated to the rights holders within 30 days of the date on which the whole number of shares allocated were registered to their account;
  - and, in general, take all appropriate or necessary actions, in particular, the execution of agreements, the fulfilment of any acts or formalities to document the capital increase or increases, the corresponding modification of the Articles of Association and the completion of any formalities required so that the shares issued may be admitted to trading.

This delegation of authority, which supersedes any previous authorisation, is valid for a period of twenty-six months from the date of this General Shareholders' Meeting.

#### NINETEENTH RESOLUTION

(Delegation of authority to the Board of Directors to increase the share capital by issuing ordinary shares or any other securities granting access to share capital with preferential subscription rights for shareholders)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for extraordinary shareholders' meetings, having reviewed the report of the Board of Directors and the special report by the Statutory Auditors, in accordance with Articles L. 225-129-2 and L. 228-92 of the French Commercial Code, delegates to the Board of Directors, with the option to sub-delegate said delegation under the conditions provided by law, the authority to decide, at its sole discretion, to increase the share capital of the Company by issuing, on one or several occasions, in France and abroad, securities granting access, either immediately or at a future date, to a portion of the share capital, in the form of:

- a) ordinary shares in the Company by issuing new shares to be subscribed either for cash or by offsetting debt, with or without issue premium;
- b) securities other than shares giving the right, either directly or indirectly, by conversion, exchange, redemption, presentation of a warrant or any other means, to the allocation, at any time or on specific dates, of securities which, in this respect, shall be issued to represent a portion of the share capital of the Company. These securities may be in the form of bonds convertible into shares, bonds with share warrants, bonds redeemable in shares, or any other form that is not incompatible with applicable legal provisions.

These securities may be issued in Euros or in a foreign currency, or in any monetary unit established with reference to several currencies.

c) warrants granting their holders the right to subscribe for securities representing a portion of the share capital of the Company, provided that the issue of such warrants may take place either by subscription for cash or by a bonus grant and that, moreover, these warrants may be issued either separately or combined with the shares and securities referred to in (a) and (b) above, issued simultaneously.

The maximum aggregate par value of the capital increases that may be undertaken immediately or in the future under the terms of this delegation of authority is set at €24 million. If necessary, the par value of any additional shares that may be issued will be added to this upper limit, in the event of further financial transactions, to preserve the rights of holders of securities giving access to share capital. This amount will be included in the overall ceiling established in the twenty-fourth resolution.

The owners of existing shares on the issue date for cash of the securities referred to in (a), (b) and (c) shall be entitled, as of right and in proportion to the number of shares they own at that time, to a preferential right to subscribe for those securities: the Board of Directors shall set the terms and timeframes within which shareholders may exercise their subscription rights, for each issue, in line with applicable legal provisions.

The Board of Directors may introduce a right of subscription for excess shares for shareholders, which shall be exercised in proportion to their rights and up to the amount subscribed for.

If the subscriptions as of right and, where applicable, the subscriptions for excess shares do not take up the whole share, security or warrant issue, the Board of Directors may limit the issue, in the legally prescribed manner, to the amount of subscriptions received or may freely allocate the shares, securities or warrants that have not been subscribed for as of right and, where applicable, unsubscribed excess shares, or even offer all or part thereof to the general public; the Board of Directors may use the abovementioned powers, or some of them, in any order it sees fit.

In the event that the issue of securities gives entitlement to the allocation of shares on presentation of a warrant, the Board of Directors shall be fully empowered to set the terms and conditions under which the Company shall be entitled to buy subscription warrants on the stock market at any time or during specific periods, in order to cancel them.

The General Shareholders' Meeting acknowledges that the decision to issue securities giving access to share capital involves a waiver on the part of shareholders of their preferential subscription right in respect of the shares that the securities issued grant a right to, pursuant to the provisions of Article L. 225-132 of the French Commercial Code.

The General Shareholders' Meeting notes that the Board of Directors may make use, in whole or in part, as provided by law, of this delegation of authority, in the event of the occurrence of one or more public purchase or exchange offers for the securities issued by the Company.

The General Shareholders' Meeting gives full powers to the Board of Directors, with the option to sub-delegate such powers under the conditions provided by law, to implement this delegation of authority, on one or more occasions, in particular to:

- establish the terms and conditions for capital increases and decide upon the dates and procedures for issues of securities carried out pursuant to this resolution:
- set the opening and closing dates for subscriptions, the price, the vesting date for securities issued, the payment terms for the shares and timeframes for such payment;
- charge, if it deems fit, the expenses, duties and fees arising from the share issues against the corresponding share premium amount and deduct from that amount the sums required to bring the legal reserve to one-tenth of the new share capital following each increase;
- and, in general, take all appropriate or necessary actions, in particular, the execution of agreements, the fulfilment of any acts or formalities to document the capital increase or increases, the corresponding modification of the Articles of Association and the completion of any formalities required so that the shares issued may be admitted to trading.

This delegation of authority, which supersedes any previous authorisation, is valid for a period of twentysix months from the date of this General Shareholders' Meeting.

# TWENTIETH RESOLUTION (Delegation of authority to the Board of Directors to increase the share capital by issuing ordinary shares or any other securities granting access to share capital without preferential subscription rights for shareholders, in the context of a public offering)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for extraordinary shareholders' meetings, having reviewed the report of the Board of Directors and the special report by the Statutory Auditors, in accordance with Articles L. 225-129-2, L. 225-135, L. 225-136 and L. 228-92 of the French Commercial Code, delegates to the Board of Directors, with the option to sub-delegate said delegation under the conditions provided by law, the authority to decide, without preferential subscription rights for shareholders, to increase the share capital of the Company by issuing, on one or several occasions, in France and abroad:

- a) new ordinary shares in the Company to be subscribed either for cash or by offsetting debt, with or without issue premium;
- b) securities other than shares giving the right, either directly or indirectly, by conversion, exchange, redemption, presentation of a warrant or any other means, to the allocation, at any time or on specific dates, of securities which, in this respect, shall be issued to represent a portion of the share capital. These securities may be in the form of bonds convertible into shares, bonds with share warrants, bonds redeemable in shares, or any other form that is not incompatible with applicable legal provisions. These securities may be issued in Euros or in a foreign currency, or in any monetary unit established with reference to several currencies.
- c) warrants granting their holders the right to subscribe for securities representing a portion of the share capital of the Company, provided that such warrants may be issued either separately or combined with the shares and securities referred to in (a) and (b) above, issued simultaneously.

