TRANSFORMING MUCH MORE THAN ORE

ANNUAL REPORT 2012





PLAYING A PART IN THE ENTIRE METAL VALUE CHAIN



THREE OPERATING DIVISIONS, STATE-OF-THE-ART R&D

MANGANESE

The world's second-largest producer of manganese alloy ore for steel production and the leading producer of manganese chemical derivatives, ERAMET is stepping up its presence on the titanium market and studying the beneficiation of a niobium and rare earth deposit.

NICKEL

From mining ore in New Caledonia to its conversion into ferronickel, metal and very high-purity salts, ERAMET is an integrated nickel producer that could double its production by operating Weda Bay Nickel's very rich deposit in Indonesia.

ALLOYS

A supplier of forged and closeddie forged parts for aerospace, energy, transports, tooling and medical equipment, ERAMET designs, produces and converts a unique range of materials, from high-performance steels and titanium or aluminium superalloys to high speed steels, a sector where it is world leader.







⊛ #**1**

WORLD PRODUCER OF REFINED MANGANESE ALLOYS



WORLD PRODUCER OF HIGH-POWER CLOSED-DIE

FORGED PARTS

 (\mathbf{b})

R&D CLUSTER

ERAMET'S world-class R&D cluster draws on its front-rank mining and metallurgical skills to design processes that are used throughout the conversion chain, mostly for strategic metals. 02 KEY FIGURES

04

MESSAGE FROM THE CHAIRMAN & CEO, PATRICK BUFFET

08

AIMING FOR TRANSFORMATION

- 10 A record year
- 11 Hydrometallurgy
- 12 Tomorrow's metals
- 13 Recycling
- 14 Chemical derivatives
- 15 Close cooperation with customers

16

- **MAKING CHANGE HAPPEN**
- 18 ERAMET Manganese
- 20 ERAMET Nickel
- 22 ERAMET Alloys
- 24 ERAMET Research & Development
- 26 Multiple markets

32

ROLLING OUT INNOVATION 36 – Supporting geographic diversification 38 – Four transformative projects

40

- MANAGING DEVELOPMENT
- 42 ERAMET and responsible transformation: their definitions
- 45 Transforming governance
- 46 A long-term commitment
- 48 Stakeholder relations based on trust
- 50 A continuous improvement process for the environment
- 52 Sponsorship as a lever for change

54

CONSOLIDATED FINANCIAL STATEMENTS

ERAMET'S VIEW OF TRANSFORMATION

The Group's core business, transformation, covers more than metals. It also means innovating for its customers and improving productivity. Or emerging from a difficult period, better armed than before and ready to meet the challenges of the global situation and to implement its strategy. For ERAMET, transformation also lies in greater attentiveness to employees, neighbouring populations and the environment. Transformation means contributing in every possible way to the progress of society.

PROFILE

ERAMET, A PLAYER IN THE INDUSTRIAL WORLD'S TRANSFORMATION

ERAMET is a French mining and metallurgical group and a world leader in its businesses, particularly alloying metals and upscale metallurgy. Its expansion and diversification are supported by a responsible, sustainable development policy. ERAMET has also begun exploring or implementing major projects centred on strategic metals with high growth potential and in recycling.

www.eramet.com

€3.4



47

2012 KEY FIGURES

In 2012 the Group posted a downturn in results in a very difficult economic environment. Its financial situation remains sound after the completion of major capital projects that are preparing the way forward.

Turnover



Turnover decreased 5.9% in 2012 compared with 2011, totalling €3,447M.





€217M net cash flow from operations, compared with €591M in 2011.

Current operating income





Net income, Group's share



Decrease in net income higher than COI, due in particular to development project costs and tax charge on dividends.



Capital

expenditure

High capital expenditure, up more than 30%.

Consolidated net cash

(millions of euros)



Sound cash position after completion of capital projects.

-265

INTERVIEW WITH PATRICK BUFFET

Chairman & CEO, ERAMET

AN ALLOYING METALS SPECIALIST AT THE CUTTING EDGE OF MINING AND CONVERSION TECHNOLOGIES

1/ What are the main factors in your environment that explain 2012's downturn in results? Are all of your activities affected in the same way?

Patrick Buffet: In 2012 we evolved in a difficult economic environment, with problems relating to developed countries' debts combined with the beginning of a transition in China's economic system.

Growth in global production of carbon steel and stainless steel slowed down compared with 2011, rising just 1% and 2%. The slowdown had a greater effect on nickel prices, with major production capacities ramping up, than on manganese prices, for which global supply decreased slightly in 2012. LME nickel prices fell 23% on average in 2012 compared with 2011, while manganese ore prices (CIF China spot prices, source CRU) decreased 9%. For ERAMET Alloys, the contrast should be pointed out between, on one hand, aerospace markets that are still growing sharply, and, on the other hand, tooling and high speed steel markets, which slumped, mainly in the 2nd half of 2012.

Our results were also affected by an exceptional technical incident in the 1st quarter, during the replacement of an important item of equipment at Owendo port in Gabon, leading to the loss of four weeks' manganese production.

Overall there was a significant downturn in results. However, we were able to maintain current operating income of \notin 144 million in 2012 and a sound financial situation, with \notin 448 million in consolidated net cash at the end of the year.

2/ How are you responding to these very different situations?

P. B.: For several years now, we've been combining a targeted development policy with vigorous measures to adapt the least competitive activities, through the implementation of our strategic project, which aims for the Group's transformation along two lines:

• Renewing and repositioning our three Divisions' existing activities for the long term, improving their productivity and, in parallel, carrying out organic developments. A large part of this programme began before the end of 2012. We still have to complete two major infrastructure programmes: the new electricity plant in Doniambo, New Caledonia and the renewal of part of the Transgabonais rail network in Gabon. Then we'll have essentially modernised our three pillars to give them the foundations for sustainable, profitable growth.

GOUT strategic project aims



for the Group's transformation >>

Patrick Buffet

• Broadening and diversifying the Group's activities with new metals and new geographic bases. We have the strengths needed to support market needs for alloying and special metals, many of them strategic, for which we can call our high technological skills into play.

We're forming an integrated cluster in zirconium and titanium dioxide. This began with the acquisition in 2008 of the Tyssedal, Norway plant (the only European supplier of enriched titanium dioxide for the pigments industry) and continued in 2011 with our entry into mineral sand mining in Grande-Côte, Senegal through TiZir, a 50/50 joint venture. This facility is under construction and will be completed in early 2014.

Furthermore, we're continuing the studies and work prior to making a decision in two major transformative projects: Weda Bay and Maboumine.

For both of these potentially world-class deposits, our hydrometallurgical skills should allow us to aim for local beneficiation. An investment decision could be made in 2014 for Weda Bay Nickel in Indonesia. For Maboumine, Gabon, a polymetallic deposit containing niobium, rare earths, tantalum and uranium resources, the first stage would be the construction of a pilot plant in Gabon in 2015, if the process is verified in the laboratory.

However, without calling our strategic project into question in any way, trends in the global economy and our markets are leading us to step up our efforts on competitiveness and be more selective in our capex choices.

3/ Can you give us some examples?

P. B.: In nickel, our competitiveness improvement plan enabled us to partly offset cost rises by around 1 dollar per pound compared with 2008 at equivalent economic conditions.

In manganese, we entirely repositioned our alloy production assets in China by closing two old plants and starting up a new, more efficient facility, New Guilin, where a large share of production will be refined alloys.

Gove have the strengths needed



to meet market needs for alloying metals and upscale metallurgy.**99**

Patrick Buffet

Finally, in the Alloys division, this year we implemented far-reaching changes to improve profitability significantly. Our action plans aim for a 15% return on capital employed before tax and 10% current operating margin for ERAMET Alloys in 2015.

4/ How do you see the outlook for the Group in this complex environment?

P. B.: Potential in our businesses remains substantial. With our technological skills, we have the means to meet the expectations of demanding customers in terms of sustainable performance. We're doing so, for example, with the three strategic capital projects that ERAMET Alloys started up in France in 2012. In recent years, we've created outstanding growth opportunities. We're actively continuing to study these major projects in close liaison with our industrial partners and local states, and with the support of our shareholders. In that respect, Fonds Stratégique d'Investissement's acquisition of a stake in ERAMET in 2012 and the shareholders' agreement signed with SORAME/CEIR for the long term give the Group's shareholding great stability.

But our future is, of course, built day after day by the Group's men and women, both long-serving staff, whose experience is precious, and those who are joining us. I see our people's quality and their commitment to the success of the house we share, ERAMET, in this fastchanging world, as the biggest reason to be optimistic about our Group's future.





















