



ANNUAL REPORT 2004

## PLAYERS IN SUSTAINABLE GROWTH



Board of Directors following the meeting of March 9<sup>th</sup>, 2005

CHAIRMAN AND CHIEF EXECUTIVE OFFICER Jacques Bacardats

#### DIRECTORS

Rémy Autebert Cyrille Duval Édouard Duval Georges Duval Patrick Duval Pierre-Noël Giraud François Henrot Pascal Lafleur Jean-Lucien Lamy Louis Mapou Jacques Rossignol Michel Somnolet Antoine Treuille

AREVA represented by Frédéric Tona

#### AUDITORS

Ernst & Young Audit Tour Ernst & Young 11, allée de l'Arche 92037 Paris la Défense Cede

Deloitte & Associés 185, avenue Charles-de-Gaulle 92200 Neuilly-sur-Seine Cedex

#### Cover: photo by David Becker, New Caledonia ANC – 23 Fix.104. The men and women pictured in this report are mostly Eramet employees. Our sincere thanks for their kind contributior

HONORARY CHAIRMAN Yves Rambaud CONTENTS

#### PLAYERS IN SUSTAINABLE GROWTH

- 1 Group Profile
- 2 Interview with Jacques Bacardats
- **14** International Management
- 8 Thorough Governance

### FACTS & FIGURES 2004

- 2 Eramet in Internationa Economic Growth
- 3 Materials for Industrial Development
- 4 An Outstanding Year
- Eramet on the Stock Market: a Year of Sharp Growth

### A SHARED DEVELOPMENT MODEL

- 20 Sustainable Growth: investment & innovation
- **26** Profitable Growth: competitiveness & performance
- 32 Harmonious Growth: responsibility & respect

### 88 MATERIALS FOR INDUSTRIAL DEVELOPMENT

- **0** Eramet Nickel
- 44 Eramet Manganèse
- **48** Eramet Alliages
- 52 ERAMET 2004
- **54** Consolidated Financial Statements
- 61 Glossary

### PROFILE

# PLAYERS IN SUSTAINABLE GROWTH

For over ten years, Eramet has implemented a sustainable growth strategy based on innovation, investment, competitiveness and responsibility. Its employees, customers, partners and shareholders are the players in that development. Together, they have built up an international industrial group with leading positions in nickel, manganese and alloys, its three areas of business.

Eramet's approximately **13,000 employees** in Africa, America, Asia, Europe and Oceania innovate, produce and develop the Group where growing markets are at their most dynamic. Eramet achieves more than 80% of its turnover outside France.

### $\rightarrow$ Progress & Innovation

The loyalty of its **customers** is Eramet's strength. It places the Group in a momentum of improvement and innovation. After two difficult years in 2002 and 2003, firm growth resumed in 2004, with turnover increasing 27% from 2003 to  $\notin$ 2,521 million.

On all five continents, Eramet works closely with **local partners** that are also stakeholders in its growth, in New Caledonia, Gabon, Norway, China, the United States and Sweden, etc. Wherever it is based, Eramet forges active, responsible dialogue with local authorities and communities.

This growth could not take place without the commitment of Eramet's **share-holders**, who share the values that give the Group the independence and durability on which its industrial development is founded.

Together, all these players help to implement this original development model and to map out an industrial path of sustainable growth for Eramet. **INTERVIEW WITH JACQUES BACARDATS** CHAIRMAN & CEO

## **"OUR DEVELOPMENT MODEL"** "Nickel and manganese made 2004 an exceptional year for Eramet."

### 2003 was a low-key year on your markets. How was 2004?

J.B.: 2004 was an exceptional year. Our results are very good, thanks to the price levels reached for nickel and, more unexpectedly, manganese. We are on cyclical markets that have accustomed us to variations. Nevertheless, prices had not been that high for over ten years. In early 2005, the situation once again bears out the robustness of our growth model, which is based on the balance between activities with cycles that are out of step with each other. Nickel has been at an exceptional peak since the second half of 2003; manganese prices have reverted to normal levels. In the Alloys Division, markets bottomed out in the first quarter of 2004 and began a upturn in the second quarter.

#### Will those prices hold steady in 2005?

J.B.: For manganese, prices have returned to normal levels but remain healthy. The nickel market is so speculative that trends are difficult to forecast. We think that demand will continue to outweigh supply in 2005 and that prices should hold steady as a result. However, in cyclical businesses we must be ready to cope with poor years. We can expect prices to drop sharply within two years. We will then be facing the constraints that we have experienced in the past. We have made great efforts to improve our performance and must keep them up. Profitability based on strong competitiveness is what drives our

Group. It enables us to safeguard our activity's future, keep up our capital expenditure efforts and harbour new ambitions.

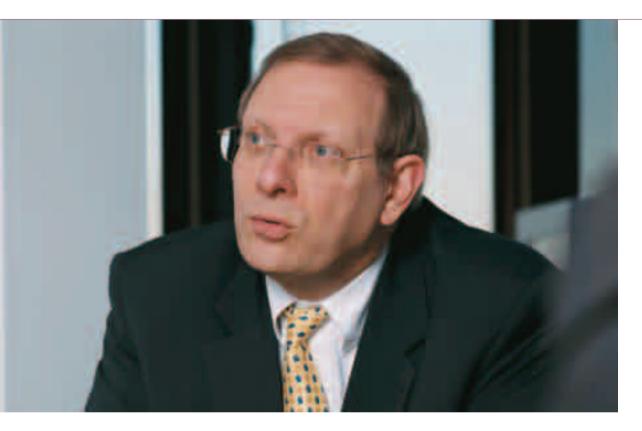
#### What are those ambitions?

J.B.: The Chinese market continues to drive global growth. The Chinese government has announced measures to control it but growth is still very high and is likely to remain so several years. Chinese steel production, for example, continued to grow by over 15% in 2004. We have positioned our Group to adapt to this new reality. In 2004, we set up an integrated organisation to seize development opportunities in China more effectively.

Our investment programme, which has been firmly established in recent years, continued in 2004. In the Nickel Division, we started up a furnace in New Caledonia that should enable us to increase our ferronickel production by over 15% from 2005 onward. This new furnace is a technological first and our R&D people are closely monitoring its ramp-up. In the Alloys Division, we are enhancing our assets with the construction of a new unit for manufacturing aircraft engine parts. This unit will be ready to meet market needs in approximately one year.

In China, an extensive capital expenditure programme is also in progress. In addition to the construction of a new tooling plant, we are building a manganese

"The situation bears out the robustness of our growth model."



chemical plant to meet growing demand from the battery industry market. Finally, we are developing our manganese production in Gabon to support global growth in steelmaking.

### In 2003, you carried out major restructuring programmes with significant impact on jobs. You pledged support measures for those changes. What is the state of progress today?

**J.B.**: In 2004, we completed almost all the restructuring projects defined in 2003. The Boulogne plant was shut down in 2003; in 2004, we implemented the personnel placement plan and carried out the dismantling and site restoration study. In Alloys, we froze all external recruiting for a year to offer inhouse placements. For the Group as a whole, approximately 250 jobs were opened to internal mobility in this way.

Responsibility is an integral part of our values and Eramet's shareholders fully adhere to this principle. In that framework, in 2004 we also stepped up actions in our plant to protect the environment. In New Caledonia for example, dust emissions are to be reduced by two-thirds. Improving the working conditions and safety of Eramet employees remains a major concern for our management teams.

#### What is the outlook for 2005?

J.B.: In 2005, the outlook is very good for our activities, including for the Alloys Division, which can now draw on its strong organisation, based on centres of excellence, to take advantage of the market upturn. Our financial situation is very healthy; this enables us to examine any external growth opportunities that would allow us to enhance or develop our three Divisions' activities.

### "China continues to drive the Group's expansion."

# INTERNATIONAL MANAGEMENT

Eramet is an international group that conducts its activities on many locations across the five continents in its three areas of business - nickel, manganese and alloys –, calling on a broad range of professions from mining to superalloy manufacturing. This diversity opens up many opportunities for the Group. Its practical knowledge of international markets and its rich culture enable Eramet to share methods and experiences. Eramet has set up a structure that leverages synergy through a consistent common strategy, while keeping every activity responsive and agile. In 2004, the Group took that process a step further by creating an international management committee that will help to enrich its strategic vision and give new momentum to its development.

### **Consistent Group strategy**

The Executive Committee is the decision-making centre that defines and implements Eramet's strategy. It is comprised of the Chairman & CEO, the three Division managers, who are also Delegate CEOs, the chief financial officer and the Group human resources manager. Monthly meetings attended by Executive Committee members and the top management of each Division to monitor activities and strategy implementation in the Divisions.

### Efficient operating support

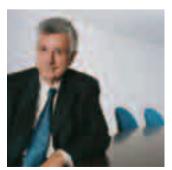
Since 2003, strategic support functions have been supervised by the managers of the Group's three Divisions, who are also members of the Executive Committee. This organisation is supported by efforts to make the respective mission and responsibilities of HS and Divisions clear, leading to greater pooling of skills. It proved its efficiency in 2004.



Jacques Bacardats



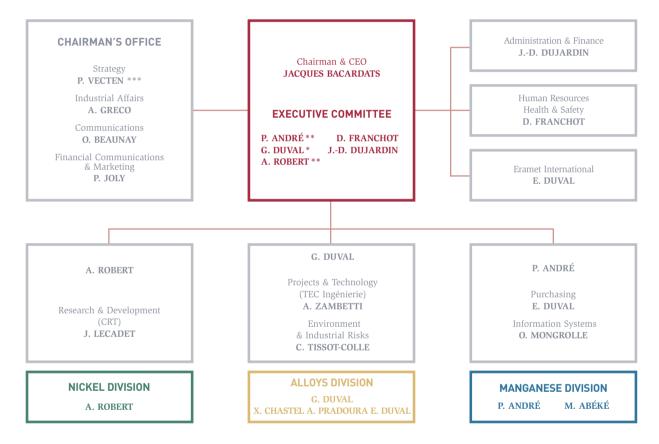
Georges Duval



Alain Robert



### ightarrow organisational chart of executive committee and support departments



\* Vice-president and delegate CEO | \*\* Delegate CEO | \*\*\* from April 1\*, 2005



Dominique Franchot



Jean-Didier Dujardin



Patrick André



### **INTERNATIONAL MANAGEMENT**



Alain Pradoura



Édouard Duval



Xavier Chastel

For example, R&D teams draw increasingly on common skills in areas such as modelling, digital simulation and thermometallurgy. Similarly, a central purchasing department has made it possible to harmonise all the Group's databases and increase its negotiating power.

Since 2004, communications between different sites and activities have benefited from a single e-mail system. Work by the environment and industrial risks department enabled environmental protection programmes to be developed on many sites. Human resources are reviewed monthly by the Executive Committee, which directly monitors the Group's senior and high-potential managers.

Finally, financial control was refocused on its assistance function through a specific charter intended for all Eramet sites.

### International development vision

Eramet's International Management Committee met for the first time on December 20th, 2004. In addition to the six members of the Executive Committee, it is comprised of the Group's top managers, i.e. Marcel Abéké, Director and CEO of Comilog (Gabon), Joseph Chang, Chairman & CEO of Eramet China, Xavier Chastel, Chairman of Erasteel, Édouard Duval, Chairman of Eramet International and Group Purchasing Manager, Alain Pradoura, CEO of Aubert & Duval, and Philippe Vecten, CEO of SLN (New Caledonia). The new committee will meet quarterly to give every manager a better grasp of all Eramet's activities worldwide. Its meetings will also foster dialogue by allowing members to contribute reactions, comments, questions or suggestions on other business areas or geographic regions.



Marcel Abéké

### → CLOSE-UP The Eramet International network

Eramet set up Eramet International in 1996 to market the Group's products. In 2004, the network was active in around 20 countries and was enhanced with the creation of a specific structure in Canada. The Group's companies also help to strengthen Eramet's international sales presence. For example, an office has been opened in India (an Erasteel-Sterling-Metchem joint venture) and a common team for the entire Alloys Division was formed to promote tool steels.



Joseph Chang



### Local activity management

Eramet has developed with great respect for the diversity of cultures in the companies that have successively joined the Group. Rather than imposing a French model worldwide, the Group has always striven to understand, adapt and learn from different methods and practices. In virtually all its locations, whether in Europe, the United States, Asia or Africa, top managers and many other members of the management team of the Group's companies are nationals of the host country.

In China, where the development stakes are exceptional for all the Group's activities, Eramet has set up an organisation under Joseph Chang's authority that pools resources in order to share experience, foster synergy, understand needs and anticipate trends in the Chinese market and propose the most relevant approach for each Division.



### CORPORATE **GOVERNANCF**

# THOROUGH GOVERNANCE

Eramet strives to meet the highest standards for good corporate governance. These standards stem from the Bouton Report, the rules and customs imposed by Autorité des Marchés Financiers and recent laws on financial transparency. They are reflected in the way the work of the Board of Directors and its committees is organised and in the implementation of internal control.

### $\rightarrow$ The Board's Work

### 5 meetings in 2004

In 2004, the Board of Directors met five times, on in China, buyout of Cogema's minority interests in January 14<sup>th</sup>, March 17<sup>th</sup>, May 12<sup>th</sup>, September 15<sup>th</sup> and December 15<sup>th</sup>, according to a schedule set at the last meeting of the previous year (except as regards the January 14<sup>th</sup> meeting).