The maximum aggregate par value of the share capital increases that may be undertaken immediately or in the future under the terms of this delegation of authority is set at €16 million. If necessary, the par value of any additional shares that may be issued will be added to this upper limit, in the event of further financial transactions, to preserve the rights of holders of securities giving access to share capital. This amount will be included in the overall ceiling established in the twenty-fourth resolution.

The securities referred to in (a), (b) and (c) above may be issued as consideration for securities that would be contributed to the Company as part of a public exchange offer satisfying the terms of Article L. 225-148 of the French Commercial Code.

The General Shareholders' Meeting decides to withdraw the shareholders' preferential right to subscribe for ordinary shares in the Company or securities granting access to the Company's share capital, issued pursuant to this resolution, and decides to offer these securities as part of a public offer under the conditions and up to the maximum limits prescribed by law and regulations, on the understanding that the Board of Directors may introduce a preferential right for shareholders to subscribe for shares as of right and/or for excess shares, pertaining to all or part of the issue, within the timeframe and under the conditions that it will establish in accordance with legal and regulatory provisions, which must be exercised in proportion to the number of ordinary shares held by each shareholder. It is further understood that such preferential right shall not give rise to the creation of any marketable or transferable rights.

The General Shareholders' Meeting acknowledges that this resolution involves a waiver on the part of shareholders of their preferential subscription right in respect of the ordinary shares that the securities issued on the basis of this authority would grant a right to.

The General Shareholders' Meeting notes that the Board of Directors may make use, in whole or in part, as provided by law, of this delegation of authority, in the event of the occurrence of one or more public purchase or exchange offers for the securities issued by the Company.

The General Shareholders' Meeting decides that (i) the issue price of ordinary shares will be at least equal to the minimum amount prescribed by laws and regulations in force at the time of application of this delegation of authority, following adjustment, if necessary, to take into account differences in vesting dates, and that (ii) the issue price of securities granting access to the Company's share capital will be such that the amount immediately received by the Company, plus any amount that may subsequently be received by the Company will, for each ordinary share issued as a consequence of the issuance of these securities, be at least equal to the minimum stipulated in sub-section (i) above, following any adjustment of that amount to take into account differences in vesting dates;

The General Shareholders' Meeting gives full powers to the Board of Directors, with the option to sub-delegate such powers under the conditions provided by law, to implement this delegation of authority, on one or more occasions, in particular to:

- establish the terms and conditions for capital increases and decide upon the dates and procedures for issues of securities carried out pursuant to this resolution;
- set the opening and closing dates for subscriptions, the price, the vesting date for securities issued, the payment terms for the shares and timeframes for such payment;
- charge, if it deems fit, the expenses, duties and fees arising from the share issues against the corresponding share premium amount and deduct from that amount the sums required to bring the legal reserve to one-tenth of the new share capital following each issue;
- and, in general, take all appropriate or necessary actions, in particular, the execution of agreements, the fulfilment of any acts or formalities to document the capital increase or increases, the corresponding modification of the Articles of Association and the completion of any formalities required so that the shares issued may be admitted to trading.

This delegation of authority, which supersedes any previous authorisation, is valid for a period of twenty-six months from the date of this General Shareholders' Meeting.

#### TWENTY-FIRST RESOLUTION

(Delegation of authority to the Board of Directors to increase the share capital by issuing ordinary shares or any other securities granting access to share capital without preferential subscription rights for shareholders, in the context of an offer specified in section II of Article L. 411-2 of the French Monetary and Financial Code)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for extraordinary shareholders' meetings, having reviewed the report of the Board of Directors and the special report by the Statutory Auditors, in accordance with Articles L. 225-129-2, L. 225-135, L. 225-136 and L. 228-92 of the French Commercial Code, delegates to the Board of Directors, with the option to sub-delegate said delegation under the conditions provided by law, the authority to decide, without preferential subscription rights for shareholders, to increase the share capital of the Company by issuing, on one or several occasions, in France and abroad:

- a) new ordinary shares in the Company to be subscribed either for cash or by offsetting debt, with or without issue premium;
- b) securities other than shares giving the right, either directly or indirectly, by conversion, exchange, redemption, presentation of a warrant or any other means, to the allocation, at any time or on specific dates, of securities which, in this respect, shall be issued to represent a portion of the share capital. These securities may be in the form of bonds convertible into shares, bonds with share warrants, bonds redeemable in shares, or any other form that is not incompatible with applicable legal provisions. These securities may be issued in Euros or in a foreign currency, or in any monetary unit established with reference to several currencies:
- c) warrants granting their holders the right to subscribe for securities representing a portion of the share capital of the Company, provided that such warrants may be issued either separately or combined with the shares and securities referred to in (a) and (b) above, issued simultaneously.

In the event that the issue of securities gives entitlement to the allocation of shares on presentation of a warrant, the Board of Directors shall be fully empowered to set the terms and conditions under which the Company shall be entitled to buy subscription warrants on the stock market at any time or during specific periods, in order to cancel them.

The maximum aggregate par value of the share capital increases that may be undertaken immediately or in the future under the terms of this delegation of authority is set at €16 million. If necessary, the par value of any additional shares that may be issued will be added to this upper limit, in the event of further financial transactions, to preserve the rights of holders of securities giving access to share capital. This amount will be included in the overall ceiling established in the twenty-fourth resolution.