STRATEGY

A continuous improvement strategy

AIMING FOR TRANSFORMATION

In response to a difficult global economic context, ERAMET continues to transform its methods and its industrial assets, while investing in its research capabilities to explore growth levers for the future. The Group is bolstering its positions to ensure each Division is competitive for the long term as it diversifies its activities.



Capital expenditure A record year

The global economic slowdown, sharp erosion in ore prices and an increasingly competitive climate are all leading ERAMET to build up the strengths that drive its growth and transformation strategy.

n a mediocre context that shows no signs of a swift upturn in 2013, ERAMET, supported by its sound financial structure, mobilised substantial resources in 2012. The goal is to speed up implementation of a set of measures designed to improve its performance and build the future on stronger bases for development. Capital investments in both cases are highly selective, in line with disciplined management in a difficult period, and focus on the Group's core businesses, *i.e.* alloying metals, high-performance metallurgy and strategic channels from upstream to downstream.

More than €600 million

Of the \notin 641 million committed in 2012 (\notin 492 million in 2011), more than \notin 350 million went to capital expenditure in support of productivity improvements (equipment renewal, site modernisation) and to training, safety and protection of the environment. The major projects and the related R&D are a crucial item for the future. More than €290 million was allocated to the next stages in building the Grande-Côte facilities in Senegal (TiZir, a 50/50 joint venture by ERAMET and Australia's MDL to mine titanium dioxide and zirconium), the Moanda metallurgical complex in Gabon (manganese processing), and other, potentially very large projects under examination, in particular Weda Bay, Indonesia (nickel), and Maboumine, Gabon (niobium and rare earths).





FROM 2011*

* Excluding development project studies, mainly Maboumine.

The Grande-Côte, Senegal site

CLOSE-UP

€ €150 MILLION TO BUILD THE FUTURE

That's the amount that Aubert & Duval has put into its "Investments for the Future" programme since 2010. The programme is designed to develop and safeguard the future of the subsidiary's world leadership positions in high-tech metallurgy. The products' highly specific characteristics put them at the very top. Whether highperformance steels, nickel-based superalloys or titanium and aluminium alloys, they are designed especially for applications that do not tolerate any weaknesses. These strong, lightweight products are essential to the energy efficiency and, as a result, environmentalfriendliness of their applications (gas turbines, aircraft, Formula 1 and Ariane engine parts, etc.)

● €1 BILLION

Total capital expenditure since 2000 to modernise SLN's mines and plants, a quarter of which was given over to improving facilities' energy and environmental performance. (2)

Innovative transformation Hydrometallurgy

High grade ores are becoming gradually scarcer, driving the development of new metal separation techniques. Ideal for leaner ores and metals with great prospects, hydrometallurgy is evolving with ERAMET Research, which has developed, tested and patented a new process.

RAMET has long used hydrometallurgy to separate metals, including in recycling. It is specifically applied to ores with low content that makes pyrometallurgy economically unfeasible. With the aim of technological independence, from 2004 ERAMET focused its research on



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developing a proprietary process for lateritic and garnieritic nickel ores like those found in New Caledonia.

Tested and developed in miniature pilot plants at the Trappes research centre near Paris, the process is especially suited to Weda Bay, a major project on Halmahera Island (in Indonesia's Northern Moluccas archipelago) and one of the world's richest deposits, mostly comprised of garnierites. In 2012, test programmes on this "Weda Bay process" continued to check whether it can be applied to a broader range of ores.

The Group's hydrometallurgical expertise is also at the centre of the Maboumine project for the separation and processing of strategic metals (niobium, rare earths, tantalum).

CLOSE-UP

SANDOUVILLE'S SALTS



The Sandouville-Le Havre plant, in France, refines nickel matte from Doniambo. New Caledonia, and turns it into a range of products through a specific hydrometallurgical process. Nickel metal. nickel chlorides, nickel carbonates and cobalt chloride are essential for several sectors, from chemicals to tyre manufacturing via power generation. Nickel salts or oxides are intended for chemical uses. Some of these very high purity products are the only ones of their kind on the market.

PRODUCTION PROCESS BASED ON WEDA BAY ORES

Simpler, cleaner, cheaper

Inspired by processes like those used in the copper and zinc industry, the new physicalchemical acid leaching technique makes extraction more economical and environmentally-friendly. Principle: the process runs at atmospheric pressure and temperatures slightly above 100 °C. It partly uses seawater, consumes very little fossil fuel – so emits no CO_2 – and above all complies with the strictest environmental standards with, in particular, solid, inert and storable residues.

120 SPECIALISED HYDROMETALLURGICAL ENGINEERS IN 8 PLANTS AND RESEARCH CENTRES IN 5 COUNTRIES

2012



Strategic transformation Tomorrow's metals

They're called tantalum, niobium, rhenium, titanium or lithium. Others make up the family of 16 rare earths. They are all increasingly essential in high-tech industries, giving tomorrow's metals great strategic importance.

RAMET's specificity is that it has the right size to pursue several projects at the same time (lithium, titanium, niobium) and, unlike large groups that mostly focus on the main commodities, to operate niche metals for promising markets. Positioned on the global mining scene in specialty minerals like titanium, which is increasingly used in aerospace structure parts, the Group's ambition is to build significant positions in special metals like niobium, tantalum and rhenium. Two major projects stand out. The development of TiZir Grande-Côte (titanium and zirconium mining) in Senegal will mark the first stage. The Maboumine project in Gabon (niobium and rare earths) could be the next major stage.

ERAMET, a preferred partner

With the profile of a specialist that has financial capability and cutting-edge skills in its own research centre, ERAMET can cooperate with countries that have special metal resources to develop, as is the case in Gabon, or small exploration firms that don't have the funding needed to take their discoveries further.

ERAMET is also a preferred partner that offers a good fit with downstream manufacturers (chemical, automotive industries) that are looking to secure their supplies of special raw materials.

CLOSE-UP

ERAMET PROCESSES A WIDE RANGE OF 32 METALS



This extensive range includes the 16 rare earths. Some of these metals are classified as economically important by the European Union, e.g. manganese, nickel, molybdenum, vanadium and rhenium. 21 are considered "critical", including cobalt, niobium, rare earths, tantalum and tungsten. Lithium and rare earths belong to the category of strategic metals for green growth channels like electric cars or renewable energies. Rhenium, niobium, rare earths and lithium are all in the feasibility study process at ERAMET.

RARE EARTHS SOUGHT BY ERAMET



The Maboumine site is by the Ngounié river in Moyen-Ogooué province.

(4)

Valuable transformation **Recycling**



A necessary response to both environmental and economic issues, recycling is fully integrated into ERAMET's strategy. Nothing is wasted and everything can be recovered through this "secondary mine".

ecyclable elements from various conversion processes have high metal content. After reprocessing, particularly through hydrometallurgy, they form excellent products that are very useful in metal production.

The Alloys division achieves a very high recycling rate for cuttings, machining scrap and metal oxides from its steelworks' slag. Its Firminy, France operation, for example, reuses 93% of its production scrap and cuttings. Erasteel Kloster's three operations in Sweden recycle metal hydroxide-rich sludge. Moreover, the Alloys division buys metallic waste from other industries for its own use.

More generally, "secondary raw materials" represent a pool of valuable resources. Recycling is a strategic development avenue for ERAMET and the focus of many research programmes.



BENEFICIAL ACTIVITY IN MORE WAYS THAN ONE

ERAMET is also implementing a recovery programme at its two specialised recycling subsidiaries, Gulf Chemical & Metallurgical Corporation (GCMC) in the USA and Valdi in France. These operations serve petrochemical companies and refineries by extracting alloying metals (molybdenum, vanadium, cobalt, nickel, tungsten) from spent catalysts. Valdi is also active in recycling waste from stainless or high speed steel-making and is looking into the possibility of redeploying an alkaline and saline batterv processing unit.





Efficient transformation Chemical derivatives

The world leader in manganese chemical derivatives, ERAMET develops a healthy activity that serves growing markets through its subsidiary ERACHEM's five production sites.

roducing and marketing manganese chemical derivatives accounts for more than 10% of the Manganese division's business. These products have a wide variety of uses in industries ranging from batteries and electronics to agrochemicals.

The Chongzuo, China and New Johnsonville, USA, plants produce 20% of the world's electrolytic manganese dioxide (EMD). This irreplaceable raw material helps to make alkaline batteries efficient. As supply lithium-ion technologies, ERACHEM makes high-purity manganese sulphate, a raw material for lithium-ion cathodes, in its Tertre, Belgium plant (production capacity 10,000 tons per year). New products are being developed for the new generation of lithium-ion batteries. ERACHEM is the world leader in the "electronics" and "specialty" markets. It serves these sectors with products designed for tantalum condenser, semiconductor and ferrite manufacturing (electronics) and for metal and surface treatments and welding applications (specialties). Production is centred around the Baltimore (USA) and Tertre (Belgium) plants. Similarly, in nickel chemical derivatives, the Sandouville (France) plant is a world leader in specialties for electroplating and catalysis.