The Board discussed the following corporate operations in its meetings:

- The January 14th meeting concerned the tax inspection in Gabon and Aubert & Duval's situation;
- The main purpose of March 17th meeting was to close the Company's financial statements for 2003 and to convene the shareholders' annual general meeting on May 12th, 2004;
- The meeting of May 12<sup>th</sup> followed the shareholders' general meeting; it renewed the two observers' terms of office:
- The meeting of September 15th, 2004 closed the financial statements for the first half of the year and the other financial documents provided by the law of March 1, 1984:
- The meeting of December 15<sup>th</sup>, 2004 particularly included a presentation of the 2005 budget.

In addition, at each Board meeting (except on January 14<sup>th</sup>), the Chairman set out the main events in the life of the Group since the last meeting. Then each Division manager presented his Division's activities. Major capital expenditure projects (EMD plant manganese, mining capacity extension in Gabon) were submitted to the Board at its September 15th meeting.

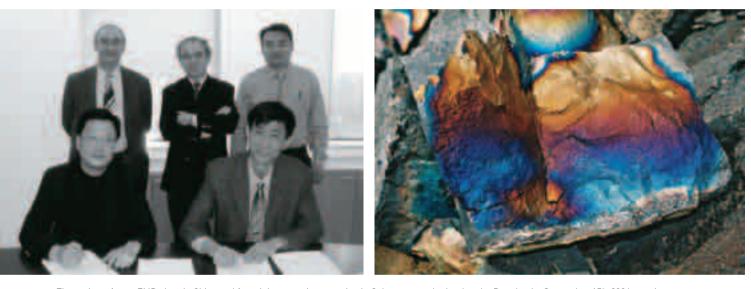
### Active committees

In organising its work, the Board is supported by two committees that it appoints from among its members: the Audit Committee and the Compensation Committee.

The Audit Committee, which usually meets on the day before each Board meeting, dealt with the following matters in 2004:

- At the March 16<sup>th</sup> meeting, three topics were addressed: risk mapping, the transition to IFRS standards and examination of the 2003 financial statements;
- At the May 11<sup>th</sup> meeting, the Group legal manager presented the main lawsuits; pensions, foreign exchange risk and captive reinsurance were also reviewed:
- At the September 14<sup>th</sup> meeting, rules concerning capital expenditures, pension funds and environmental risks were examined; financial statements were also reviewed:
- At the December 14<sup>th</sup> meeting, the legal manager presented a draft procedure concerning purchases





The projects for an EMD plant in China and for mining capacity extension in Gabon were submitted to the Board at its September 15<sup>n</sup>, 2004 meeting.

of Eramet shares by corporate officers. The audit manager then reviewed the audits conducted in 2004 and presented the audit programme for 2005.

Furthermore, the **Compensation Committee** put forward an operating charter and a proposal for the allotment of attendance fees. These documents were approved by the Board at its May 12<sup>th</sup> meeting. The Committee met three times in line with the Board meetings of **January 14<sup>th</sup>**, **March 17<sup>th</sup> and December 3<sup>rd</sup>**.

At each meeting, the members of the Board of Directors are given a folder containing sheets on most points on the agenda.

At the end of the meeting, particularly when the Board has ruled on the financial statements, a draft press release is usually presented to the directors for their opinion and is published (now online with AMF) to inform the market of the main developments at the Company.

The Secretary of the Board drafts the minutes, which the Chairman submits to the directors for approval at the next meeting, the draft minutes being sent to each participant (directors, observers and Group Works Council members), with the notice of meeting and agenda, approximately one week before the next meeting.

Board meetings are usually held on the 53<sup>rd</sup> floor of the Tour Maine-Montparnasse, except those that follows Shareholders' General Meetings (at the *Lutetia* hotel).

### **THOROUGH GOVERNANCE**

### → Internal Control

The following items only include part of a report on this subject, which is published in full in the management report and the Group's reference document.



In early 2004, the Company undertook the progressive assessment of the internal control system. The first stage in this programme consisted of mapping risks. The project was carried out through interviews with the main managers of the Company's various processes, in order to measure their exposure to risks and the effectiveness of the related internal control. Based on the findings of its mapping process, an improvement action plan was defined for implementation in 2004 and beyond. The 2005 audit plan was entirely defined on the basis of the mapping.

The work done in 2004 did not reveal any serious failings or insufficiencies in the organisation of internal control.

### **Objective: transparency**

The purpose of the internal control procedures in force at Eramet is to ensure that management actions, operations and employee behaviour all comply with

the policies defined by the Company's governing bodies, with applicable laws and regulations and with the Company's values, standards and internal rules. They are also designed to check that the accounting, financial and management information provided to the Company's governing bodies truthfully reflects the Company's activity and business. Finally, they are intended to make sure that assets are protected against the various risks of losses resulting from theft, fire, improper or illegal actions and natural risks.

One of the objectives of the internal control system is to prevent and control the risks resulting from the Company's activity and the risks of error or fraud, particularly in the accounting and financial areas. Like any control system, however, it cannot provide an absolute guarantee that these risks have been totally eliminated.

### Interlinking procedures

Eramet, because of its diverse activities, is organised in three autonomous Divisions, each of which has all the services needed to operate (management, production, sales, purchasing, finance, etc.) The head office, in addition to its general management function, carries out the assistance or control tasks needed for the Group's cohesion.

Under the supervision of the Executive Committee, internal control involves many participants in the Company, chiefly the various sub-departments of the administration and finance department. It also involves the environment & industrial risks department and the human resources, health & safety department. More generally, every management level in the company within its field of expertise is responsible for defining, implementing and steering internal control items.

Several charters, for example on environmental, auditing or financial control issues, specify internal functioning rules and formalise information flows between the various participants.

#### → ACHIEVEMENTS

As regards information systems, a global network and a single e-mail system are now in place. Security has been tightened for some systems and specific

A workgroup made up of the main treasurers drew specifications and selected the new cash management software package. The software is common to the entire Group and will be customized and started up in early 2005.

Rollout of IFRS standards led the Group to tighten its accounting principles and procedures and to standardize them within its various subsidiaries.

The Group's reporting system was overhauled with the adoption of a new consolidation and reporting software package.

A unified Group-wide insurance plan was set up for civil liability and business interruption damage policies.

A service charter on tax issues was drawn up.

The 2005 audit plan was defined on the basis of the risk mapping carried out in early 2004 and the resources of the department in charge of auditing were enhanced.

#### The main actions planned for 2005 concern:

- drawing up and publishing financial statements according to IFRS standards in 2005;
- the effective start-up of new Group reporting and treasury applications;
- implementation of unified marketing resources for the Manganese Division;
- revision of risk mapping and definition of a multi-year audit plan on that basis.

dated formally by Division management and the Chairman & CEO in specific Division meetings. The Group's budgets and reforecasts are validated by the Executive Committee.

The statutory auditors carry out six-monthly reviews of the financial statements, for which validation meetings are organised with the auditors of the main subsidiaries.



tools have been set up.

Directors of Eramet.

and audit committees.

Eramet has formalised internal procedure manuals

on the major issues in the life of the Group (capital

investments, exchange risk hedging, management

procedures, etc.) and circulated them in the Company

and all its subsidiaries. For example, the capital invest-

ment procedure states that all projects exceeding a

certain amount must be settled in Division meetings according to precise arrangements, and that any strategic projects are presented to the Board of

Monthly management meetings are organised with the management of each Division to examine monthly

results and analyse budget variances and the resul-

ting action plans. In addition, specialized manage-

The main participants in the production and control of financial and accounting information are the accounts, treasury, financial control and consolidation departments, and the management-accounting

The Company's budget control is published quar-

terly. Budget/actual reporting is monthly and includes

financial management consolidation. Company and Group budgets are determined at the end of each

year for the following year and four reforecasts are

made during the year. These budgets and refore-

casts, as well as the related action plans, are vali-

ment meetings are held every month.



# FACTS & FIGURES 2004

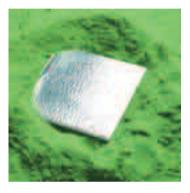
### Framet in International Economic Growth



Eramet conducts its business through three Divisions: Eramet Nickel, Eramet Manganèse and Eramet Alliages. The nickel, manganese and alloys businesses are close but their economic cycles are not aligned, which enables the Group to tap into several sources of synergy – hot metallurgy, melting, market knowledge, etc. and to balance its results.

In 2004, Eramet's operating performance was excellent. The Nickel and Manganese Divisions maintained production volumes while benefiting from exceptional price levels on their markets. In Alloys, the upturn in aerospace orders enabled the Division to improve its results.

### Materials for Industrial Development

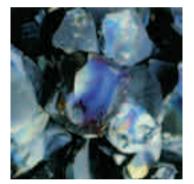


### **ERAMET NICKEL**

- World #1 producer of ferronickel

Eramet Nickel produces and processes nickel ore in its 5 mining centres in New Caledonia. The Division manufactures and markets various products based on that ore: ferronickel, used in stainless steelmaking, in New Caledonia; high-purity nickel for superalloys and nickel and cobalt chlorides, which are particularly used in the electronics industry, in its Sandouville (France) plant; and ultrafine cobalt and tungsten carbide powders, produced by Eurotungstène in its Grenoble (France) plant.

In 2004, Eramet Nickel posted excellent results, particularly as a result of very high nickel prices. On nickel markets, where structural growth has been driven by the unique advantages of stainless steel for several years, the Division's strategy is to increase production in order to satisfy demand.



#### **ERAMET MANGANÈSE**

World #1 producer of manganese chemical derivatives
 World #1 producer of manganese (by turnover)

Eramet Manganèse produces and markets one of the world's widest ranges of manganese derivatives through industrial facilities in Africa, America, Asia and Europe. In Gabon, the Division mines and enriches ore and makes sinter. Eramet Manganèse produces manganese alloys for the steel industry in France, China, Norway and the Untied States, manganese chemical derivatives in the United States, Belgium and Mexico and special products in the United States. The Division has also developed a recycling service business in two units, in Belgium and the United States. 90% of the manganese market is related to steel production, in which growth is currently driven by China.



#### **ERAMET ALLIAGES**

World #1 producer of high speed steels
World #1 producer of large closed die-forged parts

Eramet Alliages develops, produces and markets high-performance special steels and superalloys. The Division uses those materials, together with other metals such as titanium and aluminium, to make technically advanced, high value-added pre-machined parts. Eramet Alliages is comprised of two companies, Aubert & Duval (AD) and Erasteel.

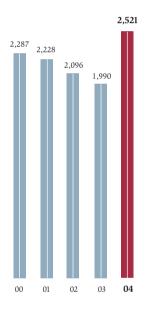
- AD manufactures long products, tooling and forged and closed die-forged parts for many industrial sectors, particularly aerospace and power generation. The company has seven industrial units in France and has several distribution sites.
- Erasteel makes high speed steel for tooling, particularly cutting tools, on eight industrial sites in France, the United Kingdom, Sweden and the United States.

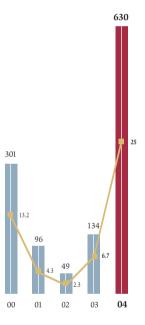
The Division, which undertook a major reorganisation programme in 2004, has benefited from the aerospace market upturn since the second half of the year.

### FACTS & FIGURES 2004

### $\rightarrow$ An Outstanding Year

The Group achieved record results in 2004, thanks to the sharp rise in nickel and manganese prices and the restructuring efforts made in 2003 and 2004. Net cash improved further, despite the high level of capital expenditure.





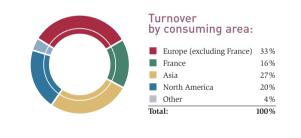
Turnover (millions of euros)

Turnover improved 31% at comparable Group structure and accounting methods, thanks to nickel and manganese prices.

### Operating income (millions of euros)

Operating margin as %

Operating income increased almost fivefold as a result of price rises and cost reduction efforts. The operating margin was 25%.



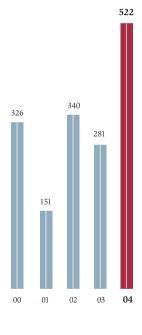


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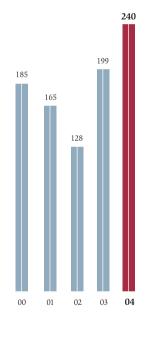


Net income rose sharply to the record level of €342 million.



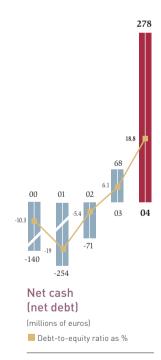
Net cash flow from operating activities (millions of euros)

Net cash flow from operating activities improved 85.8% to €522 million and remained significantly higher than capital expenditure.



### Capital expenditure (millions of euros)

Capital expenditure increased to €240 million with the continuation of the major investment programmes in progress in all three Divisions.



Net cash improved again, increasing from €68 million to €278 million, despite the high level of capital expenditure.

### FACTS & FIGURES 2004

### Framet on the Stock Market: a Year of Sharp Growth

### Very sharp rise in Eramet share price in 2004: +73%

The Eramet share price grew substantially in 2004 (+73%), following a year of recovery in 2003.

The share price reached a high of  $\notin$ 72.9 In the last quarter and ended the year at  $\notin$ 66.20, significantly above the previous highs recorded in 1996 ( $\notin$ 61.89) and 2000 ( $\notin$ 61.75).

The stock considerably outperformed the CAC 40 index, which gained 7.4%.

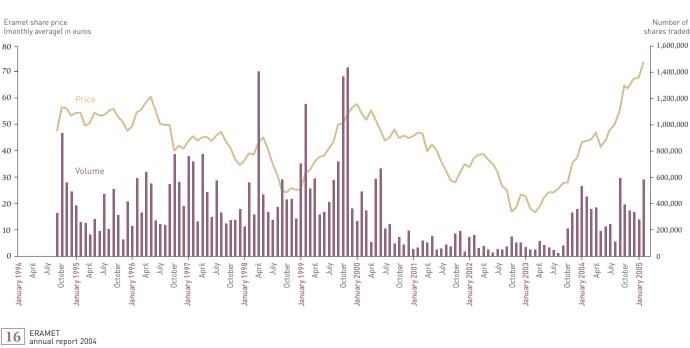
Allowing for the exercise by employees of subscription options for new shares, the total number of outstanding shares as on December  $31^{st}$ , 2004 was 25,744,944, compared with 25,577,574 as at the end of 2003.