The General Shareholders' Meeting decides to withdraw the shareholders' preferential right to subscribe for ordinary shares in the Company or securities granting access to the Company's share capital, issued pursuant to this resolution, and decides to offer these securities as part of an offer specified in section II of Article L. 411-2 of the French Monetary and Financial Code under the conditions and up to the maximum limits prescribed by law and regulations, on the understanding that the Board of Directors may introduce a preferential right for shareholders to subscribe for shares as of right and/or for excess shares, pertaining to all or part of the issue, within the timeframe and under the conditions that it will establish in accordance with legal and regulatory provisions, which must be exercised in proportion to the number of ordinary shares held by each shareholder. It is further understood that such preferential right shall not give rise to the creation of any marketable or transferable rights.

The General Shareholders' Meeting acknowledges that this resolution involves a waiver on the part of shareholders of their preferential subscription right in respect of the ordinary shares that the securities issued on the basis of this authority would grant a right to.

The General Shareholders' Meeting notes that the Board of Directors may make use, in whole or in part, as provided by law, of this delegation of authority, in the event of the occurrence of one or more public purchase or exchange offers for the securities issued by the Company.

The General Shareholders' Meeting decides that (i) the issue price of ordinary shares will be at least equal to the minimum amount prescribed by laws and regulations in force at the time of application of this delegation of authority, following adjustment, if necessary, to take into account differences in vesting dates, and that (ii) the issue price of securities granting access to the Company's share capital will be such that the amount immediately received by the Company, plus any amount that may subsequently be received by the Company, will, for each ordinary share issued as a consequence of the issuance of these securities, be at least equal to the minimum stipulated in sub-section (i) above, following any adjustment of that amount to take into account differences in vesting dates;

The General Shareholders' Meeting gives full powers to the Board of Directors, with the option to sub-delegate such powers under the conditions provided by law, to implement this delegation of authority, on one or more occasions, in particular to:

- establish the terms and conditions for capital increases and decide upon the dates and procedures for issues of securities carried out pursuant to this resolution;
- set the opening and closing dates for subscriptions, the price, the vesting date for securities issued, the payment terms for the shares and timeframes for such payment;
- charge, if it deems fit, the expenses, duties and fees arising from the share issues against the corresponding share premium amount and deduct from that amount the sums required to bring the legal reserve to one-tenth of the new share capital following each issue;
- and, in general, take all appropriate or necessary actions, in particular, the execution of agreements, the fulfilment of any acts or formalities to document the capital increase or increases, the corresponding modification of the Articles of Association and the completion of any formalities required so that the shares issued may be admitted to trading.

This delegation of authority, which supersedes any previous authorisation, is valid for a period of twenty-six months from the date of this General Shareholders' Meeting.

#### TWENTY-SECOND RESOLUTION (Delogation of authority to the Poard of D

(Delegation of authority to the Board of Directors to issue ordinary shares following the issue by the Company's subsidiaries of securities convertible into shares of the Company.)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for extraordinary shareholders' meetings, having reviewed the report of the Board of Directors and the special report by the Statutory Auditors, pursuant to Articles L. 225-129 to L. 225-129-6, L. 225.132, L. 225-136, and L. 228-91 to L. 228-93 of the French Commercial Code delegates authority to the Board of Directors so that it may:

- (i) authorise, in accordance with Article L. 228-93 of the French Commercial Code, the issue by a company or companies in which the Company directly or indirectly holds over half the share capital (the "Subsidiary" or "Subsidiaries"), on one or several occasions, both in and outside France, with the Company's consent, of all securities granting rights, either immediately or in the future, over existing or future ordinary shares of the Company;
- (ii) decide, as a consequence, to issue further ordinary shares in the Company, on one or several occasions, both in and outside France, with or without an issue premium, which the securities that may be issued by the Subsidiaries, as referred to in paragraph (i) above, would grant a right to.

The General Shareholders' Meeting acknowledges that this decision automatically involves a waiver on the part of shareholders of their preferential subscription right in respect of the ordinary shares of the Company that the securities referred to in paragraph (i) above issued by the subsidiaries would grant a right to, in favour of holders of any such securities that may be issued by the Subsidiaries.

The General Shareholders' Meeting acknowledges that the Company's shareholders have a preferential subscription right to the securities referred to in paragraph (i) above, issued by the Subsidiaries under legal conditions.

The General Shareholders' Meeting notes that the Board of Directors may make use, in whole or in part, as provided by law, of this delegation of authority, in the event of the occurrence of one or more public purchase or exchange offers for the securities issued by the Company.

The General Shareholders' Meeting decides that the maximum aggregate par value of the share capital increases that may be undertaken immediately or in the future

under the terms of this delegation of authority is set at €16 million. If necessary, the par value of any additional shares that may be issued will be added to this upper limit, in the event of further financial transactions, to preserve the rights of holders of securities giving access to share capital. This amount will be included in the overall ceiling established in the twenty-fourth resolution.

The General Shareholders' Meeting decides that in the event that the Board of Directors makes use of this delegation of authority, the sum paid to the Company, at the time of the issue or subsequently, for each ordinary share issued as a consequence of the issuance of the securities referred to in paragraph (i) above, must be at least equal to the weighted average share price over the three stock market sessions immediately preceding the fixing of the issue price of the securities referenced in paragraph (i) above, which may be reduced by a discount of up to 5% following any adjustment to that weighted average to take into account differences in vesting dates.

The General Shareholders' Meeting grants all powers to the Board of Directors, with the option to sub-delegate such powers, in order to implement this resolution, with the agreement of the Boards of Directors, Executive Boards or other management or administrative bodies of the issuer Subsidiaries, in accordance with French law and regulations and, as the case may be, applicable foreign law and regulations and, in particular, to:

- set the amounts to be issued, the kind of securities to be created, their features and issuance procedures (including payment conditions for the Company's ordinary shares), and the vesting date, retrospective or otherwise, of shares to be created;
- charge expenses arising from the capital increase against the corresponding share premium amount and deduct from that amount the sums required to bring the legal reserve to one-tenth of the new share capital following each capital increase;
- take all measures and enter into any agreements or arrangements required to achieve the successful conclusion of the intended issues, execute the capital increases and all consequent formalities and make any necessary amendments to the Articles of Association by application of this delegation of authority, in accordance with the terms of the report of the Board of Directors addressed to this Meeting and, in general, do whatever may be necessary.