Manganese for agrochemicals and micronutrients

Manganese salts and oxides are trace elements that meet the vital needs of plants and animals. They are also used to make fungicides. Manganese facilitates protein metabolism and bone growth in animals, as well as nitrogen assimilation and protein synthesis in plants, enabling them to grow healthily.



CLOSE-UP



Serving these markets calls for high supply security and, above all, compliance with current international regulations. **ERACHEM** is GMP and FAMI-QS certified, guaranteeing stringent internal control procedures, food traceability, product quality and environmental safety. Manganese oxide and manganese sulphate are the main products for agrochemicals. They are mainly produced in the Tampico (Mexico) and Tertre (Belgium) plants, which together have more than 60,000 tons of annual production capacity.



OF THE MANGANESE DIVISION'S PRODUCTS ARE CHEMICAL DERIVATIVES $(\mathbf{6})$

Co-transformation

Close cooperation with customers

The Group's DNA is in its know-how throughout the chain, from mining to metallurgical conversion. ERAMET is a preferred partner that provides its customers with a base of skills and resources, but also with innovations that enable them to secure their supplies and to innovate in their own fields.



he development of mining and metallurgical production in fastgrowing countries is making this key sector of the global economy more and more competitive. To maintain its leadership in these specialties, the Group has to protect its image and earn its customers' loyalty.

Shared responsibility

Product development cycles are often long in these industries. Close relations are vital for ERAMET, which needs customers' commitment to develop its projects – especially in tough economic times. The Group acts responsibly towards them by taking their needs into account. For example, ERAMET is investing in high-tech channels in Europe, such as titanium or the forged aluminium stream for aerospace.

Co-innovating

The major downstream industries served by the Group also need to innovate to improve their economic, energy and environmental performance. ERAMET has to foresee their needs and orientations, put forward solutions and work with them to achieve a satisfactory, optimal result for both parties. By providing customers with its resources, skills and close support, the Group makes co-innovation possible. These joint efforts can lead to new capacities or new technical products in cuttingedge fields or very special metals.

CLOSE-UP

RESPONSIBLE PURCHASING

As part of the transformation of the Purchasing function, which aims to involve buvers more clearly in all of the Group's processes, a "CSR Purchasing" process was launched in 2012. It essentially consists of identifying and analysing risks, and finding alternative solutions if needed, to make sure that suppliers adhere to ethical and sustainable development principles that are compatible with ERAMET's principles. These include limiting industrial activities' carbon footprint, ensuring products are recyclable and complying with social legislation.



Present and future metals

MAKING CHANGE HAPPEN

ERAMET's three divisions – manganese, nickel and alloys – have global positions in the production of high performance metals and alloys. Thanks to their cutting-edge R&D centres and strategic partnerships, they are addressing the issues facing the Group and its customers by investing in tomorrow's metals.

PERFORMANCE



ERAMET MANGANESE

Despite the fall in manganese ore and alloy prices and the drop in its ore production due to a non-recurrent technical incident in the first quarter of 2012, ERAMET Manganese held on to its leadership and posted good commercial results. Turnover totalled €1,560 million in 2012.



() 200,000 TONS PER YEAR

The only titanium dioxide-producing plant in Europe, ERAMET's Tyssedal, Norway operation is fully consolidated into the new company TiZir. Through the Grande-Côte, Senegal project, TiZir will secure its supplies of ilmenite, an important titanium ore.



of the ore produced in Gabon by ERAMET Manganese is converted in the Group's plants. The rest of the ore is sold for alloy and chemical production.









A year of changes

012 at ERAMET Manganese was marked by a number of changes that are also growth vectors. The reorganisation of industrial assets in China, with the closure of the Guangxi site and the start-up of the New Guilin alloys plant, will establish ERAMET Manganese on the fast-growing Chinese market for refined manganese alloys. With 60,000 tons annual capacity (out of 165,000 in total), the plant will increase total production for this alloy by 20%. The construction in Moanda of Gabon's first metallurgical complex takes the Group's presence in this region to a new level. The silicon-manganese plant will produce 65,000 tons per year by a pyrometallurgical process. The manganese metal unit will produce 20,000 tons using a hydrometallurgical technique. The complex will come on stream in early 2014. As regards ore extraction, a capital expenditure programme is on progress to raise production from 3 million tons per year in 2012 to 4 million by 2014. The progress of the mineral sands (titanium and zirconium) mining project with the Australian partner Mineral Deposits

Limited in Grande-Côte, Senegal, opens up favourable prospects, while studies are continuing on Maboumine, a major project (niobium and rare earths) in Gabon. Finally, with the arrival of new products the manganese chemical derivatives sector posted good results for the year.

Modernisation operations

Major improvement work was undertaken in Gabon, where malfunctions in loading and rail transport facilities affected COMILOG's production in early 2012. The modernisation of that infrastructure, renewal of locomotives and increase in the number of wagons should enable COMILOG to regain a satisfactory production rate from 2013. The recycling sector is the focus of recovery efforts, following the difficulties previously encountered on its two sites in France and the United States.

ERAMET MANGANESE'S AFRICAN DIMENSION

Africa is growing in importance on ERAMET Manganese's world map. Gabon's central position is being consolidated with the development of mining and, soon, metallurgical production at Moanda, where the mining and metallurgical school now under construction will train engineers and technicians, modernisation of the Transgabonais rail line operated by COMILOG subsidiary SETRAG, and the Maboumine project. ERAMET can draw on the skills and knowledge of its people in Africa to expand into other countries. The development of the Group's activities in Senegal is already expanding its presence in the region.

ERAMET NICKEL

Supported by stainless steel demand despite the slowdown in the global economy, the nickel market continued to grow in 2012. This shows the sector is likely to remain buoyant in the years ahead. In a context of rising global competition from Brazil to New Caledonia, ERAMET Nickel's operating improvement programme bore fruit. Production increased at its subsidiary SLN, cost price rises were limited and competitiveness was improved. The Division's turnover totalled €898 million.





A WORLD FIRST IN NICKEL TRANSPORT

On October 8th 2012. the Jules Garnier II docked at the Doniambo plant in Nouméa bay. Built for SLN in Japan, the ore carrier stands out because of its specific, narrow hold design. This revolutionary architecture prevents the free surface effect, whereby humidity in nickel ore can capsize a ship. The ship already implements future IMO (International Maritime Organization) regulations.



of only 3 high-purity nickel producers worldwide.

4%

rise in nickel production vs. 2011.

10

The benefits of discipline

If an improvement plan, which necessarily entails cost reduction, is to succeed, every sector of the business has to make a consistent contribution. That's how SLN (Société Le Nickel) cut its nickel cost price by \$1 per pound* in three years under its 2009-2012 competitiveness improvement plan. Additional savings of \$0.1 per pound/ year will be achieved over the next five years through an improvement process that is now standard practice.

Higher output and grade

Up 5.6% from 2011, production was in excess of 56,000 tons. Moreover, the efforts made in the past three years in terms of geology, mining methods and beneficiation pant performance led to an increase in ore grades.

* At constant 2008 economic and geological conditions

Two decisions for SLN's future

The choice of fuel for the Doniambo operation's future electricity plant was finalised in December 2012. A cleaner, more efficient 2x90MW pulverized coal will replace the current fuel oil plant. It could enable SLN to save a further \$1 per pound per year. The final investment decision will be made in 2014. In addition, a statement of intent was signed with the Brazilian company Vale and Southern Province on a joint operation to mine two probably world-class deposits, Prony and Creek Pernod.

Weda Bay's promises

In parallel to the development work on the specific hydrometallurgical process (see p. 11), the project to mine the Weda Bay nickel deposit continued on site in Indonesia's Northern Moluccas archipelago. Two crucial validation and financing decisions are scheduled for 2013-2014. Work to prepare the land that will host the future facilities began in 2012.



Kouaoua mines.

lacksquare

ERAMET'S RESOURCES AND RESERVES AUDITED AND CERTIFIED UNDER THE JORC CODE

In the global race for raw materials, subsoil assets have to be assessed and announced using a globally valid certification code. Since 2008 ERAMET has opted for Australia's stringent Joint Ore Reserves Committee (JORC) code. The Group systematically explores its deposits to improve knowledge of its nickel and manganese reserves and so optimise their use. Weda Bay's resources and reserves were certified in 2010; SLN's were certified in 2008 and confirmed in early 2013.

Doniambo plant.