BRGM: French state geosciences agency SCTPI: New Caledonian provinces development agency

### Strong increase in trading volumes

Eramet share trading volumes increased almost threefold in 2004. Trading levels were at their highest since 1999.



### → ERAMET SHARE PRICE EVOLUTION

### STOCK MARKET DATA AND DIVIDENDS

	Closing rate (€)			Market capitalisation	Volume	Income (loss) per share	Dividend **	Net yield on basis	Yield tax credit included,
	high	low	as on 31/12	(in € millions)	(daily ave.)	EUR per share	EUR per share	of 31/12 price	on basis of 31/12 price
1994 *	57.93	47.26	52.59	771	37,385	2.05	0.82	1.56%	2.35%
1995 *	58.39	41.31	48.78	743	15,673	4.36	1.00	2.05%	3.09%
1996 *	61.89	34.91	41.47	643	23,981	3.03	1.00	2.41%	3.64%
1997 *	53.20	33.08	34.76	542	22,172	3.82	1.14	3.28%	4.93%
1998	47.72	22.11	25.60	399	24,176	2.75	1.14	4.45%	6.68%
1999	58.75	23.15	57.00	1,393	33,810	1.37	1.14	2.00%	3.00%
2000	61.75	41.90	43.55	1,076	14,100	4.42	1.30	2.99%	4.48%
2001	47.80	22.00	34.60	855	4,664	-0.13 (1)	1.14	3.29%	4.90%
2002	39.80	13.90	21.05	527	4,928	0.23	1.00	4.75%	7.13%
2003	38.60	14.50	38.50	985	5,834	-4.35 (2)	0.86	2.23%	3.35%
2004	72.90	36.70	66.20	1,704	15,953	13.62	2.00	3.02%	-

\* Recalculated in euros.

\*\* Dividend excluding tax credit from 1994 to 2003 inclusive.

[1] Before the effect of the provision for SMC, income per share was €1.98.
 [2] I.e. €0.22 per share excluding exceptional restructuring-related items.

### Shareholder Information

The financial communications department is in charge of implementing the Group's information policy with respect to the financial community, investors and shareholders.

In addition to the two annual meetings intended for analysts and journalists in line with the publication of the annual and half-yearly financial statements in March and September, several other information meetings are organised in Paris, London and Frankfurt.

In 2004, three specific meetings were organised to give a more detailed view of the businesses, markets and issues of each of the Group's three Divisions -Eramet Nickel, Eramet Manganèse and Eramet Alliages.

Eramet's Internet site (www.eramet.fr) is designed to present the Group and its activities. The site also provides all the presentations, press releases and financial documents (reference documents and annual reports) produced by the Group.

### CONTACTS

### ERAMET Philippe Joly

Investors Relations Tour Maine-Montparnasse 33, avenue du Maine 75755 Paris Cedex 15 Tel.: + 33 1 45 38 42 02

### BNP PARIBAS Securities Services

Services aux Émetteurs Immeuble Tolbiac 75450 Paris Cedex 09 Tel.: + 33 1 40 14 74 68

#### → ERAMET: IDENTITY CARD

- The Eramet share is part of Compartiment A of the Euronext Paris single list. Eramet is part of the new CAC MID 100 index and the SBF 250 index.
- ISIN code: FR 0000131757.

#### • Mnemo: ERA.

- Number of shares as on December 31<sup>st</sup>, 2004: 25,744,944
- Par value: € 3.05
- Fiscal year from January 1<sup>st</sup> to December 31<sup>st</sup>

### → SHAREHOLDERS' DIARY

Tuesday May 10<sup>th</sup>, 2005 Publication of 1<sup>st</sup> quarter turnover, before stock exchange opening

Wednesday, May 11<sup>th</sup>, 2005 General shareholders' meeting

Wednesday, August 3<sup>rd</sup>, 2005 Publication of 2<sup>nd</sup> quarter turnover, before stock exchange opening Thursday, September 8<sup>th</sup>, 2005 Publication of 1<sup>st</sup> half results, before stock exchange opening

Thursday, November 3<sup>rd</sup>, 2005 Publication of 9-month turnover, before stock exchange opening

Thursday, February 2<sup>nd</sup>, 2006 Publication of full-year turnover 2005, before stock exchange opening

# A SHARED DEVELOPMENT MODEL





- Harmonious Growth:  $\rightarrow$  responsibility & respect
- Profitable Growth:  $\rightarrow$  competitiveness & performance
- Sustainable Growth:  $\rightarrow$  investment & innovation

SUSTAINABLE GROWTH

# **INVESTMENT** & **INNOVATION**



240 million euros for ambitious development programmes

In 2004, Eramet's capital expenditures totalled €240 million, an approximately 20% increase on 2003.

### CONSOLIDATING OUR LEADERSHIP ON PROFITABLE MARKETS

For over ten years, Eramet has kept up a steady growth momentum, driven by investment and innovation. The Group bolstered its R&D teams in 2003 by buying out the other shareholder in Trappes research centre (CRT). Faced with a crisis on some of its markets from 2001, Eramet maintained its growth strategy and continued to invest in major long-term programmes for its three Divisions. One after the other, the Group's markets have started to grow again. That growth is mainly sustained by the development of industry in China and, for alloys, by the upturn in aerospace that took place in the second half of the year. Eramet continues to implement its capital investment strategy to extend mining capacity in nickel and manganese and, more generally, develop its industrial assets.

### → "Moving Forward Together on Chinese Markets"

Objective: respond to the refocusing of global business on Asia, a trend that started in 2003 and was borne out in 2004. From alloys and steelmaking to construction and portable energy, Asia shows double-digit growth on most of the Group's markets. Eramet continues to invest in China to consolidate the position of its Manganese Division, which has had a firm base there for almost 10 years, and develop the presence of other activities.

### $\rightarrow$ CLOSE-UP

### Development programmes:

• China: projects for two new production units: a tool steel plant and an EMD facility for the battery market. A distribution centre for alloys is also being set up.

• New Caledonia: the nickel 75,000-ton programme, including construction of new 75 MW electric furnace at the Doniambo plant and the start of work at the Tiébaghi ore beneficiation plant.

• France: the new 40,000-ton unit at the Pamiers plant, mainly designed for closed dieforged aerospace parts.

### Interview with Joseph Chang, Chairman & CEO, Eramet China

A Chinese national with a master's degree in computer science from the University of Maryland, Joseph Chang opted to pursue a career in Asia after a few years working in research in the USA.

He worked in materials distribution before joining the Comilog group in China in 1998. He is now Chairman & CEO of Eramet China and a member of Eramet's new International Management Committee.

### The Group has set up a new organisational structure encompassing all its activities in China, with you at its head. Why?

China is where all the growth opportunities are today. Every major industrial group in the world has its eyes on the country. However, China's development entails risks, especially for an international group. So it's important for us to rally all Eramet's forces round this challenge.

#### How long has Eramet been active in China?

With 20% market share, Eramet Manganèse is the leader on the Chinese manganese alloys market. Comilog has had a base there since 1983; we now have two manganese alloy production plants and a sound portfolio of loyal industrial customers in the country. We export one-third of our Chinese production to the rest of Asia. Eramet Manganèse achieved outstanding results in China in 2004. In recent years, the Group's other Divisions have used this base as a springboard to develop their Chinese market positions.

#### What are the Eramet Group's ambitions and projects in China?

We decided to gain a foothold in electrolytic manganese dioxide (EMD) by drawing on the technological experience acquired in the New Johnsonville plant in the USA. EMD is essential to alkaline battery manufacturing. China currently produces 13% of the alkaline batteries made worldwide and forecasts suggest 50% of EMD consumption growth will take place in the country. Many international players such as Duracell and Energiser have set up plants to serve the Chinese and export markets. We want to benefit from this activity's development by establishing



### **INVESTMENT & INNOVATION**

### → CLOSE-UP

### Eramet in China

### **Existing facilities**

- 2 manganese alloy production plants since 1983 in Shaoxing and Guangxi provinces.
- An alloys distribution centre in Chang Jiang River Delta (Shanghai region), scheduled to start up in September 2005.
- Common teams in Shanghai: 40 people, of which 30 Chinese.
- Total workforce: 2,200 people.

### Projects in progress

- Eramet Manganèse: an EMD plant in Chongzuo (Guangxi province).
- Eramet Alliages: a high speed steel plant in Tiangong.



an uprange EMD production base in China. The new plant, scheduled to come on stream in 2006, will support growth on the domestic market. It is also aimed at the export market. We want our offering to be highly competitive.

In alloys, in 2004 we began setting up a distribution centre that will include extensive technical support facilities. China will establish itself as a major global producer of moulds, particularly for plastic automotive parts. China imports the alloys needed to make those moulds. This activity requires substantial technical support to identify needs, recommend the right equipment, etc. With this centre, Chinese manufacturers will benefit from local technical service. Both these projects were launched in 2004. We are currently examining other opportunities.

### How are the Chinese reacting to these developments?

China could not develop without the investments and technology of foreign groups. China's development is the world's development. Eramet already enjoys a strong image via Comilog. Now we are creating Eramet China. That will raise the Group's profile.

#### How do you manage the new organisation?

We need to know China and its markets better. Some are mature, some are maturing and others are only just emerging. The Chinese have a rich history and their own way of doing things. China is nothing like New Caledonia, the United States, northern Europe or Africa. China is a completely new experience for the Group. Eramet China is a Chinese company with mostly Chinese employees. It will have to find a place

### "Eramet already enjoys a strong image in China"

for itself in local growth. It also belongs to a big industrial group. We will be able to develop mutual understanding.

#### What can Eramet contribute to that dialogue?

The Chinese are very pragmatic; they work responsively and know how to seize opportunities. A group of Eramet's size contributes tried and tested methodologies, as well as management techniques that enable risks to be controlled more effectively and growth to be sustained. Our organisation must allow everyone to share knowledge and experience. It must also leverage the synergies that exist in the Group in relation to the Chinese market. We have to share resources between activities. This is a major improvement axis, but just a first step. We are gradually enriching our market knowledge and Eramet is studying other development opportunities, particularly in alloys for the tools market.



### → 75,000 Tons of Nickel to Support Market Growth

**Objective:** satisfy growing demand for nickel, a crucial material for many industries. Eramet's increase of its production capacity in New Caledonia to 75,000 tons is one of the few extension projects that are in step with the market. The Doniambo plant's new electric furnace started up in June 2004. It will be followed by the construction and start-up in 2005-2006 of a new beneficiation plant.



### → CLOSE-UP

### SLN in New Caledonia – Key figures

- 2,200 direct jobs
- 1,000 indirect jobs
- 5 mining centres
- 1 metallurgical plant with capacity of 75,000 tons on completion of the capital expenditure programme
- Turnover: approximately €665 million
- 80% of local exports
- 10% of New Caledonia's tax revenue

The story starts in 1999. Eramet decided to invest to increase its ferronickel production in New Caledonia. Studies were undertaken with the support of the research teams at CRT. Dominique Chuvan and Gaëtan Merceron explain.

New Caledonian Dominique Chuvan joined SLN in 1975. He is currently engineering, maintenance and electricity manager at the Doniambo plant. He was on the preliminary study team and has supervised the programme since May 2003.

With a doctorate in materials science and engineering, Gaëtan Merceron is an R&D engineer at Trappes research centre (CRT).

**D. Chuvan:** We soon reached the conclusion that we could not meet the Group's objectives without investing in a new furnace. Furnace 10 was the least efficient of SLN's furnaces. It was quickly decided to

### The fruit of know-how we have been developing for 30 years."

shut it down and replace it with a furnace using new technology that would allow us to achieve higher performance. During the in-depth preliminary study phase, we consulted many experts, including refractory materials specialists and furnace manufacturers. Trappes research centre was a partner at every stage.

### A technological first

**G. Merceron**: This furnace is a technological first. It's the first time that such high power has been used in nickel metallurgy. By putting in more energy (75 MW instead of 41 MW), we will be able to reach nickel production levels of 75,000 tons per year. This rise in energy is the main technological issue we have had to address. It required substantial changes to the furnace cooling system. These were made by using modelling techniques based on our industrial experience. Nevertheless, we are advancing into new territory. Since commissioning in June 2004, we have been closely monitoring the ramp-up of the new facility.

**D. Chuvan:** The new furnace is the fruit of long experience at SLN and the know-how we have been developing for 30 years.

ERAMET 23

### **INVESTMENT & INNOVATION**

**G. Merceron:** The selected manufacturer opted to carry out a series of tests on the furnace's new cooling system. That initiative was a very useful addition to the pilot data obtained from work at CRT and our own industrial experience. The tests, in which SLN engineers took part, enabled us to validate and make sure of our technological choices.

**D. Chuvan:** In parallel, a team studied furnace supply upstream and ferronickel refining downstream. The 75,000-ton project is much wider than just the set-up of the furnace, even a major item of equipment. In 2005, we will start building a new ore beneficiation plant in Tiébaghi. The programme also has a significant environmental aspect, for both neighbouring populations and the improvement of working conditions at the unit. Almost 20% of total capital expenditure at the plant has gone into the installation of new equipment to protect the environment, particularly by controlling dust emissions into the atmosphere.