This delegation of authority, which supersedes any previous authorisation, is valid for a period of twenty-six months from the date of this General Shareholders' Meeting.

#### TWENTY-THIRD RESOLUTION

(Delegation of authority to the Board of Directors to increase the share capital by issuing shares or any other securities giving access to share capital in consideration for contributions-in-kind in the form of shares or securities giving access to share capital, without preferential subscription rights for shareholders)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for extraordinary shareholders' meetings, having reviewed the report of the Board of Directors and the special report by the Statutory Auditors, in accordance with the provisions of the last sub-section of Article L. 225-147 of the French Commercial Code:

- delegates authority to the Board of Directors to compensate, up to a maximum of 10% of the share capital, contributions in kind granted to the Company consisting of equity securities or securities granting access to share capital, where the provisions of Article L. 225-148 of the French Commercial Code are not applicable, by issuing, on one or more occasions, both in and outside France, ordinary shares or securities giving access to the Company's share capital;
- resolves, insofar as this is necessary, to withdraw shareholders' preferential subscription rights in respect of the shares and securities that will be issued, in favour of the holders of shares or securities that are the subject of contributions in kind;
- acknowledges that the decision to issue securities giving access to share capital involves a waiver on the part of shareholders of their preferential subscription right in respect of the shares that the securities issued grant a right to, pursuant to the provisions of Article L. 225-132 of the French Commercial Code;
- 4. notes that the Board of Directors may make use, in whole or in part, as provided by law, of this delegation of authority, in the event of the occurrence of one or more public purchase or exchange offers for the securities issued by the Company.
- decides that the par value of any capital increases decided by virtue of this resolution shall be included in the overall ceiling established in the twenty-fourth resolution of this Meeting;
- decides that the Board of Directors shall have all powers to implement this resolution and, in par-

ticular, to approve the report of the Asset Transfer Auditors ("Commissaires aux apports"), establish all the terms and conditions of issues, draw up the list of contributors, the value of the contributions and the list of securities contributed, record the resulting capital increase(s), allocate all charges to the contribution premium(s), particularly the costs or taxes incurred in carrying out the transactions or the sums necessary to raise the legal reserve to its maximum and, in general, take all appropriate or necessary actions, in particular, the execution of agreements, the fulfilment of any acts or formalities to document the capital increase or increases, the corresponding modification of the Articles of Association and the completion of any formalities required so that the shares issued may be admitted to trading;

7. sets the period of validity during which the Board of Directors may make use of this delegation of authority at twenty-six months from the date of this General Shareholders' Meeting.

#### TWFNTY-FOURTH RESOLUTION (Ceiling applicable to issues)

The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for extraordinary shareholders' meetings, resolves that the capital increases that may result from the use of the delegations of authority governing the issue of shares, other securities and warrants, as provided for in resolutions 19 to 23 above, whether immediate or deferred, may not exceed a maximum par value of €24,000,000, plus the total amount of additional capital increases required in order to preserve the rights of holders of securities granting an entitlement, in any form whatsoever, to shares representing a portion of the share capital.

#### TWENTY-FIFTH RESOLUTION (Delegation of authority to the Board of Directors to increase the share capital reserved for employees without preferential subscription rights for shareholders)

The General Shareholders' Meeting, having reviewed the report of the Board of Directors and the special report by the Statutory Auditors and deliberating in accordance with Articles L. 225 129. L. 225 129-6 and L. 225-138-1 of the French Commercial Code and Articles L. 3332-18 to L. 3332-24 of the French Labour Code, delegates to the Board of Directors, with the option to sub-delegate, the powers required to increase the Company's share capital, on one or several occasions, by a maximum par value of €500,000, via the issue of new shares for cash reserved for employees and former employees of the Company and of its affiliated companies, within the meaning of Article L. 225-180 of the French Commercial Code, who are members of an employee savings plan or pension scheme.

The Meeting resolves to withdraw the shareholders' preferential right to subscribe to the ordinary shares to be issued, in favour of these employees and former employees, in the event that they are granted as bonus shares on the basis of this resolution.

This delegation of authority is valid for a period of twenty-six months from the date of this General Shareholders' Meeting.

The subscription price of the shares shall be set in accordance with the provisions of Articles L. 3332-18 et seq. of the French Labour Code.

#### TWENTY-SIXTH RESOLUTION (Authorisation to reduce the share capital by cancelling shares)

The General Shareholders' Meeting, deliberating in accordance with the guorum and majority requirements for extraordinary shareholders' meetings, having reviewed the report of the Board of Directors and the special report by the Statutory Auditors, in accordance with Articles L. 225-209 of the French Commercial Code, authorises, subject to prior approval by the General Shareholders' Meeting of the sixteenth resolution concerning authorisation to trade in the Company's shares, the Board of Directors, granting it additional powers to sub-delegate under the conditions provided by law, to reduce the Company's share capital by cancelling, on one or several occasions, all or part of the shares acquired in accordance with the provisions of Article L. 225-209 of the French Commercial Code.

The General Shareholders' Meeting bestows all powers on the Board of Directors in order to decide upon the cancellation of shares, record the share capital reduction, allocate the difference between the buyback value of the cancelled shares and their par value from the premiums and available reserves, make corresponding amendments to the Articles of Association and, generally, do whatever is necessary and complete all formalities.

This authorisation is valid for 26 months from the date of this General Shareholders' Meeting, up to a maximum of 10% of the Company's share capital in any 24-month period. It supersedes any previous delegation of authority having the same purpose.