STAINLESS STEEL, STILL GROWING AT 100

Britain's Harry Brearley was probably not the first person to develop a steel that doesn't stain in 1912, but the discovery of stainless steel is officially attributed to him.

YESTERDAY AND TODAY

In 1912, SLN produced 450 tons of nickel – about what the world consumes today in three hours.

ERAMET ALLOYS

2012 was a contrasting year for the Alloys division and its two clusters, Aubert & Duval and Erasteel. Except for aerospace, markets – automotive, tooling and nuclear power – slumped, penalising its activities. However, a vigorous action plan enabled the division to start turning its operating performance around towards the end of the year. The process should give ERAMET Alloys the responsiveness and agility needed to draw maximum benefit from its investments in strategic partnerships and from a world-renowned range of products.



() QUALITY IN POLE POSITION

The cornerstone of the IV30 unit on **ERAMET Alloys'** Les Ancizes site (France) is a vacuum induction furnace. The facility produces nickel-based superalloys with no risk of oxidation for components that have to withstand extreme stress in aircraft engines, gas turbines, nuclear plant primary circuits or Formula 1 cars.





Inauguration of UKAD unit in October 2012.





A year of building up strength

The aerospace industry accounts for around 50% of ERAMET Allovs' business. The massive intake of orders in 2011 led Aubert & Duval to overhaul its processes and operating methods. The top priority is to deliver orders on time. To do so, the company had to improve its supply chain, eliminate bottlenecks, be more selective with orders, reduce inventory cycles and set up a recruitment and training program for a successful ramp-up. Radical measures were taken in 2012 with the support of a firm specialising in the metallurgical industry and lean manufacturing, with the aim of better process control and cost reductions. Given the complexity of products and their manufacture, rollout of these measures will be stepped up in 2013. For Erasteel, the fall in demand for high speed steel led the company to adjust its production of the most common products. For products that add most value, the second powder atomisation tower in Söderfors (Sweden) is in the approval process and will double the site's capacity.

Partnership strategy

In January 2012, Aubert & Duval extended its alloys offering for aerospace by creating a new closed-die forging unit in India in cooperation with Setforge (France) and QuEST (India). From 2013 SQuAD will deliver forged, pre-machined parts. Erasteel, which sells one third of its high speed steel in Asia and intends to defend its leadership, continued to consolidate its very strategic partnership with China's HeYe.

Titanium vision

Foremost among Aubert & Duval's "investments for the future" is UKAD, the joint venture through which A&D and Kazakhstan's UKTMP are building the only integrated titanium channel in Europe. Inaugurated in 2011, the UKAD unit forges titanium ingots in France from the titanium sponge produced by UKTMP in Kazakhstan. As the aerospace approval process is particularly long, the facilities will ramp up gradually in 2013.

● R&D ON SITE

The Alloys division's plants host three specific research centres: Söderfors (Sweden) for powders (opposite), Les Ancizes (France) for the design of many alloys and initial conversion, and Pamiers (France) for closed-die alloy forging.

b B.A.T. ECO-DESIGN

At ERAMET Alloys, every capital project comes under the **Best Available** Technology (BAT) approach, covering facility design and ergonomics, and the protection of health and the environment. Moreover, 98% of the material used for conversion processes is recovered. Raw material value, energy savings, recycling and selective sorting are closely monitored. Every Alloys division site is ISO 14001 certified.

ERAMET RESEARCH & DEVELOPMENT

A key component of the Group's sustainable growth strategy, ERAMET R&D is a lateral organisation that works closely with all of the Divisions' research units through ERAMET Research. It develops processes and products with innovative features that ensure they stand out on their markets. Substantial resources are allocated to studying or implementing major projects, beneficiating strategic metals and exploring tomorrow's ores.





TRAPPES' 40TH BIRTHDAY

Fully consolidated into the ERAMET Group since 2003, the Trappes research centre, near Paris, was officially named ERAMET Research in 2008. It was founded in 1972 by SLN (Société Le Nickel), Peñarroya and Mokta to pool substantial resources. With a cross-disciplinary culture and an operational focus, in close cooperation with teams on the ground, the centre has worked to conserve and pass on knowledge, despite difficult periods.

The development of a hydrometallurgical process for nickel-bearing laterites is a good example. The project was idled in the late 1970s at an advanced stage, then revived 10 or so years ago and is now complete and patented. From 60 people in 2003, the centre's workforce has now tripled, attracting a growing number of talented engineers and research technicians from a broad spectrum of backgrounds. Its culture is also an international one, as the centre keeps up relations with universities, institutes and R&D centres around the world.



Weda Bay Nickel pilot facility at ERAMET Research's Trappes, France centre.





Research pilots

ERAMET Research's Trappes centre was very active in 2012. Work largely focused on the development of a new hydrometallurgical process for use on the ores in the Maboumine project, currently in the study phase. The two pilots built by ERAMET at AREVA's trial facility in Bessines (France) - one for niobium separation, one for rare earths and uranium - and the Trappes pilot for niobium refining have produced their first material. Work also began on engineering for the Maboumine demonstration plant. Development of the hydrometallurgical process for the Weda Bay deposit's oxidised nickel ores gave rise to an extensive pilot programme to debug the process. Studies have revealed avenues for improving the project's profitability in the first years of ramp-up, particularly with respect to testing its sensitivity to ore variations.

In parallel to the current exploration of a potential lithium deposit in Argentina, research progressed on a process for converting lithium brine into lithium carbonates and the exploration of new avenues to obtain refined products (lithium metal, lithium hydroxides, etc.) from those primary carbonates.

R&D and new alloys

In the Alloys division, Aubert & Duval and Erasteel's three research laboratories continued to develop new products and improve industrial process control. This work is done in close cooperation with plants' technical specialists and, in some cases, with partner customers, for example in cutting tools at Erasteel. Aubert & Duval developed new Al-Li Airware 2050 alloy (aluminium/lithium) parts for aerospace and diversified applications of MLX 17, a new, highstrength stainless steel that should be used to build B747-8 and B737-MAX aircraft. Substantial work was also done in 2012 to finalise MLX 19 for Messier-Bugatti-Dowty and to optimise manufacturing flows for ML 340 shafts for Snecma's new engine programmes. Finally, customers welcomed the arrival of AD730. This superalloy is now being appraised on the first disks for hot engine sections.

Erasteel filed three patents in 2012 for fine powders produced for developing markets by its Spanish subsidiary Metallied. They include 3D-printing of small complex parts used in the medical and aerospace sectors, and the development of new alloys for powder metallurgy, designed for cold markets in partnership with Cooltech.

MULTIPLE MARKETS

From stainless steel and energy to automobile, civil and military aircraft manufacturing, transport and tooling, the Group serves a wide array of markets. All of its customers are uncompromising on the quality of metal used to make their products.



BUILDING MATERIALS

The London Olympics' organising team wanted to reduce the event's environmental footprint, particularly by using recyclable materials. No surprise then that The Orbit, the games' symbolic tower, is mostly made from stainless steel, the primary outlet for nickel.



AEROSPACE

Titanium is used in the space market to make propellant gas tanks for satellites. Delivered in hemispherical or dome shape, it keeps the tanks airtight for their lifespan and protects them against corrosion from fuel gases.



ALKALINE BATTERIES

Manganese is the main raw material in alkaline batteries. It is also the key component in cathodes, an essential part of lithium-ion batteries.









WHITE PIGMENTS FOR MEDICINE AND PAINT

95% titanium ore production is used in titanium dioxide form as a white pigment for paint, paper and even medicinal products. The rest is used to make titanium metal.

MAKING CHANGE HAPPEN

MULTIPLE MARKETS

EXTRA-FINE METAL POWDER

Eurotungstene is specialised in the production of extra-fine metal powders, formed using hydrometallurgical processes. These cobalt, copper, nickel, tungsten or tungsten carbidebased powders are used to make diamond tools, carbide cement and refractory materials, as well as for Metal injection Moulding (MiM).

DIAMOND TOOLS

Manufacture of diamond saws and diamond wire for stone working (cutting and polishing marble and granite, etc.) and building materials (concrete, asphalt, brick, etc.).



MOBILE ENERGY

Nickel is essential to the production of today's mobile electronic devices (smartphones, tablets, etc.). It is also a part of components such as condensers for rechargeable batteries.



AIRCRAFT MANUFACTURING



The amount of titanium in each Airbus A350 (115 tons) or Boeing 787 (114 tons).



over 1,000

The number of aircraft turbine shafts produced per year at Aubert & Duval's Imphy, France plant, thanks to the development of new metallurgical grades and a specialised, automated production line.

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Titanium closed-die forged part for Airbus A350 door frame. Aubert & Duval's production of titanium door frames for the A350 proves its mastery of metals from the lightest to the heaviest.