**G. Merceron**: Dust is captured by filters then shaped to be fed back into the process. This operation was a technological challenge. By combining assistance from CRT with the company's know-how, we met it successfully. The facility came on stream in 2004 and will benefit the entire plant.



**D. Chuvan**: The project was supported by a personnel information and training programme. This is important. But what is more important and what impressed SLN personnel was to see how the company continues to grow and progress through the new, more powerful furnace.

"What impressed personnel was to see how the company continues to grow and progress through the new furnace."

### $\rightarrow$ CLOSE-UP

### A growing mining centre in Tiébaghi



In Tiébaghi, all the mining infrastructure work, particularly the crushing facilities, has been completed, and the mobile equipment pool, which includes several 100-ton trucks, is now full. Construction of sea loading facilities – including a 1.8 km-long conveyor (1.2 km in the sea), the longest in New Caledonia – was finished in early 2005. A new beneficiation plant will be built in 2005-2006. Tiébaghi will eventually produce an additional 1 million tons of ore for the Doniambo plant.

### Strong R&D Involvement in Major Strategic Projects

From technological progress to the development of new processes and materials, R&D is a key strength for Eramet's businesses. In 2004, R&D mainly focused on improving production processes in the Nickel and Manganese Divisions, where it helped to roll out the Group's major projects in New Caledonia, Gabon and China. In the Alloys Division, work particularly concerned the development of new steel products and grades.

Research and development (R&D) at Eramet is organised in a matrix. Trappes research centre (CRT) houses the skills that can be shared at Group level, while each Division has more specialised R&D or metallurgical studies units. With a budget of 6 million, CRT employs around 60 researchers, engineers and technicians and is a centre of excellence for the mining, conversion and utilisation of non-ferrous metals. The centre also takes part in Group projects concerning special steels and alloys, protection of the environment and development of new applications and products. CRT is a world-class skill centre that works with all Divisions in liaison with production site teams.

Every activity has its own R&D units. These focus more on creating new products, particularly in the Alloys Division. In Les Ancizes (France) for example, the emphasis in 2004 was on designing technically advanced products for aerospace, with applications in engines, landing gear and power transmission. One development goal is to make the anti-corrosion cadmium deposit in aircraft parts unnecessary. In this way, Aubert & Duval contributes to its customers' sustainable development policy.

New products developed by Erasteel include the extension of the Linea TM offering. The treated blanks range, launched in 2003, now includes small-diameter treated bars for automotive applications.

AD also develops new alloys for the tooling market to support the company's great ambitions in this sector. All these developments are made possible by excellent grasp of processes and product microstruc-



ture at every stage in manufacturing. They are accelerated by intensive use of digital simulation for both processes and alloy design. The Alloys Division also leverages that process expertise to make products more reliable and cheaper to make. In 2005, the Division's projects and resources will be bolstered by an Alloys R&D Committee in order to foster synergy and optimise the use of equipment.

In total, more than 100 R&D projects were developed in the Group in 2004 by CRT and Division research teams. The Group's R&D activity is coordinated by the Division research managers with the support of CRT and has a total workforce of approximately 150. It represents 1-2% of the Divisions' turnover (approx. 1% for Nickel and Manganese and 2% for Alloys), i.e. a total budget of approximately €25 million in 2004, a 25% increase from 2003.

#### $\rightarrow$ CLOSE-UP

### Hydrometallurgy a fast-growing research area

Supported by high-quality garnierite reserves. Eramet has focused its efforts on developing its pyrometallurgical process for ferronickel. The group has also developed state-of-theart techniques for refining high-purity cobalt and nickel matte. After extensive work on ore processing in the 1970's, the Group has kept constant watch over major projects and recent developments in their technology, particularly in Australia. In New Caledonia, Eramet favours a comprehensive approach to the beneficiation of available mineral resources (high-grade garnierite, low-grade garnierite, laterites) by the additional use of different processes (pyrometallurgy, ore enrichment, hydrometallurgy). CRT now puts substantial resources into developing new hydrometallurgical processes for ores that are in line with the Group's objectives.

### PROFITABLE GROWTH

# **COMPETITIVENESS** & PERFORMANCE





Workforce by Division

	Manganese	5,361	(42%)
	Alloys	4,961	(38%)
	Nickel	2,484	(19%)
	Holding company	92	(<1%)
Tot	al: 1	2,898	

### SUSTAINING GROWTH OVER THE LONG TERM

Competitiveness is a crucial factor in maintaining positions on fiercely disputed markets. In 2004, prices were high in manganese and exceptional in nickel. However, these are cyclical markets and prices will fall eventually. That is why Eramet constantly seeks to improve its competitiveness. In 2003, the Group began an ambitious performance improvement programme in its three Divisions. Significant events in 2004 were the completion of Aubert & Duval's reorganisation and the start-up of a development plan for manganese production in Gabon. This performance drive is intended to sustain growth over the long term to achieve greater production in line with market trends, well-controlled quality, excellent customer service and widely recognised competitiveness.

### → From Moanda Mine to Owendo Port Three Million Tons of Manganese on the Right Track for Progress in Gabon

Objective: address global growth in steel production. Eramet decided to extend its production capacity for non-ferrous metals and their alloys to keep pace with the sharp growth in the global steel market (+ 6.6% in 2004). Comilog produced 2.5 million tons of manganese in Moanda (Gabon) in 2004. The great potential of Eramet's Gabonese manganese is matched by only a few sites worldwide. That is why the Group decided to undertake a performance improvement plant to ship 3 million tons from 2006 (2.4 million tons of ore and 600,000 tons of sinter).

### Interview with Marcel Abéké. Director & CEO of Comilog Gabon. member of Eramet International Management Committee.

### A growth milestone for Comilog Gabon

### What are the main stages in the programme?

In recent years, Comilog's annual capacity has been close to 2 million tons. We want to increase it to an average of 3 million tons. In 2005, we'll be at 2.7 million and we expect to reach the 3 million mark in early 2006. As we cannot rule out an acceleration in market growth, we are bolstering all the stages in the production process. This includes the mine, of course, but also the beneficiation plant and rail transport through to loading onto ships in Owendo ore port. All these structures must progress so that we can address market growth.

### How far do you think you can increase the facilities' capacity?

We have real potential. The port's current capacity is 5 million tons. We can go back through the chain to the mine. The Transgabonais rail line was designed to carry 20 million tons; it currently only carries 6 million. We must improve traffic regulation. Then the processing plant will benefit from new equipment and we are stepping up mining operations. The entire production chain must get ready to meet demand for 4 million tons as needed.

#### Won't the mine be exhausted sooner in those conditions?

By increasing the utilisation rate of the deposit that our people are working on, we will of course shorten its lifespan slightly. However, Comilog's mining rights include several other deposits close to our current facilities that enable us to keep up our output for several decades, even at a significantly higher rhythm than 3 million tons.



### → CLOSE-UP

### Key actions in the 3 million-ton programme

- Mine: replace and upgrade equipment (mining machines, cranes, sprayers); transition to 3 shifts to operate 7 days a week.
- Beneficiation plant: switch to digital management system.
- Transport via Transgabonais railway: purchase new equipment (2 locomotives and 60 wagons) to schedule 14 trains per week; bolster traffic control teams; implement quality improvement programme.
- Port: renovate critical equipment: wagon tippler, bucket wheels, ship loader.

### **COMPETITIVENESS & PERFORMANCE**



Moanda industrial complex (CIM) had just reached cruising speed. Is it taking part in this overall effort? The programme is based on innovative and very recent technology. Rated production of 600,000 tons was achieved in early 2004 and we already consi-

### "An extraordinary chance for Comilog."

dering an increase to 660,000 tons. The technology allows it. In parallel, we are going to continue the sinter quality improvement programme, particularly by limiting the quantity of fines. CRT has contributed to this programme, which has already made good progress.

### What part do employees play in the performance drive?

The programme has two components: capital expenditure, which will benefit all facilities, and work organisation, which will evolve. We are hiring at the mine to operate it 7 days a week. The management system for the beneficiation plant will now be digital and personnel will be trained in the new technologies. We are implementing a transport regulation improvement programme at SETRAG<sup>\*</sup>, the company that operates the Transgabonais railway, and a regulation

### "Above all, we must improve safety."

coordinator will be recruited. Comilog will also hire and train a number of new train drivers. Personnel, therefore, are totally involved in the programme, which is an extraordinary chance for Comilog. We are preparing the next stages in Comilog's growth in Gabon and elsewhere. I would add that, as we meet this challenge, we must continue to improve working conditions, particularly in the mine, and, above all, safety. Accident rates have been falling steadily for several years but are still too high, and we had a tragic accident in 2004. In parallel to the launch of the 3 million-ton programme, we have defined safety procedures. Everyone must be aware of the industrial risks and give more thought to his or her own safety and other people's.

### How do the people at Comilog perceive the programme?

The programme will benefit from €30 million in capital expenditure over 3 years, but its success depends above all on our people. The project is a great source of hope and Comilog will rally round it. We want to see the company consolidate its global posi-

tion and keep pace with the phenomenal growth seen in Asia. We don't know where it will stop and, if we have to aim for 4 million tons, we hope that our new performance will able to us to meet such a challenge.

\* Société d'Exploitation du Transgabonais, which Comilog is contracted to manage until September 2005. Marcel Abéké is its Chairman & CEO.

### → CLOSE-UP

### Sandouville: objective 15,000 tons

The Sandouville (France) produced 12,000 tons in 2004. It also proved it was capable of achieving output of 15,000 tons in line with the capacity extension project in new Caledonia. The plant has undertaken a performance improvement programme to support market growth. This development comes with cost control efforts to improve the site's competitiveness. Sandouville is also stepping up its safety, quality and environmental actions.

### More efficient purchasing

In line with its objective of negotiating its purchases more efficiently, Eramet has identified the Group's 4,500 biggest suppliers. With help from Dun & Bradstreet, Eramet now uses standard nomenclature based on DUNS numbers for all those firms, which has allowed it to standardise and ensure consistency between the Group's 20 supplier databases. This new system is an effective negotiating lever and a provides for greater transparency.





### $\rightarrow$ CLOSE-UP

Production cycle times halved in Långshyttan (Sweden)

### "3F" stands for "Förbättrade Flöden i Färdigställningen" and means "improved flow in finishing department." The abbreviation has become a symbol of success at Erasteel. The aim was to cut manufacturing cycle times (24 hours until 2003) in half in the Swedish plant. Improvements were made by planning to reduce inventory and reorganising the finishing workshop, with greater flexibility in terms of tasks and more effective control of flows. The objective was achieved in 2004, thanks to consensus and commitment from all personnel.

### $\rightarrow$ Channels of Excellence in Alloys

Objective: be ready for the upturn in the aerospace market - a trend that was confirmed in the second half of 2004 after three difficult years – and open the way for new products. In 2003, AD began a long-term plan that will be rolled out from 2004 to 2008. The goal is to become a front-rank player on all markets and leverage all the synergy stemming from the combination of Aubert & Duval, Fortech and Tecphy. The company reorganisation plan is supported by significant capital expenditure (including a new press in Pamiers and a distribution centre in China) and sets new sales targets.

Interview with Alain Pradoura, CEO of AD and member of Eramet's International Management Committee.



"Redesign the company to make it more efficient."

### AD was transformed in depth in 2004. Why did you undertake that programme?

AD was created from the merger of three companies in 2004: Aubert & Duval, Tecphy and Fortech. We had already begun to leverage the existing synergy but brisk business on the aerospace and power generation markets until 2001 kept our efforts focused on production. Those markets collapsed in 2002. We took advantage of that difficult period to launch a long-term reorganisation programme. It is intended to implement all the potential synergy in our entity and adapt our assets to changes on our markets. In addition to relocation, global purchasing policies are more and more common as principals seek to select the most competitive supply worldwide. We felt the need to redesign the company to make it more compact and efficient, with a customer-driven organisation and a more responsive cost base. We opted for a matrix-based industrial structure with three channels - long rolled products, forged products and closed die-forged products - supplied by an alloy production centre (cf. diagram on next page).

The new industrial rationale came with equipment transfers. Are you going to specialise personnel? We want to give every plant a specialised business vocation and enable them to be more flexible and responsive in terms of customer service. Our aim is

### **COMPETITIVENESS & PERFORMANCE**



to be world-class on this issue, with over 90% of orders delivered on time (vs. 50 - 60% in previous years). This is an important differentiation criterion from our competitors in low-cost countries. We also want to consolidate our lead in terms of productivity, performance and responsiveness. Another differentiation factor lies in our technical ability to innovate by developing new materials.

The programme meets two other objectives: by concentrating specific manufacturing on given sites, we want to cut manufacturing cycle times, working capital and, over the longer term, the company's indebtedness.

### "We have one of the world's best business sets in our field."

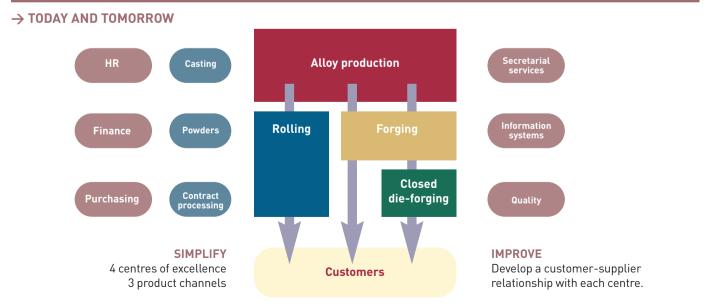
We also want to pool certain resources. For example, we used to carry out digital simulation at Les Ancizes, Pamiers and Issoire; this skill has now been concentrated on Pamiers and Issoire. The number of engineers and managers has been reduced to 240 from approximately 300 in the previous organisa-

tion. Finally, we want to reduce our costs and make the reduction in overheads permanent. In three years, the target is to achieve annual savings of around €30 million.