#### TWENTY-SEVENTH RESOLUTION

CUDDENT VEDSION

#### (Amendment to Article 10.7 of the Articles of Association)

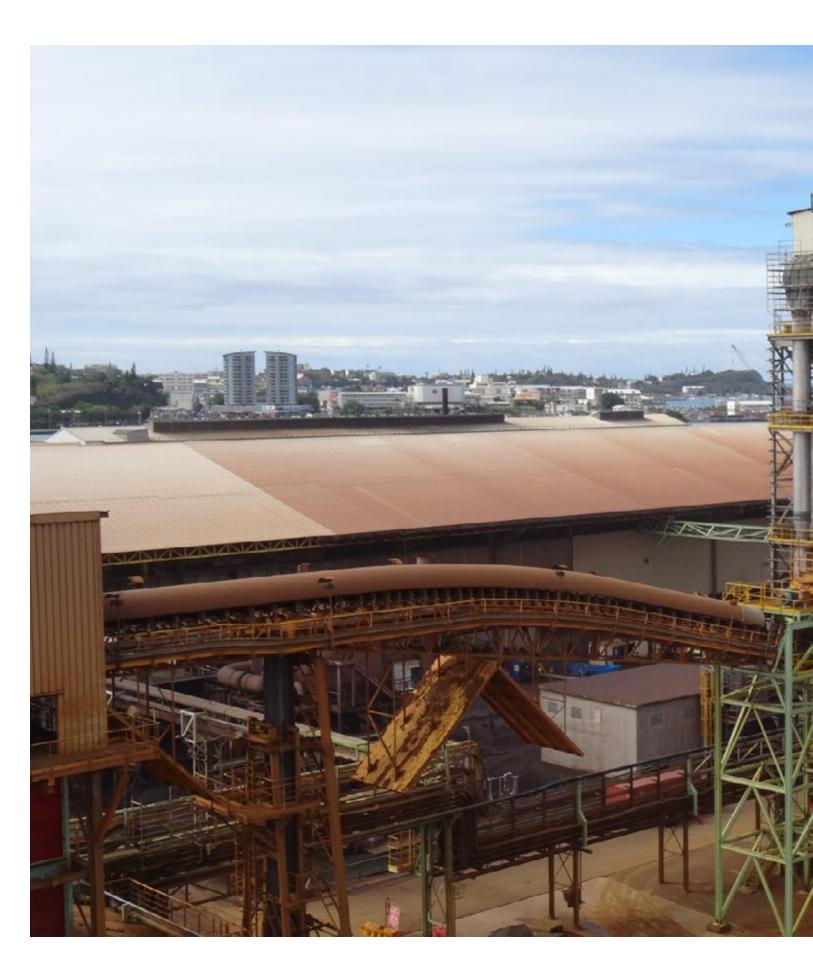
The General Shareholders' Meeting, deliberating in accordance with the quorum and majority requirements for extraordinary shareholders' meetings, having reviewed the report of the Board of Directors and the provisions of Articles L. 225-25 of the French Commercial Code, resolves to amend Article 10.7 of the Articles of Association to adopt the following text:

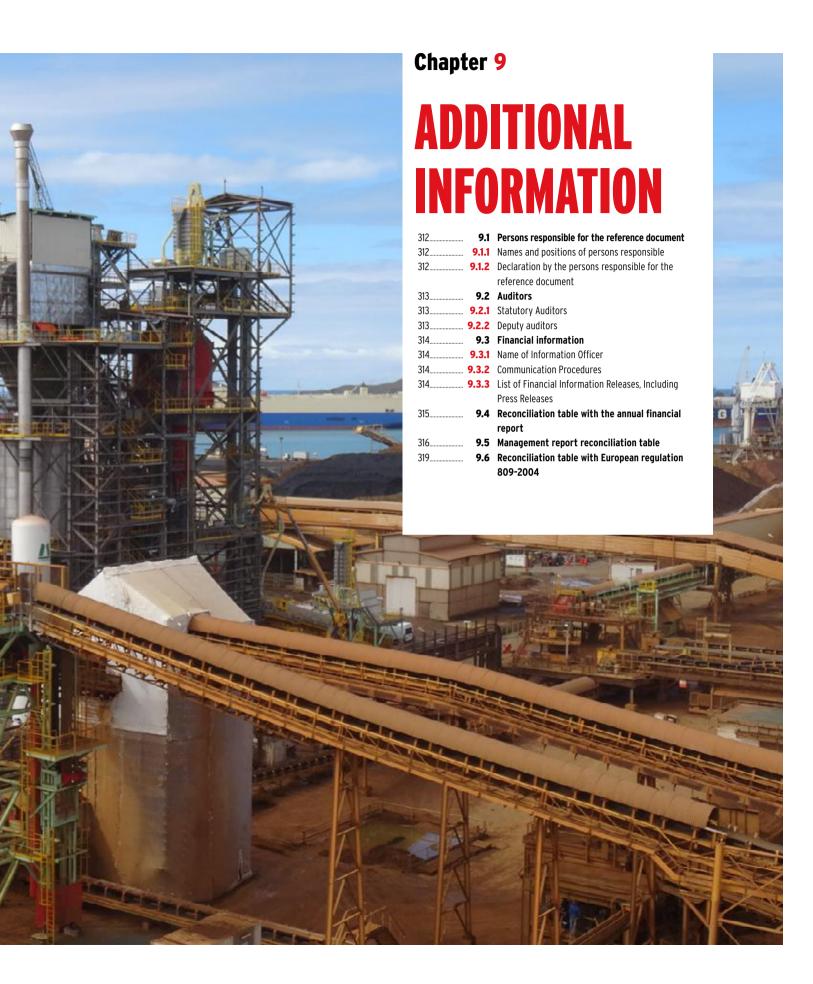
NEW VEDSION

CORRENT VERSION	NEW YERSIUN
7. Each director must own at least one share. If on the day of his/her appointment,	7. Each director must own at least one share. If on the day of his/her appointment,
a Director does not own at least one share, or if, while in office, he/she ceases to	a Director does not own at least one share, or if, while in office, he/she ceases to
own any shares, he/she is deemed to have resigned if he/she does not rectify the	own any shares, he/she is deemed to have resigned if he/she does not rectify the
situation within three months.	situation within six months.