MAKING CHANGE HAPPEN

MULTIPLE MARKETS





HIP PROSTHESES

Forged titanium rod for hip prosthesis*.

* by kind permission of Forges Marle.

OIL & GAS

Operating new offshore resources calls for steel that can withstand harsh conditions at depths of more than 1,500 meters. Opposite: forged riser for oil platform, made at Aubert & Duval's Firminy, France plant.



ELECTRIC CARS

A material with a future, nickel is an essential component in the batteries of the hybrid and electric vehicles that will help to reduce the automotive industry's environmental impact.

METAL INJECTION MOULDING

Large manufacturing runs of complex parts for the automotive, medical and cooling sectors.



AGROCHEMICALS

60,000 tons

Combined annual capacity of the Tampico (Mexico) and Tertre (Belgium) plants. Manganese oxide and sulphate, the main products, are used in agrochemicals to facilitate nitrogen assimilation and protein synthesis for healthy plant growth.



CLOSE

Global skills serving customers

ROLLING OUT INNOVATION

With 47 industrial sites on five continents, ERAMET's global presence enables it to meet the challenges of its growth. The Group contributes a foundation of skills and human resources that allows customers to secure their supplies and innovate.



CLOSE TO OUR CUSTOMERS EVERYWHERE

Manganese sites

- Nickel sites
- Alloys sites
- Group: Paris head office / ERAMET Research and ERAMET Ingénierie in Trappes
- ERAMET International: Brazil, Germany, India, Italy, Japan, South Korea, Spain, Taiwan, UK, USA

USA



- Mn BMC Butler (ferromolybdenum and ferrovanadium)
- GCMC Freeport (oil catalyst recycling)
- ERAMET Marietta (manganese alloys)
- Mn ERACHEM COMILOG New Johnsonville (manganese chemistry)
- Erasteel Boonton (high speed steels)
- Erasteel Romeoville service centre

Mexico

ERACHEM Mexico Tampico (manganese chemistry)

Argentina



Germany



A Stahlschmidt

Belgium

ERACHEM COMILOG Tertre (manganese chemistry and copper solution recycling)

Spain



Italy

Aubert & Duval ADES (distribution centre)



France



SUPPORTING GEOGRAPHIC DIVERSIFICATION

A long-term partner of its historical host countries, ERAMET is also forging closer bonds with China, now the world's second biggest economic power, and India, which is developing its skills in upscale metallurgy.



Above: the New Guilin plant. Opposite: HeYe head office.





OF THE WORLD'S CARS ARE MADE IN CHINA, THE BIGGEST CAR MANUFACTURER SINCE 2009.

FURTHER EXPANSION IN CHINA

RAMET's strategy for China is built on the need to be there, establish sales teams and build good relations with customers. The world's leading iron & steel producer and consumer also plans to open a new aluminium plant every three months.

The Group intends to draw maximum benefit from its cutting-edge specialties on a market where they are scarce. Especially as the aerospace, nuclear, automotive and other promising sectors that the Group knows how to serve are growing quickly. The Manganese division has the greatest presence in China so far, with two production units: ERACHEM COMILOG (GECC) in Chongzuo (production of manganese dioxide for alkaline batteries) and the New Guilin plant, a cornerstone of the Group's strategy in refined manganese alloys that came on stream in the third quarter of 2012. The Allovs division forged closer relations with its customers. Its subsidiary Erasteel has a high speed steel drawing unit under a joint venture with HeYe and an Asia logistics platform that opened in 2012, both in Tianjin.

The Wuxi service centre, created by Aubert & Duval in 2006 and specialised in the distribution of high-performance tool steel, also offers the ASP® range of metal powders. HeYe, whose products are distributed by Erasteel outside China, is a subsidiary of AT&M, a powerful metallurgical group stemming from a major national research centre that has long-term cooperation interests with ERAMET.



ERAMET'S PARTNERS IN INDIA

Setforge and QuEST

Setforge, part of the FARINIA group (850 employees), specialises in technical parts for the automotive sector and wants to develop its aerospace activities. QuEST (2,300 people), an Indian engineering company recognised by major aerospace principals, created a special economic zone (SEZ) in 2008 in Belgaum (Karnataka state) and is diversifying into precision machining. Several industrial partners are already based in QuEST's SEZ, which aims to form an industrial fabric able to offer ready-to-fit systems.

FIRST STEPS IN TOMORROW'S #3 ECONOMIC POWER

9 00 French firms in India employ 200,000 people, a fourfold increase since 2005 that reflects the vibrant relations between the countries. The latest statistics show that France is the 3rd biggest project contributor by value.



Aubert & Duval took the plunge and created SQuAD Forging in partnership with Setforge and QuEST.

SQuAD will start up a 1,200-ton screw press in May 2013 and a 10,000-ton hydraulic press in September 2014. SQuAD will forge small and medium-size nickel-based alloy, aluminium, steel and titanium parts for aerospace. The unit broadens Aubert & Duval's offering in a good fit with the Issoire and Pamiers sites' activities.

In line with the Aero India show, customers on the site were invited to plant a tree in their name.

Manganese, high speed steel and nickel

ERAMET is active in India for all of its specialties. The Group is supported in Mumbai by ERAMET International's office for the Manganese activity and Erasteel India's office for high speed steels. Through its network of agents, it can also develop the Nickel division and Aubert & Duval's activities across India.

FOUR TRANSFORMATIVE PROJECTS

The TiZir site in Senegal is under construction and three other ERAMET projects are being examined. They all concern the mining and production of strategic metals. These projects will transform the Group and broaden its offering.

TIZIR (SENEGAL AND NORWAY)

En 2011, ERAMET made a strategic investment in mineral sands containing zirconium and ilmenite (titanium oxide) by entering into a 50/50 joint venture with Mineral Deposits Ltd. (MDL). This Australian group is already involved in the Grande-Côte (GCO) mineral sands project in Senegal. TiZir groups together 90% of CGO and 100% of TiZir Titanium & Iron (TTI), which operates the Tyssedal, Norway unit, one of the world's three specialists in titanium dioxide slag. Operations are planned to start up at GCO in early 2014. The unit should produce 85,000 tons of zirconium and 575,000 tons of ilmenite on average per year. The titanium ore will partly supply the Tyssedal plant.



WEDA BAY NICKEL (HALMAHERA, INDONESIA)



This vast project was begun in 2006 and could double the Group's nickel production capacity by operating a nickel deposit on Halmahera island, Indonesia. Metal would be obtained through an innovative hydrometallurgical process developed by ERAMET in line with the ore's specificities. The Weda Bay Nickel project comes under a responsible development process and is implemented in accordance with international environmental, social and health standards. The project brings together ERAMET (60%), Mitsubishi Corp. (27%), the Indonesian firm PT Antam (10%) and a second Japanese company, Pacific Metals Co. (PamCo, 3%). The investment decision on the first phase should be made in 2014.



€155 MILLION

TOTAL R&D SPENDING ON MAJOR PROJECTS CURRENTLY BEING STUDIED

MABOUMINE (GABON)

This long-term project is centred on a polymetallic deposit that is rich in valuable metals that are considered strategic, i.e. niobium, rare earths, tantalum and uranium. Tests are being conducted on two pilot facilities (at AREVA's Bessines unit and ERAMET's Trappes

research centre, both in France) to develop an original hydrometallurgical process that is relevant to this type of deposit. Depending on the results, a pilot plant could be built on the mining site around 50 kilometres from Lambaréné in 2015.





LITHIUM (ARGENTINA)

Since 2012, ERAMET focused its exploration activities in Argentina on Centenario salt lake in Salta Province, after recognising the site as a potentially viable lithium deposit. The Group's subsidiary Eramine Sudamerica is conducting quantitative appraisals on the deposit, whose economic potential should be confirmed in the second half of 2013. In parallel, teams in Argentina and at the Trappes, France research centre continue to work together to develop production processes for lithium carbonate and some of its derivatives.



SOLIDARITY

Value creation for all

MANAGING DEVELOPMENT

Sustainable performance is not just a financial issue. It's also about everything the company does to improve its' employees' work lives, make sure its activities benefit neighbouring communities and protect its environment. For ERAMET, continuous performance means creating lasting value for all.

ERAMET AND RESPONSIBLE TRANSFORMATION: THEIR DEFINITIONS



Chief Financial Officer

"We're keeping up our capital expenditure efforts to improve productivity and respond to our markets' continued growth in emerging countries." Delegate CEO, ERAMET Manganese

"I'm thinking of the Maboumine project for example, or the future metallurgical complex in Moanda, the first of its kind in the country, the building of a Mining and Metallurgy School, and the environmental consultation framework between the State, the population and COMILOG. Our different activities in Gabon contribute to the country's economic and social development." Executive Vice-President Communications & Sustainable Development

"It's a respectful, systematic and open process of constructive dialogue with stakeholders, whether in the Group's historical partner countries or for new projects." ERAMET Chairman & CEO

"It means aiming for operating excellence to offer our customers, through the continuous improvement of performance in every area. It's a major resource for our growth strategy and the guarantee of value creation for all our stakeholders."