How did your customers react to the programme? Customers were rather satisfied. They appreciated the process, which is a part of industrial life. They recognise that we are now more flexible and responsive to their needs.

### What other gains do you expect from the programme?

These objectives of winning back business through greater efficiency are ambitious. Through them, the aim is to put the company back on track for success by capitalising on its tradition of excellence, but also by giving impetus to a new entrepreneurial momentum. The aim of this momentum is to make behaviour evolve. For several months, it has been embodied in the *Accélér* action process on every AD site. It is about giving everyone an appetite for initiative in his/her job. We should remember that the pooling of the company's skills has given us one of the world's best business sets in our field. It is up to us to bring out winning culture and behaviour.



### → VIEWPOINT

**Interview with Patrick Delaborde,** former manager of the Imphy plant, now manager of the forging unit and of the forged products channel in Les Ancizes.

### You experienced the reorganisation of AD as manager of the Imphy (France) plant until October 2004, then as the future manager of the forging centre. How did the year go?

It was a difficult period during which we had to manage several problems. The most important was carrying out the redundancy plan. 100 jobs were cut at Imphy. 32 people took up job offers in other Group sites. Others found a new job, went into training or started their own business. As at the end of 2004, 14 people were still at the job search centre.

In parallel, one essential task was to ensure continuity of customer service. Imphy's forging activity was moved to Les Ancizes (France). This was a production transfer rather than a shutdown. It meant defining programmes with customers, qualifying products and validating the new setup. We stopped the press in October 2004. The requalification process took all of 2004. We are now in the workshop reconfiguration phase. The challenge is to learn to work with each other.

### You are now in charge of the new forging unit. What do you think of this industrial setup?

We are still in the reconfiguration process, but the benefit of lighter structures is already being felt. By concentrating our resources, we'll be able to track market trends better. This is a very positive industrial trend.



### Will this specialisation by product channel lead to the development of new technologies or the enhancement of existing skills?

We are pooling the best things that AD has to offer. In concentrating that technological know-how, we are also concentrating our needs in terms of resources. We will do more and better with the same resources. We are working on a forging development programme to support the long-term plan. We want to go beyond our specialisation in aerospace and gas turbines. To do so, we have to develop other activities. Two major directions have been identified: long products (semi-finished products and bars) and tooling.

### $\rightarrow$ CLOSE-UP

### A plan for winning back business

AD's industrial reorganisation is part of an ambitious business development plan along three main lines:

- Increase market share in aerospace engine parts through the new 40,000-ton unit in Pamiers (France);
- Develop the production of tools for the Chinese, American and German markets and improve distribution of those products;
- Develop the production of long forged or rolled products for aerospace, but also for the medical and fastening sectors.

These developments will now have the "AD" umbrella brand.

### → A NEW PRESS FOR GROWTH IN AEROSPACE

Through AD, Eramet is a front-rank leader in the closed die-forging of large parts with leadership in the aircraft structure market and in power generation parts. However, the Group's market share remains relatively small in aircraft engine parts. Eramet has therefore decided to invest in new equipment to increase

its presence on this market, which represents approximately  $\in 1$  billion.

#### AN EXCEPTIONAL PROJECT

This project is in line with the ambition of increasing the Group's global market share in aircraft engine parts to 20 - 25%. The investment in the 40,000-ton press in Pamiers (France) will, among other benefits, take weight off the 65,000-ton press in Issoire (France), which was saturated, and allow it to specialise in large parts again. The programme is currently in the completion progress and the press should be operational in 2006.

### HARMONIOUS GROWTH

# **RESPONSIBILITY** & RESPECT



### $\rightarrow$ CLOSE-UP

### A harmonious approach

"In recent years, SLN has been transformed into a company that is improving in every respect. This harmonious approach, which combines skills, contributions and growth, and follows on from other Eramet Group successes on other continents - I'm thinking of Norway, Gabon and the United States, for example – seems to be the core of our development model and the surest guarantee of our Group's lasting success in the years to come." J. Bacardats - July 2004.

### **SHARING PROGRESS**

Eramet's development model favours harmonious growth. That means growth with consideration for the Group's employees, shareholders, partners and, more generally, all the stakeholders that surround and take part in its activities. This aim is reflected in a special focus on two issues. Eramet strives to contribute to an improvement process for all its employees and partners and all the communities in which it is based. In parallel, the Group fulfils its responsibilities on employment, safety, industrial risk control and the protection of the environment. For example, in 2004 Eramet remained committed to local job market regeneration plans around its former site in Boulogne (France), which was closed in 2003, as well as the site's restoration. Eramet has bases in many communities around the world. The Group maintains and develops industrial activities not only in Europe, but also in Africa, Oceania and America, and is investing in Asia to keep pace with market trends. On every location, its personnel have the same aim of contributing to local economic progress.

### → Health, Education & the Environment Comilog & Sustainable Development in Gabon

When Comilog established a base in Moanda in the 1950's, the entire socio-economic fabric of Upper Ogooué province was transformed. As Gabon's second-largest industrial exporter and the province's biggest private employer, the company generated extensive business, first in retailing then in construction.

Comilog has always acted with social awareness, taking initiatives in health, education, leisure, training and food supplies. In particular, the company has a modern, well-equipped hospital where high-quality healthcare is provided for its 1,300 employees and their families, as well as a large part of the population of Upper Ogooué.

### Education: top priority

In education, Comilog has financed the building of a primary school for its employees' children. The school is managed on the principles of the French secular system. It has its own secondary education section through to high-school graduation, for which pupils have the second-best results in Gabon.

Comilog has invested heavily in cultural and sporting activities. Libraries, screening rooms and a swimming pool have been built. Recreational or festive activities are organised regularly. Sports are encouraged and a range of facilities (football, basketball, volleyball, athletics, judo and boxing, etc.) have been set up. Comilog's teams achieve first-class results in the competitions in which they take part. Internally, Comilog remains one of Gabon's most active companies in terms of training, in which 2% of its payroll is invested. Under the policy of increasing the share of Gabonese among managers, local employees regularly attend training courses, including in Europe. Furthermore, the inauguration of Moanda industrial complex (CIM) in Moanda in late 2000 shows the ability of Comilog's management to run industrial assets using state-of-the-art technology.

Comilog has always reconciled the development of its mining environment with the protection of the environment. An ambitious action plan was launched on this issue in 2001. Moreover, Comilog's creation of Sodepal, (the Lékédi animal park management company), which was primarily intended to provide new job opportunities for the personnel that previously worked on cableway transport, has promoted biodiversity. 14,000 hectares of savannah, fringing forests, lakes and a variety of wild landscape with hundreds of animals, whether or local or outside origin, have been protected by the initiative.

### → CLOSE-UP

### A major contribution

One Comilog employee is responsible on average for the upkeep of 7-8 people, out of a total population of 24,000 in Moanda. Comilog's social action, including the guality healthcare provided by modern hospital facilities, represents 12% of the company's annual operating budget. Comilog has also created a subsidiary in charge of protecting local biodiversity through the 14,000-hectare Lékédi animal park.



### **RESPONSIBILITY & RESPECT**

### → Responsible Human Resources Management

Through the skills they show and the diversity of their career paths and cultures, Eramet's employees form a front-rank international team. Despite a decrease in the workforce in 2004 following the reorganisation efforts made in 2003 in the Alloys and Manganese Divisions, the Group remains driven by the will to grow. Three new plants are under construction and management recruitment has resumed. In its human resources (HR) management, Eramet strives to foster fairness, job fulfilment for all, listening and dialogue.





### High-level managers

In 2004, Eramet transformed its management resources development system. The Group set up a skill pool to support its development. The first stage was to detect the 200 or so key individuals, whether high-potential managers, promising young talents or experts. These managers were identified by specialised committees comprised of the three Division HR managers and the Executive Committee. This key group, which covers every nationality (Europe, USA, Mexico, China, Japan, Korea, Taiwan, Gabon, New Caledonia), will now be monitored directly by the Executive Committee. In parallel, all management organisational charts were reviewed and key positions were identified. The Group will now manage the development of its activities with the support of high-potential managers who can bring their skills to the most relevant positions. Furthermore, in September 2004 an international management seminar was organised for the second year running. At the event, 85 managers worked on the topic of the Group's developments in China. In total, the new management development policy has made the Group's organisation clearer. Its role from now on is to enhance sharing of experience and increase management's contribution to the company's performance.

### **Extending benefit schemes**

The social agreements signed by Eramet are managed in compliance with the laws and requirements of each country. Following the signing of a benefits agreement in New Caledonia, the Group extended its scope to include all employees in France. All personnel in both France and New Caledonia now benefit from the same coverage in the event of death (payment of capital and pension to eligible parties) and the guarantee of significant additional income in the event of temporary work incapacity or permanent disability.

### Support for restructuring programmes

When the 2003 restructuring programmes were announced, Eramet pledged to fulfil all its social responsibilities. In 2004, the Group continued to support these operations with job-saving plans and placement programmes for former employees. In Boulogne (France), almost all the 349 employees at the plant whose jobs were cut or will be when the site is restored have already found a new job or undertaken a personal project. Almost 200 positions have been offered within the Group. In parallel, Eramet took part in an industrial regeneration plan for the Boulogne area, which has led to the creation of more jobs than were lost. At AD, for 318 job cuts, 82 people have found internal placements, 88 have taken early retirement and 148 have benefited from retraining leave of 5 - 9 months according to seniority. As at the end of 2004, 63 people under this programme had found a new job, begun a training course or started their own business.



#### → VIEWPOINT

Philippe Vecten, CEO of SLN: "Combining industrial development with social progress"



"The 75,000-ton programme involved unprecedented consultation for the company with personnel representatives, which led to tangible progress on organisation, training, working conditions and safety. The signing of a benefits agreement in 2004 entitled all the personnel to protection against major risks (work incapacity, disability and death). Furthermore, work began on including a profit-sharing plan in the current bonus scheme. These agreements are part of a wider process for implementing a 'social charter.' In a location where industrial relations are often difficult and complex, this progress underscores SLN's driving role in this as well as other fields in New Caledonia."

### → Safety – a Priority for Eramet

In 2004, the Group's safety results were stable compared with 2003. The overall performance reflects contrasting situations and Eramet decided to launch a determined and ambitious improvement plan on all its sites. Health & safety managers analysed the accidental events that occurred in the company over the past 10 years and found that most of them were the result of human error or failure to apply safety instructions. A safety manager will now be appointed and trained on sites that do not yet have one in order to mobilise personnel on the importance of safety instructions. Furthermore, the HR department has begun a programme of tours covering the entire Group. The purpose of these site visits is to observe behaviour and identify risks. They are followed by a meeting with the site's managers to review the situation. A list of objectives is then drawn up. In some cases, concrete decisions are made and applied within a few days. The scope of action is vast, as safety is often connected to work organisation. Machine certification, new investments or training programmes are sometimes required.

#### Interview with Jerry Jenkins, HR manager, Marietta (United States).

### The Marietta plant regularly achieves good safety results. How do you do it?

We have a long-standing safety management system that involves every management level in the company. We have put a lot of time into the issue. A safety manager has been appointed in every department in the company. Labour unions take part in the running of safety committees and managers hold a 'safety council' every month. Despite that, we are not satisfied with our 2004 results.

## The accident frequency rate, which is still one of the best in the Group, has improved only slightly. Why?

Employees had to deal with changes in their contracts, particularly concerning benefit systems, following the reorganisation in the Manganese Division. Other developments led to changes in work habits and the redefinition of everyone's job. That made people slightly less vigilant. Keeping people safe means keeping them focused.

What do you intend to do to improve the situation? Since the end of 2004, the plant's management has been carrying out audits to understand the causes



'A long-standing safety management system that involves every management level in the company."

better and define corrective measures. We need to make sure that safety messages reach every employee. We firmly intend to improve the situation in 2005. There will be fewer moves and vigilance will probably increase. In addition, 2004 was a very good year in financial terms, so morale is higher. That factor often has positive impact on safety results.

#### **RESPONSIBILITY & RESPECT**

# Environment & Industrial Risks A Meaningful Sustainable Development Process

**Involving anticipation, control, improvement and communication**, the Group's environmental actions cover a vast geographic area and a wide variety of issues. These important initiatives are often sensitive in terms of evolving regulations and public opinion. The significant tangible progress achieved in 2004 shows that the Group's environmental approach, particularly as implemented in the past three years, is a very professional one. This determined, progressive process is supported by a dedicated team that works through a broad network of players both inside (plants, divisions) and outside (trade organisations, scientific bodies, legal experts) the Group.

#### $\rightarrow$ CLOSE-UP

#### Compliance with European greenhouse gas regulations

The Group is concerned by the European directive on emission quotas, effective on January 1st, 2005. It comes under the French national emission quota plan through its three steelworks in France: Les Ancizes, Commentry and Firminy. A new round of negotiations will take place later to define applicable quotas for the relevant sites for 2008-2012.



### Rolling out an environmental information system (EIS)

The deployment of an environmental information system (EIS) in 2004 was an important milestone for Eramet, following the adoption of an environmental charter in 2002. The EIS is an interactive system linking the Group's environmental & industrial risks department to the plants. It includes a database and a document management system. The former provides for the traceability and consolidation of all the sites' environmental data (water, air, waste, energy, substances); the latter gives sites easy access to regulatory, methodological and practical information. In 2004, a test was carried out on three pilot sites: Sandouville, Pamiers and Les Ancizes. This phase made it possible to align the tool on the plants' needs and define a methodology for the thorough validation of every phase in the process. The EIS was then extended to almost all the Group's French sites. It will be rolled out gradually in other countries and 2005 and 2006, consolidating a comprehensive and structured environmental management process.