#### TWENTY-EIGHTH RESOLUTION (Powers)

The Combined Ordinary and Extraordinary General Shareholders' Meeting, fully empowers the bearer of an original, an extract or a copy of the minutes of this Meeting to carry out any filing or formality that may be necessary.





# 9.1 **PERSONS** RESPONSIBLE **FOR THE** REFERENCE **DOCUMENT**

#### 9.1.1 NAME AND STATUS OF **OFFICIALS**

Mr. Patrick Buffet CEO.

Mr. Thomas Devedjian

#### 9.1.2 DECLARATION BY THE PERSONS RESPONSIBLE FOR THE REFERENCE **DOCUMENT**

We declare that to the best of our knowledge, having taken all reasonable measures in this regard, the information in this Reference Document is accurate and does not contain any omission that could affect its scope.

The Auditors have provided us with a letter of completion of assignment in which they state that they checked the information concerning the financial position and the financial statements presented in this reference document, and that they read the document in its entirety.

Done in Paris, 24 March 2017

Thomas Devedjian CF0

Patrick Buffet CEO

financial statements have been prepared in accordance with the applicable accounting standards and give a true and fair view of the financial position and results of the Company and of all the companies included in the consolidation, and that the management report (presented in chapters 1-Presentation of the Group, 2-Activities, 3-Risk factors, 4-Corporate governance, 5-Sustainable development and 7-Information on the Company and its capital) faithfully reflects the changes in the business, earnings and the financial position of the Company and all of the companies included in the basis for consolidation, while presenting the main risks and uncertainties faced by them.

We certify to the best of our knowledge that the

# 9.2 **AUDITORS**

The Company's corporate and consolidated financial statements are audited by the Auditors listed below:

#### 9.2.1 STATUTORY AUDITORS

#### 9.2.1.1 ERNST & YOUNG AUDIT

Address: Tour First-1, place des Saisons, 92400 Courbevoie, No. 344 366 315 in the Nanterre trade and corporate register (RCS).

Partner in charge of audit: Jean-Roch Varon.

Date of appointment: General Assembly of 29 May 2015, replacing Ernst & Young and Others.

Term expiry date: General Shareholders' Meeting called in 2021 to rule on the 2020 financial statements.

#### 9.2.1.2 KPMG

Address: Immeuble Le Palatin-3, cours du Triangle, 92800 Puteaux, No. 775 726 417 in the Nanterre trade and corporate register (RCS).

Partner in charge of audit: Denis Marangé.

Date of appointment: General Shareholders' Meeting of 29 May 2015.

Term expiry date: General Shareholders' Meeting called in 2021 to rule on the 2020 financial statements.

#### 9.2.2 DEPUTY AUDITORS

#### **9.2.2.1 AUDITEX**

Address: Tour First-1, place des Saisons 92400 Courbevoie, No. 377 652 938 in the Nanterre trade and corporate register (RCS).

Date of appointment: General Shareholders' Meeting of 3 May 2009, renewed at the General Shareholders' Meeting of 29 May 2015.

Term expiry date: General Shareholders' Meeting called in 2021 to rule on the 2020 financial statements.

#### 9.2.2.2 SALUSTRO REYDEL

Address: Immeuble Le Palatin-3, cours du Triangle 92800 Puteaux, No. 652 044 371in the Nanterre trade and corporate register (RCS).

Date of appointment: General Shareholders' Meeting of 29 May 2015.

Term expiry date: General Shareholders' Meeting called in 2021 to rule on the 2020 financial statements.

# 9.3 FINANCIAL INFORMATION

#### 9.3.1 NAME OF INFORMATION **OFFICER**

Head	Mr. Philippe Gundermann.
Ouglity	VP Strategy and Financial
Quality	Communications
	ERAMET
	Tour Maine-Montparnasse
Address	33, avenue du Maine
	75755 Paris Cedex 15
	Telephone: +33 (0)1 45 38 42 78

#### 9.3.2 COMMUNICATION PROCEDURES

Periodicity: in accordance with regulations, ERAMET publishes its annual and interim results and releases quarterly sales figures.

Information release: in addition to legal publication in financial publications, press releases and all regulated financial information are made available to the public on the Company's website (http://www.eramet.fr-in the Investors section), the Investors section), and released in accordance with AMF regulations.

The Articles of Association, minutes of AGMs, Company and consolidated financial statements, reports by the auditors and all documents made available to shareholders can be consulted at the Company's headquarters.

All data indicated in this document for which no source is specifically indicated are from the Company's internal reporting and data.

All copies of documents included in this Reference Document may be viewed on the ERAMET website (http://www.eramet.com) or consulted on request to the Company's Director of Legal Affairs at its headquarters: Tour Maine-Montparnasse-33, avenue du Maine. 75015 Paris.

#### 9.3.3 LIST OF FINANCIAL INFORMATION RELEASES, INCLUDING PRESS RELEASES

23 February 2017: Annual Results 2016-deployment of a new cycle of governance

17 January 2017: 2-year extension of the syndicated loan maturity

3 January 2017: Completion of the sale of Erachem as of 31 December 2016 to PMHC II. Inc.

23 December 2016: Following the operating incident at the TiZir plant in Norway on 15 August 2016

12 December 2016: Signature of an agreement for the sale of Erachem (manganese chemistry) to the company PMHC II, Inc.

9 December 2016: Signature of an agreement for the sale of the company Eurotungstène to Umicore

9 November 2016: Sales in third quarter of 2016

24 October 2016: Following the operating incident at the TiZir plant in Norway on 15 August 2016

30 September 2016: Final terms for the issue of ODIRNAN for an amount of €100 million

27 September 2016: ERAMET launches an issue of bonds of indefinite duration with a cash and/or new share redemption option (ODIRNAN)