Delegate CEO, ERAMET Alloys

"Continuous improvement can't work unless every employee is involved. It's a policy that empowers everyone for the sake of our customers' performance and the good of the environment we all live in." Executive Vice-President, Human Resources, Health & Safety

"Responsible transformation means we have to set the example on social and environmental aspects. That exemplarity is essential to the consolidation of our leadership and the development of our projects." Delegate CEO, ERAMET Nickel

"It's the continued modernisation of SLN and the decision to go ahead with the Weda Bay project, which will use the ERAMET process and give off the least CO₂ per ton of nickel produced." ERAMET's Executive Committee meets every two weeks to steer the activity of the Group and its subsidiaries and to drive change.

COMPOSITION OF THE BOARD OF DIRECTORS

AS OF DECEMBER 31ST 2012

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Patrick Buffet

Chairman and Chief Executive Officer, ERAMET

DIRECTORS

Claire Cheremetinski

Deputy Director, energy and other capital interests, Agence des Participations de l'État (representing the French State)

CEIR, represented by Patrick Duval, Chairman, CEIR

Édouard Duval

Chairman of the Management Board, Sorame, Chairman, ERAMET International

Georges Duval

Manager, Sorame – Delegate CEO, ERAMET

Sorame, represented by Cyrille Duval, Secretary General, ERAMET Alloys

FSI-Equation, represented by Thomas Devedjian, Director and Executive Board Member, FSI

Caroline

Grégoire Sainte Marie Company director (independent director)

Thierry Le Hénaff

Chairman & CEO, ARKEMA (independent director)

Manoelle Lepoutre

Executive Vice-President Sustainable Development and Environment, TOTAL (independent director)

Louis Mapou

Chairman, STCPI (New Caledonia)

Michel Quintard

Technical Advisor, New Caledonia chamber of commerce & industry

Michel Somnolet

Former director, Deputy Chairman and Chief Financial Officer, L'Oréal (independent director)

Claude Tendil Chairman & CEO,

Generali France

Antoine Treuille

Chairman, Charter Pacific Corporation, Chairman, Altamont Capital Partners, LLC (independent director)

CENSORS

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GROUP WORKS COUNCIL DELEGATES

••••••

Odile d'Erceville Béatrice Peignot Guillaume Pareyt Philippe Laignel

HONORARY CHAIRMAN

......

Yves Rambaud

TRANSFORMING GOVERNANCE

ERAMET GROUP SHAREHOLDING STRUCTURE EVOLVES

On May 16th 2012, AREVA sold its capital interest in ERAMET to FSI-Equation, a subsidiary of Fonds Stratégique d'Investissement (FSI). Sorame-CEIR and FSI entered into a shareholders' agreement that runs until December 31st, 2016 and may be tacitly renewed for one-year periods from that date.

ERAMET's Board of Directors welcomed four new members:

- Thomas Devedjian, Director and Executive Board Member of FSI, representing FSI-Equation

- Caroline Grégoire Sainte-Marie, Company Director

- Thierry Le Hénaff, Chairman & CEO of ARKEMA

- Claude Tendil, Chairman & CEO of Generali France.

"This shareholders' agreement between Sorame-CEIR and FSI gives ERAMET's capital stability that is very favourable to the implementation of its ambitious development programme", commented Patrick Buffet, ERAMET Chairman & CEO.



NEW GOVERNANCE AT SLN

On December 4th, 2012, the Board of Directors of Société Le Nickel (SLN) decided to continue modernising the company's governance by adopting a dual structure with a non-executive Chairman of the Board of Directors and an operating CEO. As of January 1st, 2013, Pierre Alla and Pierre Gugliermina hold the positions of Chairman of the Board of Directors and CEO of SLN, respectively. The modernisation of the company's governance was begun in 2007 by Patrick Buffet. After holding the position of Chairman & CEO of SLN until January 2012, he is now Chairman of the company's Strategic Committee. ERAMET still has a majority stake with 56% of SLN. New Caledonia's provinces have a 34% interest through STCPI.

A LONG-TERM COMMITMENT

The quality of the Group's products and performance is founded on its people's excellence and commitment. Ensuring employees' health and safety, fostering their career development and rewarding them are pillars of corporate social responsibility and a major orientation of ERAMET's strategy.

20% of employees AT TRAPPES ARE FEMALE, A PROPORTION THAT IS INCREASING WORLDWIDE.

Safety, an absolute priority

ERAMET operates in a mining and metallurgical environment that may entail health and safety risks. The accident prevention process – identifying hazards and limiting exposure to them – is of overriding importance so a number of training programmes are organised throughout the Group for every personnel category. For example, a module was given out, partly in workshops, to both management and operators at SLN in New Caledonia.

Health, a constant concern

Significant progress was made on health issues with the definition of international monitoring standards. They concern medical checks for personnel and an inventory of any toxic substances used or produced in plants. These standards, which formalise existing practices and make them general practice, must be applied on every site. The Group's consultant physician supervises all prevention and monitoring operations and reports to executive management.

Induction and training

The Group's recruitment policy enables it to bolster its assets. Huge efforts were made in that direction in 2012 on the Trappes research centre, a driver of ERAMET's development, and the metallurgical complex under construction in Moanda, Gabon.

Training is an essential vector for skill development and project success, and currently represents 3.5% of the total wage bill. More and more programmes are proposed, particularly for managers. IMaGE, the Group's management institute created in 2011, organised



2012

5 shared values

The Group defined the 5 values that convey its culture:

- Customer and stakeholder orientation
- Sustainable performance
- Initiative and team spirit
- Respect and people development - Integrity and courage

A vast support campaign shares these values with all of the Group's employees. 3.5%

OF TOTAL WAGE BILL GIVEN OVER TO TRAINING IN 2012.





training for all managers in New Caledonia and is examining a programme for the Weda Bay Nickel project in cooperation with local Indonesian authorities. The Alloys division institute, AMI, runs its own management programmes in coordination with IMaGE.

With around 5,000 employees in mainland France, the Alloys division plays a special role in the country's industrial policy, particularly by encouraging young people to take an interest in its businesses. 150 of them started apprenticeships on its Auvergne sites in 2012.

Dialogue and engagement

Exchanges between the Group's units and Divisions are gaining ground through internal and external benchmarking, best practice sharing and the development of knowledge communities. All these initiatives boost employee engagement and spread Group culture. This is one of the missions of Leaders, the Group's management programme. Training is being stepped up worldwide under this framework, particularly on project management, a key success factor for continuous performance improvement.

Fostering workplace wellbeing



The "Zéphyr" programme seeks to promote wellbeing in the workplace by preventing

psycho-social risks. It was initially rolled out on the Group's French sites and is being implemented in its New Caledonian operations. A survey on the process had a high response rate.

Supporting sensitive regions

A Security Department was created to support project development in sensitive regions in order to prevent any risk of threat against the company and its employees.

Developing career paths

ERAJOB is a system for publishing vacancies and submitting applications. The new version provides for smooth information flows between Divisions, projects and jobs, and fosters career development.

400 jobs created in Moanda

In close cooperation with the Gabonese authorities and with the aim of recruiting a maximum number of nationals (currently 98% of the workforce), 400 jobs have been created for the new Moanda complex.



PREVENTION

2012 accident prevention campaign on working at heights

Following the 2012 programme, in 2013 ERAMET will launch a new global prevention campaign. Focusing on "lock out/tag out", the aim is to prevent machines or facilities from being accidentally switched on during maintenance or repair work, in order to ensure personnel are in complete safety.



Responsible transformation is the art of carrying out our professions with

all the technical expertise, skill and improvement it demands, with constant awareness and respect for the world around us. **99**

Benoît Bied-Charreton, Leaders programme director

STAKEHOLDER RELATIONS BASED ON TRUST

From Moanda to Söderfors and from Nouméa to Marietta, in every territory where it is based the Group builds trusting relations with its different neighbouring communities. Spreading knowledge of activities, listening and dialogue are essential to mutual understanding and value creation for all.

Spreading knowledge, fostering dialogue

Wherever it is based, ERAMET is a player in the local economy and society. It brings jobs and training, strives to boost local businesses and, in New Caledonia and Gabon for example, contributes to education and health. This long-standing policy is being implemented at Weda Bay Nickel before the project even starts. Nevertheless, apart from highly visible mining operations, neighbouring communities often know little about the Group's industrial activities, giving rise to questions, criticism or even opposition over possible impacts on the local population's health or environment. Every site has been encouraged to undertake a systematic process to identify and meet its stakeholders in order to gather their opinions and expectations.