#### **Greater transparency**

Eramet publishes detailed environmental results for a significant number of its industrial sites in its annual information documents, as was the case in 2003 for the Commentry, SLN (Doniambo), Eurotungstène, Marietta, Pamiers, Porsgrünn, Sauda and Sandouville plants. Combined with an analysis of the industrial risks relating to the Group's activities, this information was treated in greater depth in Eramet's first reference document, which was published in January 2005. In parallel to this extension of the scope of environmental reporting, in 2004 the Group's environmental network continued its work to share information and best practices through two meetings of the environment club comprising French-speaking sites, in Clermont-Ferrand (France) in March and in Dunkerque (France) in September.

#### Active participation in regulatory and scientific bodies

In 2004, Eramet stepped up its participation in trade organisations to be closely involved in studies and work concerning its activities. The Group joined the Nickel Institute, which was created in 2004 from the merger of two cross-industry organisations, NIDI and NIPERA. The Institute focuses on regulatory and scientific matters and on the development of nickel uses. In that framework, Eramet took part in the nickel risk assessment study requested by the European Community.

The Group also contributes actively to the work of the International Manganese Institute, which car-

ries out various research programmes on the metal and, on a European level, to the work of Eurométaux, which is in charge of defending and promoting metals. Eramet takes part in the MERAG and HERAG programmes, which are supported by European authorities and intended to define assessment methodologies for the dangers and risks specific to metals. Finally, with the same aim of recognition for the specificities of metals, Eramet contributes to work on the new European policy on chemicals (Registration, Evaluation and Authorization of Chemicals – REACH), which is currently in the discussion stage.

In an area that, as Alain Robert, delegate CEO for nickel and R&D, points out, is "all too often marked by hasty, irrational, phobia-driven comparisons," this work seeks to promote a scientific appraisalbased approach. It allows Eramet to put forward its position on objective, responsible bases and gather the information needed to prepare for regulations more effectively as part of sustainable development approach of the Group's activities.



#### $\rightarrow$ CLOSE-UP

#### New operating permits for further environmental improvement

The Group's sites are not all at the same stage in terms of environmental management. While some facilities, following the example of Tertre (Belgium), have undertaken an ISO 14000 certification process, most of them are consolidating the bases of environmental policy by reviewing the operating permits that authorise them to operate and enable them to make further progress. The Commentry, Les Ancizes, Grenoble, Imphy, Pamiers and Champagnole plants in France and SLN's Doniambo plant in New Caledonia all obtained new permits in 2004.

# MATERIALS FOR INDUSTRIAL DEVELOPMENT



### $\rightarrow$ Eramet Nickel

a technological first and an all-time record

### $\rightarrow$ Eramet Manganèse

prosperity regained

### $\rightarrow$ Eramet Alliages

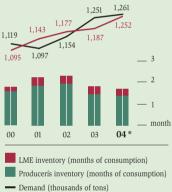
industrial reorganisation and a conquering spirit



# ERAMET NICKEL

Eramet Nickel, the Group's Nickel Division, is a world leader in the nickel and nickel derivatives market. With the implementation of the 75,000-ton programme in New Caledonia in 2004 and the capacity extension of its French plants, the Division is enhancing its production potential and positioning itself to support growth worldwide.

### World nickel supply and demand



Demand (mousands of tons)
 Supply (thousands of tons)

\* Eramet estimate

#### World nickel supply



Western production

### → 2004 Events

#### January

• Dust filtration and compacting facilities come on stream in Doniambo (New Caledonia). The system is designed to cut the site's dust emissions by twothirds.

#### March

• SLN shuts down furnace 10. The countdown begins for the technically ambitious project of building the first 75-megawatt furnace. Ferronickel production on SLN's other two furnaces continues during the work.

#### May

• Eramet Sandouville takes part in the organisation of a conference on industrial risks in Le Havre (France), sponsored by the Seine estuary risk control office (ORMES).

• Alain Robert invites analysts and journalists to the first sector information meeting on the nickel market.

#### June-July

• SLN's new furnace is commissioned on schedule on June 18<sup>th</sup>. The first slag is tapped in June, followed by successful metal production in mid-July. Ramp-up has since progressed satisfactorily. The furnace will be able to produce 70,000 tons in 2005.

#### September

• Jacques Bacardats, Alain Robert and Philippe Vecten take part in the second international nickel conference in Nouméa, New Caledonia.

#### October

• Eurotungstène's second open day in Grenoble is the opportunity to spread public knowledge of the company, particularly in terms of its safety and industrial risk control strategy.

#### December

• Studies are completed on the ore beneficiation unit in Tiébaghi and construction gets under way.

#### **KEY FIGURES 2004**

(millions of euros)	2002	2003	2004
Turnover	501	610	765
Operating income	73	160	310
Cash flow	125	180	277
Capital expenditure	40	104	139
Capital employed	250	270	353
Employees	2,356	2,395	2,484





### → A Technological First & an All-Time Record

In 2004, Eramet Nickel benefited from record nickel prices. The average price on the London Metal Exchange (LME) in 2004 was US\$6.27/lb., a 43% increase on the 2003 average.

This increase resulted from stretched supply combined with growing demand in 2004 and was fuelled by speculation. Stainless steel production, which takes up two thirds of the world's nickel, continued to rise, driving ferronickel demand despite the development of stainless steel with little or even no nickel content. Demand for nickel on the alloys market grew significantly from 2003 (+12.6%), while the other sectors (electroplating and electronics) were stable.

Thanks to the inventory built up in 2003 in preparation for furnace idling at SLN, Eramet Nickel kept its ferronickel sales on a par with the previous year at 48,242 tons. Nickel metal and chloride shipments were also stable, enabling the Division to report total shipments of 60,020 tons. Sales improved at the Sandouville refinery, which produces high-purity nickel and nickel and cobalt chlorides, to over 12,000 tons. Eurotungstène, the market leader in cobalt powders, an essential component in diamond tools for cutting stone and building materials, also achieved good results in 2004.

#### **Production capacity extension**

In recent years, Eramet Nickel has implemented a capital investment programme to increase its production capacity.

In New Caledonia, a milestone was reached in 2004 in the programme to increase nickel production to 75,000 tons with the start-up of the new furnace and the completion on Tiébaghi of all the work related to conventional mining. In early 2005, construction

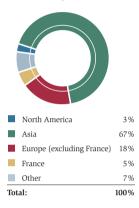
#### $\rightarrow$ CLOSE-UP

#### Essential nickel

Nickel is an essential component of several alloys and special steels. It is used in the composition of austenitic stainless steels with approximately 8-12% content, which provide the resistance to corrosion, heat and cold needed in many fields. For example, these steels are used in the chemical industry and in all smoke treatment facilities for the protection of the environment, as well as the food industry and the medical field, where their ease of cleaning prevents the spread of bacteria. Nickel is also a major component of special nickel base alloys with high nickel content, which have the mechanical strength and high-temperature corrosion resistance needed in sectors such as aerospace.

#### **ERAMET NICKEL**

#### Consolidated sales of ferronickel by consuming area





#### → EUROTUNGSTÈNE

Eurotungstène, a specialties company based in Grenoble (France) ploughs back a significant share of its value-added into research (10% in 2004), to support new product launches. New grades of metal powders for diamond tools are developed every year. This R&D effort has increased the company's market share in the sector from 12% in 1996 to over 22% in 2004.

of the port loading and storage facilities was completed. The programme will continue in 2005 with the commissioning of the new ore beneficiation plant.

In Sandouville, the plant successfully tested a production capacity increase to 15,000 tons in order to meet market demands. As for Eurotungstène, the company regularly develops new powder ranges. In 2005, installation of a new production line will position it on new market niches.

The Division's outlook is positive for 2005, a year in which prices are likely to remain high. Beyond that, Eramet's capital expenditure and ore reserves put it in a good position to develop in line with the steady growth of nickel markets.

### → A Dynamic Process Shared by All at Sandouville

The Sandouville (France) site's managers gave thought to the real meaning of sustainable development for a nickel refinery. The personnel's input on the question mostly concerned the protection of the site and its surroundings – a workplace that is also an outstanding natural environment.

In 2004, that work led to effective work on soil waterproofing. A new waste park and a new truck unloading area were built and underground pipes were repaired. These actions were carried out following construction of a third effluent collection tank which cut discharges by two-thirds.

### Drinking water consumption halved

Changing employees' mindsets is an important factor in sustainable development. In 2004, this was reflected in strong incentives to report any incidents. Fostering a broader view among personnel in this way enabled the site to halve its water consumption as many employees helped to track down leaks. The site's management wants to make this state of mind last. A recent local ruling that sets down new measures in line with the Seveso II directive will help in this respect. The new requirements provide opportunities to improve management, especially through the current ISO 14000 certification process. The ambitions of management and personnel assume consideration for people in both ethical and economic terms. For the 15,000-ton target in line with SLN's capacity increase in New Caledonia, Sandouville strives to achieve its productivity improvement goal with complete respect for its customers (quality), employees (safety) and neighbours (environment and industrial safety).



#### $\rightarrow$ CLOSE-UP

Red, yellow or green: best practices are colourful in Sandouville

In 2001. Sandouville (France) reached a turning point in terms of sustainable development. "The aim," explains plant manager Benoît Bied-Charreton, "is to keep the site in its good current condition and, if possible, improve it." Any anomaly identified by an employee that could affect safety, quality or the environment is notified to the management committee, which puts someone in charge of solving the problem swiftly with the employee in question. Incidents are notified via colour-coded forms: red if they concern industrial or individual safety, yellow for quality and green for the environment. The issue is to federate everyone's energy on the basis of transparency and trust. "The system is based on empowerment and prevention," says the plant manager. "It has enabled us to make problems less alarming and solve them more efficiently and with greater collective motivation."

### → SLN Increases Contribution to Better Economic and Social Balance in Northern Province

In addition to the three mining centres that it operates, either directly (Kouaoua and Népoui-Kopéto) or indirectly (Étoile du Nord) in the Northern Province, which already represented over 600 direct and 200 indirect jobs, Tiébaghi will create a total of 250 new direct jobs plus approximately 500 indirect and spinoff jobs in the North of New Caledonia.

Extensive training has been provided with a view to filling the resulting vacancies in the North, in cooperation with CFTMC, a mining and quarry training centre in Poro on the East coast. Supported by Northern Province development assistance measures, two local subcontracting companies have also been created in order to increase the economic fallout for the local population.

SLN is a stakeholder in mixed economy companies that were recently created in the Northern Province. It is also an active partner in ADIE, the association for the right to economic initiative, which has the vocation of helping small development projects, particularly in the inland areas of Grande Terre.

### Extensive fallout for all New Caledonia

With 2,100 direct jobs (i.e. a total wage bill of almost  $\in$ 110 M), of which 30% in the North, 1,000 indirect jobs, 80% of local exports and over  $\in$ 60 million in taxes paid for financial 2003 (10% of the Territory's tax revenue), SLN is a special partner in the development of New Caledonia as a whole.

The 75,000-ton programme will increase that con-show the way for tribution by generating additional tax revenue of New Caledonia."



over €8 million from 2006 onward. The programme has also involved a determined policy of calling on local companies to carry out the various projects, generating €100 million in local orders in 2003. Through STCPI, a New Caledonian development com-

pany that since 2000 has represented the interests of the Territory's three provinces with stakes of 30% in SLN and approximately 5% in Eramet, SLN closely involves New Caledonia in the company's development. For 2003 and 2004, it paid a total of €14 million in dividends to STCPI.

Emphasising the company's "active and responsible partnership role in New Caledonia," at the inauguration of the Doniambo plant's new furnace towards the end of 2004, Jacques Bacardats said, "Through the 75,000-ton programme, Eramet and SLN are implementing an entrepreneurial model that combines competence, dialogue, contribution and growth to show the way for sustainable growth shared with New Caledonia."

"An entrepreneurial model that combines competence, dialogue, contribution and growth to show the way for sustainable development shared with New Caledonia."

# ERAMET MANGANÈSE

Located close to the fastest-growing international markets, Eramet Manganèse, the Group's Manganese Division, has a robust position in all its sectors of business: manganese ore, alloys and chemical derivatives. In 2004, the business group continued its capital expenditure programme and benefited from the actions taken in 2003 that raised its profitability to world-class standards.

### > 2004 Events

#### January

• Eramet signs an agreement for the regeneration of the job market around its Boulogne site, which was closed in December 2003: a call centre representing 250 jobs is created: several industrial activities will enhance the local economic fabric (fish processing, play areas, shelter construction, engineering, etc.). An agreement will also be signed with Boulogne town council for the restoration for the site itself. A number of projects are being examined, including the setup of a supply platform for a hypermarket or the creation of a hub for a high-speed shipping line between Norway and Spain.

#### February

• The Gabonese cabinet approves the extension of the SETRAG management contract awarded to Comilog until September 2005.

#### March

• The price of high-carbon ferromanganese reaches a record \$796 per ton in China, a 140% increase from March 2003, reflecting the boom in demand driven by the growth of Chinese steel production.

#### April

• A tragic accident in Gabon. Comilog remobilises its people around safety in order to step up the steady progress achieved for several years.

#### 2004 KEY FIGURES

(millions of euros)	2002	2003	2004
Turnover	879	769	1,103
Operating income	(20)	9	320
Cash flow	99	46	264
Capital expenditure	46	35	39
Capital employed	620	444	400
Employees	5,174	6,115	5,361

#### June

• 30<sup>th</sup> International Manganese Institute annual conference in Tokyo, focusing on new uses for manganese and the latest environmental, health and safety data. Vincent Trelut, Eramet Comilog Manganèse sales & marketing manager, chaired the Institute until the end of 2004.