22 September 2016: Information about the operating incident at the TiZir plant in Norway

16 August 2016: Operating incident at the TiZir plant in Norway

27 July 2016: 2016 interim financial report

27 May 2016: Annual General Assembly

11 May 2016: Information concerning the 2016 Annual General Assembly

9 May 2016: SLN draft recovery plan

22 April 2016: Turnover in first quarter of 2016

11 April 2016: 2015 reference document

17 February 2016: 2015 annual results

#### **EXPECTED 2017 FINANCIAL REPORTING** SCHEDULE-EMBARGO PERIODS

The provisional timetable for financial communication of 2017 is as follows:

23 February 2017: 2016 annual results

28 April 2017: turnover of the first guarter of 2017

26 July 2017: half-year results 2017

24 October 2017: turnover in third guarter of 2017

During an embargo period (quiet period) of 15 calendar days before the quarterly sales publications or annual or interim results, the Company refrains from contact with analysts, investors or brokers who operate both in securities and credit.

#### PUBLICATIONS IN THE "BALO" MANDATORY LEGAL NOTICE BULLETIN

Announcement of General Assembly	11 April 2016
Notice calling the General Assembly:	11 May 2016
Notice of approval of financial statements without amendment:	5 September 2016

# 9.4 **RECONCILIATION TABLE WITH THE ANNUAL FINANCIAL REPORT**

This Reference Document contains all the information required in annual financial reports pursuant to Article L. 451-1-2 of the French Monetary and Financial Code and Article 222-3 of the General Regulations of the AMF.

In order to facilitate the reading of this annual financial report, the concordance table below identifies the sections contained herein.

NO.	INFORMATION IN THE ANNUAL FINANCIAL REPORT	REFERENCE DOCUMENT
1	Statement by management on the accuracy of the information	Chapter 9.1
2	Consolidated financial statements	Section 6.1
3	Auditors' Report on the consolidated financial statements	Chapter 6.1.3
4	Financial statements of the parent company	Chapter 6.2
5	Auditors' report on the financial statements	Sections 6.2.4 and 6.2.5
6	Management report:.	See management report reconciliation table
7	Fees of the Statutory Auditors	Chapter 6.1
8	Report of the Chairman of the Board of Directors of ERAMET-Report of the Statutory Auditors prepared in accordance with Article L. 225-235 of the Commercial Code on the report of the Chairman of the Board of Directors of ERAMET	Chapter 4

# 9.5 **MANAGEMENT REPORT RECONCILIATION TABLE**

The concordance table below identifies the main sections required by the French Commercial Code, the French Monetary and Financial Code, the French General Tax Code and the AMF's General Regulations.

	REFERENCE DOCUMENT
Activity	
Analysis of business developments, results and the financial position of the Group in the course of the year	Chapter 1
Major events after the reporting date	Chapter 1
Foreseeable outlook	Chapter 1
Results of subsidiaries and companies controlled, by areas of activity	Chapter 2-Chapter 6
Research and development	Chapter 2
Description of the main risks and uncertainties	Chapter 6
Group policy concerning management of financial risks, exposure to price, credit, liquidity and cash risk	Chapter 6
Analysis of business developments, results and the financial position of the Company in the course of the year	Chapter 6
Stakes or controlling interests in companies based in France	Chapter 6
Information on supplier payment periods	Chapter 6
Table of the financial results of the Company over the past five years	Chapter 6
Reincorporation of general costs and sumptuary expenses	Chapter 6
Legal and information and information concerning shareholder structure	
Sum of dividends paid out over the last three financial years	Chapter 6
Identity of shareholders with more than 5% of equity	Chapter 7
Employee shares held on the last day of the year	Chapter 7
Information on share buybacks during the year-treasury shares	Chapter 7
Table summarising valid authorisations granted to the Board by the General Meeting concerning share capital increases, and the use made of these authorisations during the year	Chapter 7
Elements likely to have an impact in the event of a public offer	Chapter 7
Information concerning corporate officers	
Terms and functions of members of the Board of Directors and General Management	Chapter 4
Total remuneration and any benefits granted to each corporate officer	Chapter 4
Information provided in Article R. 225-105-1 the Commercial Code	
Social information	
Jobs	
Total headcount (distribution of employees by sex, age and geographic area)	5.7.2.1 to 5.7.2.5 and 5.7.7.1
Hires	5.7.2.6
Redundancies	5.7.2.7
Remuneration and developments in pay	5.7.4
Organisation of work	
Organisation of working hours	5.7.3
Absenteeism	5.7.3.3

	REFERENCE DOCUMENT
Company relations	
Organisation of social dialogue (procedures for information, consultation and negotiation vis-à-vis staff)	5.7.5
List of collective Company agreements	5.7.5
Health and Safety	
Conditions of health and safety at work	5.6.1 and 5.6.2
Agreements signed with trade union organisations or employee representatives in connection with occupational health and safety	5.7.4.2
Frequency and seriousness of occupational accidents and accounting for professional illnesses	5.6.3
Training	
Total number of training hours	5.7.6.4
Training policies implemented	5.7.6.4
Equal treatment (policy implementation and measures taken)	
Equality between men and women	5.7.7.1
Employment and integration of people with disabilities	5.7.7.3
Fight against discrimination	5.7.7
Promotion and compliance with the provisions of the fundamental ILO conventions	5.7.7.5
Environmental information	
General policy on environmental matters	
Organisation of the Company and procedures for assessment or certification	5.1/5.2.1/5.2.2
Staff training and information concerning protection of the environment	5.2.1
Resources allocated to prevention of environmental contingencies and pollution	5.2.1
Provisions and cover to guard against environmental contingencies	6.1
Pollution	
Prevention, reduction or rectification of waste in air, water or soil with a serious impact on the environment	5.2.3
Consideration of noise pollution and any other kind of pollution specifically related to a certain activity	5.2.1
Circular economy	
Prevention and management of waste	
Prevention, recycling, reuse, other forms of recovery and waste disposal	5.2.4
Actions to combat food waste	5.2.4
Sustainable use of resources	
Water consumption and supply in accordance with local constraints	5.2.4
Consumption of raw materials and measures taken to boost efficiency of consumption	5.2.4 and 5. 2.6
Energy consumption, measures taken to boost energy efficiency and use of renewable energies	5.2.5
Use of soil	5.2.6 and 5.2.7
Climate change, contribution to adaptation and the fight against global warming	
Greenhouse gas emissions	5.2.5
Adaptation to the consequences of climate change	5.2.5
Protection of biodiversity	
Measures taken to preserve or develop biodiversity	5.2.7
Information relating to societal commitments in favour of sustainable development	
Territorial, social and economic impact of the business	
Impact of the business on employment and regional development	5.3.1
Impact of the business on neighbouring and local populations	5.3.1