The need to be proactive

To increase knowledge of local operations, the best approach is to take the initiative by explaining and showing

Public information meetings and medical clinics are part of the facilities set up for the Weda Bay Nickel project on Halmahera Island, Indonesia.









what they do. Operations are encouraged to build good relations with authorities, NGOs and other local stakeholders. More and more of them are organising open days in France, the USA, Sweden, Gabon and New Caledonia. These events generate interest in professions that the public knew little or nothing about. That's what ERAMET Research's centre in Trappes, near Paris, did for its 40th centenary celebrations. To inaugurate its new UKAD facilities in central France, with the French minister for industry in attendance, Aubert & Duval not only opened its doors to the public and its employees, but gave over a full day to its stakeholders.

First stone laid at Moanda Mining and Metallurgical School in the presence of the President of Gabon.





RESPONSIBLE

Industrial sites over the centuries

Ensuring its operations' long-term future is also a way for the company to show responsibility to its host communities. It does this by creating new activities that are in addition to existing operations or take over from activities that are being phased out. The blast furnaces in Pamiers, France, used to make cast iron. They gave way to an engine part production plant. The Söderfors site dates back to the 17th century, when it made anchors for the Swedish navy. It is now the world leader in gas atomisation technology for metal powders. With no change in their core businesses, COMILOG has celebrated its 50th anniversary, while the Marietta plant is 60 years old, Doniambo 100 and SLN 132!

A CONTINUOUS IMPROVEMENT PROCESS FOR THE ENVIRONMENT

Every industrial activity affects its environment to some extent. Reducing impacts, repairing their effects and protecting biodiversity are constant concerns for ERAMET. Environmental issues are factored into a project from the first exploration work, in accordance with the most stringent international standards.

of the group's sites worldwide are covered by eragreen.

INCREASE IN AREA RESTORED BY

HYDROSEEDING

WITH 2011.

AND PLANTATION COMPARED

Certified compliant

In 2012 five new sites achieved ISO 14001 certification, raising their total number to 31, *i.e.* 95.8% of the Group's turnover. By 2015 they should all have obtained this essential confirmation of environmental quality.

Since 2006, EraGreen, an IT tool, has collected, analysed

and compiled all the nonfinancial data provided by sites (environmental impact, energy and water consumption, etc.). 100% of the Group's sites come under this reporting structure. EraGreen enables non-financial agencies to judge the company's environmental performance. These appraisals build customers' confidence in a company that knows how to plan ahead and which involves them in its work on the supply chain for the products they buy.

Monitoring mining

ERAMET takes special care to reduce the impact of its mining activities on the natural environment. Specialised teams are on site in Gabon and New Caledonia to help operations factor environmental issues into their practices. In 2012 COMILOG Moanda was the first mining site in the Group to obtain ISO 14001 certification for all mining operations, from extraction to equipment maintenance. Resources are depleted

Resources are depleted as operations progress. By improving knowledge of deposits and assessing resources with increasing accuracy, geologists enable mine operators to limit the amount of tailings

Recording water depth and flow in the rivers in the Weda Bay Nickel project.

%



to be handled and the surface areas to be stripped, and to target the ores to be extracted more effectively. In parallel, ERAMET develops beneficiation techniques for tailings, and increasingly lowgrade ores or, as at SLN, ores that were considered marginal

Fewer post-mining landscapes

until then.

In 1993 SLN began to revegetate its operating sites. It has restored 240 hectares with hydroseeding and plantations, including 38 hectares in 2012 alone, twice as much as in 2011, following the activity's recent reorganisation. In Gabon, settling basins were built on the Moanda ore concentration site, putting an end to aqueous discharges into the Moulili river. A remediation plan for the river began in 2010 and is ongoing. Almost 3.3 million tons of sediment has been extracted and recovered to date.

Protecting biodiversity

Through the Weda Bay Nickel project, in 2011 the Group joined the international Business and Biodiversity Offset Programme (BBOP), which defined best practices for protecting the ecosystem, flora and fauna by preventing, reducing and offsetting impacts. The aim of the BBOP study in progress on Weda Bay is to avoid any net biodiversity losses.





Building on healthy foundations

From the design phase onwards, every project undertaken by the Group has to factor in standards defined by major international financial institutions (chiefly the World Bank's Equator principles) on sustainable development, environmental, social and other aspects. Following three years' work in cooperation with international specialists, the Environmental, Social and Health Impact Assessment (ESHIA) for the upstream part of the Weda Bay project was completed in May 2012.

A "sound and robust" tool

The appraisal of the statutory auditors that ERAMET asked to give an opinion on EraGreen.



UKAD PLANT

Sustainable Eco-Design

The UKAD plant in Saint-Georges-de-Mons, central France, came on stream in 2012. The facility, which makes semi-finished titanium products for aircraft manufacturing, wants to set the standard with roomy, well-lit architecture, efficient production organisation, ergonomic workshops and as seamless as possible integration into its environment. Eco-sustainable solutions were carefully examined from the design phase by using the best available technologies, e.g. nitrogen oxygen burner, energy harvester and state-of-the-art dust removal system with low emissions. The roof is designed to house photovoltaic panels, while a closed circuit with a separating network protects rainwater. Green spaces provide the final touch to help the plant fit into the surrounding landscape.



SPONSORSHIP AS A LEVER FOR CHANGE

From Africa to Asia-Pacific, wherever it is active the Group engages with its host communities. It leaves operations free to choose their actions in line with the location's needs and specificities. Units support one-off or long-term initiatives in health, education, training, culture and sport.

A foundation for local life



The Aubert & Duval Foundation was created in 2012 to develop communities and people. Mainly active in France where the company's production sites are located, the Foundation provides financial support for meaningful actions and programmes, including educational projects and cultural, sporting and leisure activities, as well as local business initiatives from micro-entrepreneurship to tourism.





Hospital renovation in Gabon

ERAMET COMILOG contributes 1 billion CFA (over €1.5 million) annually to Marcel-Abéké hospital in Moanda. Intended for company employees and their families and open to a large share of the local population, the general healthcare facility provides obstetrics and gynaecology, paediatrics, radiology and emergency services that are also funded by the company. A substantial renovation programme was completed in recent years.



ERAMET support for child literacy

The Group has supported the Coup de Pouce Clé literacy programme. Created in 1994 by the equal opportunities NGO Apféé, the programme's reading clubs now support almost 10,000 children throughout France. ERAMET supports 12 clubs close to its operations in France, particularly near Dunkirk and Grenoble.





WEDA BAY

Taking care of the neighbours

In 2008 ERAMET began a series of actions to ensure communities are impacted as little as possible by its future industrial activities but draw full benefit from them. The Saloi Foundation was created in 2010 and is funded by ERAMET through its subsidiary PT Weda Bay. Yayasan Saloi - the "basket foundation" - has launched several projects to improve living conditions in local villages (e.g. education, health, road repair, sanitation, photovoltaic equipment). It is also exploring avenues to leverage the region's economic potential, such as identifying plants that could be used in pharmacology or cosmetics.

Revealing and training tomorrow's talent

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The Group places special importance on education. In addition to vocational training programmes, exchanges and grant agreements between Ternate and Le Havre universities should enable young Moluccans to obtain qualifications that will open doors for them, including at Weda Bay Nickel.



Gamma AIDS campaign

Since 2006, ERAMET COMILOG has run the Gamma Programme on AIDS in cooperation with Gabon's public authorities and health services. The comprehensive programme includes information on the disease, distribution of condoms, screening and payment of all treatment costs for HIV-positive employees of COMILOG, SETRAG and Sodepal and their families.



VALUE CREATION

PERFORMANCE

CONSOLIDATED FINANCIAL STATEMENTS

The Group's consolidated assets as on December 31^{st} , 2012 totalled $\notin 6,319$ million compared with $\notin 6,301$ million as on December 31^{st} , 2011.

The €18 million increase mainly results from:

• Assets: increase in intangible assets and property, plant and equipment, particularly due to capital expenditure (€641 million),

inventory reduction (€55 million) and the decrease in cash assets (€395 million);

• Liabilities: decrease in shareholders' equity (-€228 million), mainly due to lower minority interests, offset by higher debt liabilities (€310 million).

Turnover



Turnover decreased 5.9% in 2012 compared with 2011, totalling €3,447M.







-265

Decrease in net income higher than COI, due in particular to development project costs and tax charge on dividends.