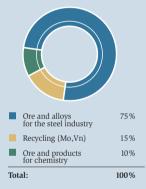
#### July

• Eramet Manganèse buys out Cogema's 30% and 7% stakes in Eramet Manganèse Alliages and Comilog, respectively.

#### September

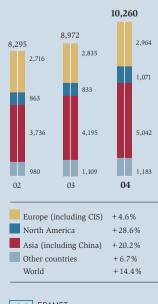
• Eramet decides to build an EMD plant in China to address the high growth in the country's alkaline battery market. The plant will come on stream in 2006.

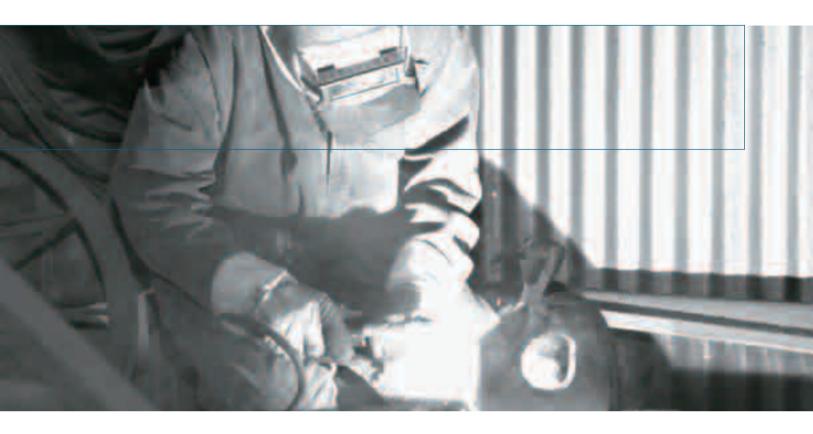
#### Turnover by activity



#### World consumption of manganese alloys in the steel industry

(Eramet estimate – thousands of tons)





### Prosperity Regained

In 2004, Eramet Manganèse benefited from two positive factors. The Division undertook a performance improvement programme in Europe, China and the United States in 2003, enabling it to achieve world-class profitability standards for its production assets. In addition to the gains resulting from restructuring actions, market conditions improved significantly and the Division was one of the first international players to benefit. As a result, Eramet Manganèse achieved operating income of €320 million in 2004, compared with €9 million in 2003.

Firm demand prevailed on all the Division's markets. Restructuring operations were completed, enabling personnel to focus on commercial matters and take advantage of the situation.

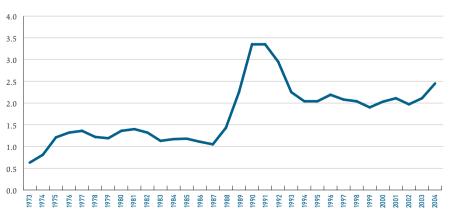
#### **Price volatility**

Prices rose sharply on the manganese alloys market in 2004. However, a significant downward correction brought prices closer to historical levels towards the end of the year. Growth in steel production worldwide, particularly in China, continues to drive manganese alloys but new capacities are appearing on the market, especially in China. That is why Eramet has opted for a strategy that favours competitiveness over capacity increase by implementing a process for constant improvement in all the Division's production units.

The ore market is also growing sharply. Eramet, which has extensive resources in Gabon, began a capital expenditure programme in 2004 to increase its annual production, which should reach 3 million tons in

#### Manganese ore prices

(USD for 1% manganese content, on basis of FOB Australia 48% grade)



#### ERAMET MANGANÈSE

2006. Production was almost 2.5 million tons in 2004, a substantial rise from the 2 million tons shipped in 2003. In parallel, the Group continued plan to improve the quality of the sintered ore produced at CIM in Gabon. The manganese chemicals market improved significantly compared with previous years. The Division decided to invest in a new EMD production unit in China to keep pace with the high growth in

#### "The ore market is also growing sharply"

alkaline battery production in the country. This plant will also be a development platform for all the Group's activities in manganese chemistry.

In 2004, Eramet Manganèse regained its development capability, enabling the Division to seize any new growth opportunities.



### Boulogne Restoration Acknowledged as Environmental Responsibility Benchmark

In accordance with the commitments made when the shutdown of the Boulogne plant was announced in September 2003, the determined process for dismantling facilities and restoring the site has begun. The end goal is to deliver land fit for industrial use to the local authorities. The process is going ahead as expected and on schedule.

The objectives and timeframe for the next stages were set down in an order of the prefect published on November 22<sup>nd</sup>, 2004. This ruling covers the preparatory period of the project as well as the actual restoration work, which should last until 2007 (cf. close-up).

Comilog only took nine months to wrap up the study, diagnosis and engineering work in preparation for the order of the prefect that defined the objectives for the restoration of the Boulogne site. The order was published in September 2004, just nine months after the cessation of activity was declared and one year after the shutdown was announced. This very short timeframe compared with similar cases reflects, on one hand, the company's determination and commitment to the process and, on the other hand, the completion of the various stages in accordance with the commitments made and in full compliance with the instructions and deadlines set by the relevant authorities.

On all levels and at every stage, the players involved showed great realism in terms of project management. This disciplined, responsible process has met with the approval of public authorities and been cited as an example by major industrial groups.

#### → CLOSE-UP

Boulogne (France): the main stages in site restoration (2003-2007)

PHASE 1: This stage includes shutting down, venting and carrying out safety work on the blast furnace, thermal power station and boilers before they are switched off. It is followed by hazardous substance removal and electrical safety work.

PHASE 2: Draw up activity shutdown procedure and remove inventory Studies are divided between preparation for facility dismantling and a diagnosis of soil conditions. More specifically, they concern infrastructures (identifying materials) and possible dismantling and soil restoration techniques. During this period, stocks are removed and preparation is made for ground cleaning.

PHASE 3: Restoration work. Carried out with a constant concern for safety and the environment, this stage involves dismantling all the site's industrial and administrative infrastructure and the final restoration, repair and handover of the site.



### → Safety at Eramet Norway - a Question of "Synergi"

Safety has always been a priority at Eramet Norway, even if the actual results were long judged insufficient. For several years, the lost-time frequency rate (number of reported accidents leading to time off work per million hours worked) was around 10. The average risk level was too high and showed no sign of improvement. Following two serious accidents in 2001, measures were taken including the setup of a work authorisation system, procedure improvements and the organisation of safety patrols.

Autumn 2003. A project was launched on management's initiative to highlight the importance of obtaining a systematic overview of the risks inherent in some of the company's work stations. Steered by an external consultant, the study covered risks relating to the external environment, equipment compliance, information systems and individual safety. The project's aim was to reinforce the measures already in place. Following meetings with all employees, a risk analysis was made per function and per sector of activity.

Employees listed all variances, incidents and accidents in "Synergi." This database provides an immeasurable amount of relevant information on how, when, on which workstations and during what processes incidents and accidents occur. All this information was exploited and feedback was provided to employees.

Personnel and unions are closely involved in this task. One of the objectives was to set up a common language and terminology for workplace safety and security.

#### Accident rate divided by 4

As a result of these actions, the lost-time frequency rate improved, reaching 2.5, the lowest ever score, in 2004. However, as site manager Odd Husmo points out, "This achievement crowns the work done by every one of us through this project." He adds, "This task demands our constant attention and is a natural component of management's mission. The objective is to develop a culture in which risk assessment comes naturally as part of our activity."

In 2005, efforts will be focused on the reported accident frequency rate (number of accidents with or without lost time per million hours worked) and on incident monitoring. A benchmark value will be defined on the basis of a benchmarking study of several Norwegian companies with particularly good track records on safety. "We want to learn their best practices," the site manager explains.

Like the Synergi database, sectorial risk analyses are designed as management tools for monitoring, developing and improving employees' working conditions.



"This work demands

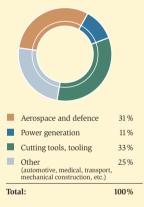


ERAMET 47 annual report 2004

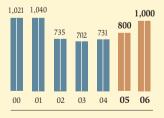
# ERAMET ALLIAGES

In 2004, Eramet Alliages, the Group's Alloys Division, overhauled its organisation to adapt to market trends and continued its capital expenditure programme in France and Asia. With the economic upturn, the Division is now in a position to consolidate its leadership on high-tech markets and is continuing its development in high speed steels.

#### 2004 turnover by market



Aerospace market forecast CFM56 Engine (number of engines)



Source: GIFAS

### → 2004 Events

#### January

• Erasteel acquires 100% of Peter Stubs, a production site in Warrington (England) specialising in the manufacture of high speed steel wire for bimetal saws.

#### March

• Finalisation of the job-saving plan at AD marks the outcome of a long negotiation process. In April, the company launches the "Accélér'action" programme to mobilise employees around new industrial and commercial goals.

#### June

• Erasteel launches "High Speed News", a newsletter published in 6 languages, aimed at customers and featuring their testimonials.

#### July

• Aubert & Duval, Tecphy and Fortech merge. AD becomes the single international brand for all the company's activities with a new logo.

#### October

• AD's industrial reorganisation is completed with the shutdown of the Imphy press. The company is now organised around four excellence centres.

#### **2004 KEY FIGURES**

(millions of euros)	2002	2003	2004
Turnover	720	616	659
Operating income	1	(26)	9
Cash flow	99	86	(22)
Capital expenditure	36	60	60
Capital employed	585	497	551
Employees	5,069	5,021	4,961

#### December

• Erasteel's Commentry plant achieves ISO 14001 certification in recognition of its environmental policy.



### Industrial Reorganisation with Winning Ambitions

In 2004 in the Alloys Division, the industrial reorganisation plan defined at Aubert & Duval in 2003 was completed, enabling the company to seize opportunities arising from the upturn on the aerospace market in mid-year. In parallel, the Division continued to invest to keep pace with growth on its markets.

The industrial reorganisation plan had two objectives: leverage the synergy resulting from the merger of Aubert & Duval, Tecphy and Fortech; and adapt the company to structural trends on its markets. The Division's customers are relocating their production to Eastern Europe and China. They are globalising their purchases and demanding constant productivity improvements from their suppliers. The plan, which was rolled out from March to October, structured the activity around four centres of excellence: allow production (Ancizes and Firminy), rolling (Ancizes), forging (Ancizes and Firminy) and closed die-forging (Issoire and Pamiers). 46 sub-projects were defined in 2003, including activity transfers and product range developments. All were completed by the end of 2004.

This plan was supported by efforts to mobilise all personnel around the Divisions' business goals: develop the production and sale of tool steels and long products and establish itself as the world's secondlargest maker of closed die-forged parts for aircraft engines, thanks to the new 40,000-ton production unit that will come on stream in Pamiers towards the end of 2005.

#### **Evolving markets**

The aerospace market began to turn around in April. In particular, Airbus announced its intention to increase its annual production rate to 450 aircraft from 2006 (only 300 were manufactured in 2004). Orders at Aubert & Duval, which works far upstream of assembly, reached that level towards the end of 2004.

The global cutting tools and high speed steel market showed slight growth. Two contrasting factors lie behind that fact: sharp growth in China and a shrinking market in Western countries because of relocations to China and Brazil, as well as growth in carbide tools. In response to these two trends, Erasteel opted to set up a base in China to produce standard high speed steel, while keeping upscale product manufacturing in Europe.

#### → CLOSE-UP

#### Eramet Alliages' markets

- engine parts for aerospace and power generation
- structure parts for aerospace
- high speed steels
- long products for hightech sectors (medical, bearings, aerospace)
- tooling



#### **ERAMET ALLIAGES**

#### $\rightarrow$ APPLICATION

Erasteel materials make cars cleaner



Cutting fuel consumption is a major issue for the automotive industry. Erasteel contributes to these efforts by proposing materials for the new generations of Common Rail injection systems for diesel vehicles. These systems help to reduce fuel consumption, in accordance with the Euro 4 standard, and so cut CO<sub>2</sub> emissions. The Division decided to invest in a steel distribution centre near Shanghai. The site will house extensive technical support staff for the marketing of various steels, including long products for Chinese industry.

In 2004, the power generation market remained slack. In addition, Aubert & Duval was penalised by the emergence of new competitors and the weakness of the US dollar. However, the Division is now in an advantageous position to benefit from changes in the materials used by manufacturers such as General Electric. Eramet Alliages is the only Western player that can provide its customers with a 65,000-ton capacity press.

Therefore, the outlook is healthy for Eramet Alliages, which continues to roll out a continuous improvement process on all its sites. With the Accélér'action process at Aubert & Duval and the Horizon plan at Erasteel, this initiative led to savings of over €29 million in 2004.

### New Operating Permit for Les Ancizes

After three years in preparation, the Les Ancizes site's operating permit was approved on September 9<sup>th</sup>, 2004. This integrated order cancels and replaces all previous one-off orders and covers all classified facilities, in line with the French decree of February 2<sup>nd</sup>, 1998.

The new permit requires capital expenditure to bring the plant into compliance. This concerns:

- discharges from electric steel mills, i.e. commissioning a system to remove dust from smoke emitted by electric melting furnaces;
- water discharges: modification of aqueous effluent circuits to obtain, on one hand, a single outlet for easier control in the natural environment and, on the other hand, complete recycling of cooling water;
- solvent management plan;
- a contingency plan, which is to be submitted to authorities.

In addition, the site must have additional studies conducted by an independent firm and step up control of air and water release of pollutants before the capital equipment is commissioned. As regards waste, the possibility of creating a class II landfill (i.e. for non-dangerous industrial waste generated by the site's activity) is under examination.