	REFERENCE DOCUMENT
Relations with stakeholders	
Conditions of dialogue with stakeholders	5.3.2
Solidarity, partnerships and sponsorships	5.3.2
Subcontracting and suppliers	
Consideration of social and environmental factors in purchasing policy	5.3.4
Importance of subcontracting	5.3.4
Social and environmental responsibility in relations with suppliers and subcontractors	5.3.4
Fair trade practices	
Action taken to prevent all forms of corruption	5.3.3
Measures taken to protect health and safety of consumers	5.5 and 5.3.3
Other action taken to protect human rights	5.7.7.5

# 9.6 **RECONCILIATION TABLE WITH EUROPEAN REGULATION** 809-2004

The following correspondence table identifies the main sections required under European Regulation No. 809-2004, implementing the "Prospectus" directive.

CHAPTER	INFORMATION	REFERENCE DOCUMENT		
1	Persons responsible	9.1		
1.1	Persons responsible	9.1		
1.2	Statement of responsible persons	9.1 9.2		
2	Statutory auditors			
2.1	Information on statutory auditors, Changes	9.2		
2.2	Changes	9.2		
3	Selected financial information	1		
3.1	Selected financial information	1		
3.2	Interim periods	Not applicable		
4	Risk factors	3		
5	Information concerning the issuer			
5.1	History and development of the Company	1.3		
5.2	Investments	1.2.3		
6	Business overview			
6.1	Main activities	2		
6.2	Main markets	2		
6.3	Exceptional events, if any, likely to affect activities and markets	2		
6.4	Likely dependence	2		
6.5	Competitive position	2		
7	Organisational chart			
7.1	Group	2.12.1		
7.2	Important Subsidiaries			
8	Real estate, plant and equipment			
8.1	Important tangible assets	2.6		
8.2	Environmental aspects of this equipment	5.4		
9	Review of financial position and results			
9.1	Financial position	1.2		
9.2	Operating result	1.2		
10	Cash and equity			
10.1	Capital	1.2		
10.2	Cash Flow	1.2		
10.3	Funding Structure	1.2		
10.4	Potential Restrictions on Capital Use	1.2		
10.5	Sources of Financing	1.2		
11	Research and development-Patents and licences			
12	Trend Information			
12.1	Trends	1		
12.2	Potential Influence	1		

CHAPTER	INFORMATION	REFERENCE DOCUMENT
13	Profit forecasts or estimates	
13.1	Assumptions	non-applicable
13.2	Report	non-applicable
13.3	Comparison	non-applicable
13.4	Actualisation	non-applicable
14	Administrative, management and supervisory bodies and Executive Management	
14.1	Information on members	4
14.2	Conflicts of interest	4
15	Compensation and benefits	
15.1	Compensation	4
15.2	Pensions, retirement or other benefits	4
16	Functioning of the administrative and management bodies	
16.1	Date of expiry of mandates	4
16.2	Service contracts	4
16.3	Committees	4
16.4	Declaration on corporate governance	4
17	Employees	
17.1	Information on employees	5.7
17.2	Participations and options for share subscriptions	5.7
17.3	Participation of employees	5.7
18	Major shareholders	
18.1	Shareholders	7.2
18.2	Voting rights	7.2
18.3	Ownership and control	7.2
18.4	Agreements related to control	7.4
19	Related party transactions	6.2
20	Financial information concerning the issuer's assets and liabilities, financial position and results	
20.1	Historical financial information	6
20.2	Pro forma financial information	non-applicable
20.3	Financial statements	6
20.4	Verification of historical financial information	6
20.5	Date of latest financial information	6
20.6	Interim and other financial information	non-applicable
20.7	Dividend distribution policy	6.4
20.8	Legal and arbitration proceedings	3 and 6
20.9	Significant change in the financial or commercial situation	non-applicable

CHAPTER	INFORMATION	REFERENCE DOCUMENT
21	Additional information	
21.1	Share capital	7.2
21.1.1	Issued capital	7.2
21.1.2	Other non-equity shares	7.2
21.1.3	Treasury shares	7.2
21.1.4	Convertible or exchangeable securities, or securities with subscription warrants	7.2
21.1.5	Acquisition conditions	7.2
21.1.6	Options or agreements	4.5
21.1.7	Capital History	Note 6 Consolidated financial statements
21.2	Articles of incorporation and by-laws	7.3
21.2.1	Corporate Purpose	7.3
21.2.2	Regulations of management and control bodies	4.2
21.2.3	Rights and privileges of shares	7.2
21.2.4	Changes to the rights of shareholders	7.3 7.3
21.2.5	General Assemblies	
21.2.6	Change of control elements	7.3
21.2.7	Shareholding thresholds	7.3
21.2.8	Conditions governing amendments to the Articles of Association	7.3
22	Significant contracts	3
23	Information from third parties, statements by experts and declarations of interest	
23.1	Declarations of Interest	non-applicable
23.2	Certificate	non-applicable
24	Public documents	9
25	Information on equity investments	2 and 6



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