ALL-INCLUSIVE INCOME STATEMENT

(€ millions)	Financial 2012	Financial 2011	Financial 2010
Turnover	3,447	3,603	3,576
Other income	34	81	31
Cost of products sold	(2,823)	(2,674)	(2,437)
Administrative & selling costs	(200)	(174)	(155)
Research & development expenditure	(51)	(47)	(44)
EBITDA	407	789	971
Fixed asset amortisation and depreciation	(245)	(230)	(225)
Depreciation expense, provisions	(18)	(5)	(7)
Current operating income (expense)	144	554	739
Other operating income and expense	(74)	(63)	(19)
Operating income (expense)	70	491	720
Net cost of debt	8	22	3
Other financial income and expense	(8)	8	(15)
Share in earnings of affiliates	-	1	1
Income tax	(28)	(219)	(255)
Net income (loss) for the period	42	303	454
share of non-controlling interests	34	108	126
 share of parent company owners* 	8	195	328
Undiluted income (loss) per share (EUR)	0.31	7.42	12.43
Diluted income (loss) per share (EUR)	0.31	7.39	12.40
Net income (loss) for the period	42	303	454
Translation adjustments on financial statements of subsidiaries in foreign currency	2	7	63
Change in financial instrument reappraisal reserve	37	(51)	(20)
Change in fair value of financial assets intended for sale	6	(10)	3
Income tax	(12)	21	6
Other all-inclusive income items	33	(33)	52
share of non-controlling interests	(4)	4	8
share of parent company owners	37	(37)	44
TOTAL ALL-INCLUSIVE INCOME (LOSS)	75	270	506
share of non-controlling interests	30	112	134
share of parent company owners	45	158	372

* Net income, Group share.

BALANCE SHEET

Assets

(€ millions)	31/12/2012	31/12/2011	31/12/2010
Goodwill	173	210	172
Intangible assets	717	612	521
Property, plant and equipment	2,454	2,119	1,903
Equity accounted companies	33	23	22
Other non-current financial assets	100	87	86
Deferred tax	29	25	30
Other fixed assets	7	5	5
Total fixed assets	3,513	3,081	2,739
Inventories	1,038	1,093	996
Trade receivables	690	664	642
Tax receivables	38	33	12
Financial derivatives	51	46	128
Other current financial assets	368	473	359
Cash and cash equivalents	621	911	1,227
Total current assets	2,806	3,220	3,364
TOTAL ASSETS	6,319	6,301	6,103

Liabilities

(€ millions)	31/12/2012	31/12/2011	31/12/2010
Share capital	81	81	81
Primes	373	372	371
Share premiums	5	-	7
Change in fair value of assets intended for sale	4	(24)	10
Financial instrument reappraisal reserve	32	28	24
Other reserves	2,538	2,579	2,465
Share of parent company owners	3,033	3,036	2,958
Share of non-controlling interests	818	1,043	1,016
Shareholders' equity	3,851	4,079	3,974
Personnel commitments	131	129	123
Provisions	428	379	360
Deferred tax	380	406	342
Borrowings – long-term portion	311	151	203
Other non-current liabilities	28	37	33
Total non-current liabilities	1,278	1,102	1,061
Provisions – short-term portion	30	29	29
Borrowings – short-term portion	230	80	88
Current trade payables	805	833	731
Tax payables	72	77	149
Financial derivatives	53	101	71
Total current liabilities	1,190	1,120	1,068
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES	6,319	6,301	6,103

CASH FLOW STATEMENT

(€ millions)	Financial 2012	Financial 2011	Financial 2010
Operating activities			
EBITDA	407	789	971
Elimination of non-cash or non-business items	(149)	(155)	(201)
Cash flow	258	634	770
Net change in operating assets and liabilities	(41)	(43)	(43)
Net cash flow from operating activities	217	591	727
Investing activities			
Capital expenditure	(641)	(492)	(326)
Net financial investments (divestments)	(19)	(65)	76
Disposals of long-term assets	4	3	5
Changes in accounts payable and liabilities on long-term assets	7	12	4
Consolidation adjustments and financial loans	13	17	(11)
Dividends from equity accounted companies	-	-	-
Net cash flow used in investing activities	(636)	(525)	(252)
Financing activities			
Dividends paid	(287)	(186)	(152)
Capital increases	2	1	31
Net change in working capital with respect to financing activities	-	(2)	-
Net cash flow used in financing activities	(285)	(187)	(121)
Currency translation adjustments	(1)	(21)	(5)
Increase (decrease) in net cash position	(705)	(142)	349
Opening cash (debt) balance	1,153	1,295	946
Closing cash (debt) balance	448	1,153	1,295

Financing

The Group's net cash amounts to €448 million as on December 31st, 2012 compared with €1,153 million as on December 31st, 2011. This decrease results from the following flows:

• €217 million net cash flow from operating activities, compared with €591 million in 2011;

• €(636) million net cash flow used in investing activities, mostly comprised of €(641) million in capital expenditure and €19 million in securities, including HeYe;

• €(285) million in net cash flow used in financing activities, of which €(287) million in paid dividends, with €59 million to ERAMET shareholders and €228 million to minority shareholders in consolidated companies;

• \in (1) million negative impact of currency translation adjustments.

641

492

2011

2012



€217M net cash flow from operations, compared with €591M in 2011.

High capital expenditure, up more than 30%.

PROCESSES

Alloy metallurgy

• Air metallurgy: melting takes place in an arc furnace and is followed by metallurgical treatment to add alloying metals, eliminate impurities and obtain the required chemical analysis.

• **Powder metallurgy:** production of superior alloys by pulverising a stream of liquid metal, resulting in powder that is then compacted at very high pressure and high temperature.

• **Remelting:** essential for some critical parts intended for the aerospace and power markets, this process is used to purify metal in order to improve its qualities, particularly mechanical reliability.

• Vacuum metallurgy: used for alloys withstanding higher constraints (nitrogen content, oxygen-reactive alloying elements, etc.), this process is carried out in vacuum induction melting (VIM) furnaces.

Closed-die forging

Shaping a piece of metal by hot pressing it between two engraved dies to produce complex forms, in one stroke and at a slow speed.

Forging

Plastic deformation of metal between two flat tools to produce parts with simple shapes.

Hydrometallurgy

Separation of metals and/or metallic salts by chemical processes (dissolving, solvent extraction, electrolysis or precipitation). These techniques are used to separate out the different metals in polymetallic rocks and process low-grade ores.

Ore beneficiation

This innovative technology sorts particles by size and density to improve ore grade in order to use a larger share of a deposit and so extend the lifespan of reserves.

Press

Industrial tool used for closed-die forging (cf. definition above). A press' power is measured in thousands of tons.

Pyrometallurgy

Metal oxide reduction and metal-oxide separation by melting in a blast furnace or electric furnace.

Rolling

An operation that reduces the thickness of an ingot, a bar, a sheet, etc. by passing it between the rollers of a mill.

PRODUCTS

Alloys

Metallic substances composed of various metals, each with specific properties and meeting specific requirements, *e.g.* resistance to wear or corrosion, mechanical strength at high temperatures.

Cobalt and tungsten powders

Powders that are mainly used to manufacture cemented carbides for use in metal machining and diamond tools for cutting stone and building materials.

Electrolytic Manganese Dioxide (EMD)

Active agent in alkaline batteries.

Ferroalloys

Alloys containing iron and at least one other metal that is added to liquid steel to adjust its composition according to the desired properties.

High speed steels

Steels with high wear resistance and high hardness hot or cold, used principally in the manufacture of cutting tools (drills, taps, milling cutters, saws, etc.) for machining metals.

Long products

Semi-finished alloy products with advanced characteristics, intended for conversion.

Manganese

In alloy form (ferromanganese, silicomanganese), this metal is a 6-7% component of steel that improves its hardness, abrasion resistance, elasticity and surface state in rolling. It is also used in the steel production process for deoxidation/ desulphurising. Other applications include chemistry, batteries, electronic circuits, fertiliser and aluminium hardening.

Nickel

An essential alloy element, this metal gives steel a number of properties, e.g. resistance to air corrosion in combination with chrome (stainless steel), high temperature resistance, ductility, mechanical resistance, ductility, mechanical strength, electrical resistivity and magnetic properties.

Steel grades

Different qualities of steel obtained by varying the alloys of their component metals to obtain specific characteristics. Each grade is suited to particular needs.

Superalloys

Alloys of several metals, with high mechanical strength at elevated temperatures and are resistant to corrosion. Superalloys are used in aerospace parts manufacturing, power generation and the chemical industry.

Titanium

A lightweight, robust and corrosion-resistant metal used as a component in alloys that are valued in the aerospace industry, but also in the manufacture of medical equipment, eyewear, etc. Titanium oxide is used as a white pigment in paint.





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