The Les Ancizes site has set up a responsible action plan in order to fulfil its obligations under the new operating permit.



### → ISO 14001 Certification for Commentry

For years, Erasteel Commentry (France) has reconciled industrial performance with respect for the environment. In 2003, the site decided to reach a new milestone with the setup of an Environmental Management System (EMS) in line with the international standard ISO 14001. The aim, through a specific organisation, is to roll out environmental strategy on every level of the company and to make it a permanent feature with the implementation of annual programmes.

A project of this kind is built up in stages: environmental analysis, policy, operating control, training/awareness-raising, etc. The process gives everyone an environmental role, mission or responsibilities. These stages have been completed successfully, and the efforts and commitment of all employees were recognised and rewarded in December 2004 when certification was achieved.

Site manager Michel Delime explains, "*The next* stages are sustaining and consolidating the system, improving our environmental performance in air, energy, risks and sensitive products requiring special precautions – as well as rallying personnel around these issues."



'Rallying personnel around environmental performance."

#### → VIEWPOINT

#### Marie-Hélène Costet: "The environment in our daily practices"



Marie-Hélène Costet, environment manager at Commentry (France), worked on raising the awareness of the site's employees in 2004. This involved informing them about the company's environmental system, obtaining their buy-in and training them on environmental impacts. Meetings were organised with all personnel to explain the ins and outs of setting up an environmental management system (EMS) under the ISO 14001 standard. Every group attended a presentation on the EMS (policy, organisation,

implementation, employees' role) and on more general environmental topics. This part was given an original treatment centred on a film on the major issues concerning air and water, etc. It was followed by a debate with a focus on Commentry's tangible issues. "I appreciate these discussions with employees. In this kind of process, they are essential to creating and maintaining a close relationship and to making sure that the environment is part of our daily practices," says the young manager. The subject has obvious interest for everyone and led to the organisation of annual meetings to support the process. In 2005, employees will meet around two main topics: saving energy and a progress report on the EMS, 18 months after its setup.

#### $\rightarrow$ CLOSE-UP

#### The IPPC directive

The Integrated Pollution Prevention and Control (IPPC) directive was set up in 1996, based on French law. It standardises the definition of an operating permit across Europe. It covers the obligatory existence of operating permits for industrial sites and defines the best available technologies (BAT) for operating the site in question.

# **ERAMET** 2004



### $\rightarrow$ Financial Statements 2004



# CONSOLIDATED FINANCIAL STATEMENTS

In 2004, Eramet benefited from exceptionally high nickel and manganese alloy prices, mainly as a result of high demand from Chinese steelmaking. The Group's turnover increased 27% overall, with rises of 25% in the Nickel Division and 43% in the Manganese Division. The Alloys Division's sales also increased (+ 8%), particularly because of an upturn on aerospace markets in the second half of the year. Those economic conditions, together with improvements in management, enabled the Group to record operating income of €630 million (€134 million in 2003) and ROCE before income tax of 52% (9% in 2003).

Cash flow from operations, at  $\in$  522 million compared with  $\in$  281 million in 2003, enabled the Group to finance its major capital expenditure programmes (SLN 75,000-ton and Aubert & Duval 40,000-ton projects) and increase its net cash by more than  $\in$  200 million.

### → Income Statement

#### Turnover

The Group's consolidated turnover totalled €2,521 million, compared with €1.990 million in 2003. At comparable scope of business and accounting methods, it increased 31% (€2,521 M vs. €1,920 M pro forma 2003).

Whereas changes in scope of business had little effect on turnover ( $\notin$ 7 M with the divestment of the Manganese Division's carbon black business in September 2003), pro forma application to 2003 turnover of the method for reporting sales in foreign currencies used as from January 1<sup>st</sup>, 2004 (market rates instead of hedging rates for some subsidiaries) would have had impact of –  $\notin$ 65 million.

The Nickel Division's turnover increased 25% and 38% at comparable scope of business and accounting methods. This growth is entirely due to the rise in

sales prices (LME nickel price 6.27 \$/lb vs. 4.37 \$/lb in 2003), after allowing for the depreciation of the US dollar against the euro (1.243\* vs. 1.131\*). Volumes were stable in 2004 with 60,000 tons of metallurgical nickel products sold.

The Manganese Division's turnover rose €334 million. This 43% increase (+45% at comparable scope of business and accounting methods) is mainly the result of the sharp rise in manganese alloy sale prices.

The Alloys Division's turnover increased 7% (+8% at comparable scope of business and accounting methods), reflecting the pass-through of raw material price rises as well as slightly higher volumes.

\* Market prices.

#### **Operating income**

The Group's operating income totalled  $\notin$ 630 million (25% of turnover), compared with  $\notin$ 134 million (7% of turnover) in 2003.

This increase is mainly due to the following:

- the rise in sales prices (almost €610 M impact on operating income) in the Manganese and Nickel Divisions, with the successful pass-through of raw materials price rises in the Alloys Division offset by the slight decrease in basic sales prices at Aubert & Duval;
- a positive volume and business effect of almost €50 million:
- growth in mining and chemical activities in the Manganese Division,
- in the Alloys Division, 4% increase in Erasteel's sales volumes and the recovery from the 4<sup>th</sup> quarter onward of aerospace sales at Aubert & Duval, with sales to the gas turbines sector still in a slump;
- a negative foreign exchange effect of €90 million to the US dollar's depreciation against the euro, despite currency hedging that worked out at 1.18 on average (vs. 1.01 in 2003), i.e. 5% better than market rates;
- the discontinuation of the losses of Comilog France (€27 M in 2003), which ceased to operate the Boulogne-sur-Mer site in November 2003.

#### **Financial income**

Financial income improved significantly in 2004, from – €23 million to – €8 million. This is due to foreign exchange gains/losses and improvement in cash.

#### Net exceptional items

Net exceptional costs totalled –  $\notin$ 23 million, compared with –  $\notin$ 156 million in 2003, when they bore the weight of the provisions for restructuring booked in the Manganese and Alloys Divisions.

Exceptional costs mainly include additional provisions to address environmental risks and the financial consequences of the settlement of the tax dispute and the signing of the new mining agreement with the Gabonese government.

#### Income tax

The income tax charge recorded in consolidated financial statements totals  $\notin 123$  million, which represents 21% of earnings before income tax. This rate results from the tax advantages granted on some capital expenditures and the reduced taxation system from which some subsidiaries benefit, in particular.

#### Net income of consolidated companies and Group share

Net income of consolidated companies in 2004 was  $\notin$ 475 million. After allowing for  $\notin$ 133 million in minority interests, which decreased as from July 1<sup>st</sup>, 2004 after Eramet's buyout of Cogema's interest in Eramet Manganèse Alliages (30.5%) and Comilog SA (6.78%), the Group share of net income was  $\notin$ 342 million, which represents  $\notin$ 13.62 per share, compared with –  $\notin$ 107 million in 2003.



2004 turnover (millions of euros) Excluding holding company,

eliminations and miscellaneous

 Nickel
 765

 Allovs
 659





Nickel	610
Alloys	616
Manganese	769

#### **CONSOLIDATED FINANCIAL STATEMENTS**

### $\rightarrow$ Financing

Net cash as on December 31<sup>st</sup>, 2004 was €278 million, up almost €210 million from year-end 2003.

This significant improvement results from the following flows:

- +€522 million in operating activities (€281 M in 2003), after outlay of almost €43 million in restructuring expenses in the Manganese and Alloys Divisions, for which provisions were booked in 2003, and a €77 million increase in working capital due to the impact of the strong growth in turnover on customer accounts;
- – €285 million in investing activities, chiefly made up of €240 million (9.5% of turnover) in purchases of fixed assets, €75 million in acquisitions of investment securities (buyout of Cogema's interests - cf. above – for €66 M, constitution of 60% of capital in Tiangong-Erasteel joint venture for €7 M, and €3 M in other investment securities) and an investment subsidy received at SLN for €17 million;
- – €29 million in financing activities, of which €35 million in dividends paid and €6 million in capital increase resulting from the exercise of options by Eramet employees under the Group's stock option plans.

### → Consolidated Balance Sheet

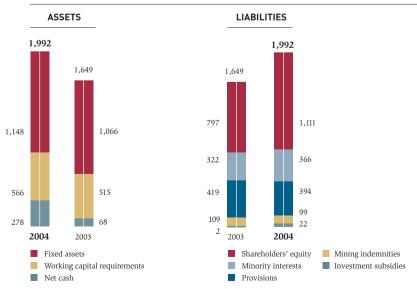
year-end 2003.

Fixed assets totalled €1,148 million, compared with €1,066 million in 2003. They represented 45% of turnover, as against 54% for the previous year. Simplified working capital requirements (invento-

The Group's assets as on December 31<sup>st</sup>, 2004 totalled ries, payables, operating receivables) were €819 mil-€2,742 million, compared with €2,536 million at lion as on December 31<sup>st</sup>, 2004 (32% of turnover), compared with €732 million as on December 31<sup>st</sup>, 2003 (37% of turnover).

> The Group's consolidated net equity increased significantly from €1,119 million on December 31st, 2003 to €1,477 million at year-end 2004.





### Balance Sheet (in millions of euros)

ASSETS	As on December 31 <sup>st</sup>		
	2004	2003	2002
Goodwill	39	40	46
Intangible assets	67	81	87
Property, plant and equipment	976	876	977
Equity method	16	19	19
Non consolidated subsidiaries	24	23	23
Other investments	26	27	24
Total fixed assets	1,148	1,066	1,176
Inventories	607	596	672
Trade accounts receivable	424	303	354
Other receivables	136	108	131
Cash	427	463	364
Total current assets	1,594	1,470	1,521
TOTAL ASSETS	2,742	2,536	2,697

#### SHAREHOLDERS' EQUITY AND LIABILITIES

	2004	2003	2002	
Share capital	79	78	76	
Share premiums	218	212	204	
Reserves	496	628	647	
Currency translation adjustments	(24)	(14)	10	
Net (loss) income	342	(107)	6	
Group shareholders' equity	1,111	797	943	
Minority interests	366	322	372	
Total consolidated net equity	1,477	1,119	1,315	
Provisions for contingencies and losses	394	419	319	
Investment subsidies	22	2	3	
Borrowings	149	395	435	
Trade accounts payable	212	167	209	
Other payables	488	434	416	
Total liabilities	871	998	1,063	
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES	2,742	2,536	2,697	

As on December 31st

### **CONSOLIDATED FINANCIAL STATEMENTS**

### Income Statement (in millions of euros)

	As	As on December 31 <sup>st</sup>		
	2004	2003	2002	
Turnover	2,521	1,990	2,096	
Other operating income	94	33	34	
External purchases	(759)	(724)	(858)	
Personnel costs	(465)	(477)	(496)	
Other operating costs	(557)	(475)	(539)	
Miscellaneous taxes and levies	(52)	(54)	(52)	
Depreciation of fixed assets	(133)	(145)	(151)	
Provisions (net)	(19)	(14)	15	
Operating income	630	134	49	
Financial (costs) income (net)	(8)	(23)	14	
Income of consolidated entities before exceptional items	622	111	63	
Exceptional items	(23)	(156)	(16)	
Taxation on profits	(123)	(75)	(22)	
Net (loss) income of consolidated entities	476	(120)	25	
Share in net income of equity accounted affiliates	1	2	2	
Amortisation of goodwill	(2)	(9)	(15)	
Total consolidated net (loss) income	475	(127)	12	
Minority interests	(133)	20	(6)	
Group net (loss) income	342	(107)	6	
Net (loss) income per share (€)	13.62	(4.35)	0.23	
Net (loss) income per share fully diluted $(\epsilon)$	13.58	(4.35)	0.23	

### **Cash Flow Statement**

(in millions of euros)				
	As	As on December 31 <sup>st</sup>		
	2004	2003	2002	
OPERATING ACTIVITIES				
Net income of consolidated entities	476	(120)	25	
Elimination of non-cash items				
- Amortisation, depreciation and provisions	112	346	144	
– Change in deferred taxation		10	14	
– Losses (gains) on disposal of fixed assets	(1)	(31)	4	
Operating cash flow before changes in working capital	587	205	187	
Dividends from equity accounted companies	4	1	1	
Changes in operating working capital	(69)	75	152	
Net cash flow from operating activities	522	281	340	
INVESTING ACTIVITIES				
Purchases of fixed assets	(315)	(226)	(148)	
Disposals of fixed assets	15	61	17	
Investment subsidies received	21		2	
(New) repayments of bank loans	1	25		
Net change in deferred charges and accounts payable for fixed assets	4	25	2	
Consolidation adjustments	(1)	6	(8)	
Sub-total	(275)	(134)	(135)	
Indemnity New Caledonian mining reserves	(10)	(10)	(6)	
Net cash used in investing activities	(285)	(144)	(141)	
FINANCING ACTIVITIES				
Dividends paid: to Group shareholders	(25)	(25)	(28)	
Dividends paid: to minority shareholders	(10)	(5)	(8)	
Increases in share capital	6	10	10	
Changes in financial working capital				
Net cash used in financing activities	(29)	(20)	(26)	
Currency translation adjustments	2	22	10	
INCREASE (DECREASE) IN NET CASH POSITION	210	139	183	
Opening balance	68	(71)		
Closing balance	278	68	(254)	
	278	00	(71)	

#### **CONSOLIDATED FINANCIAL STATEMENTS**

### Changes in Shareholders' Equity (in millions of euros)

Number o		Share	Share	Consolidated	Currency	Net income	Total
Weighted average	As at year-end	capital	premiums	reserves	adjustments	for the period	
Shareholders' equity as at Dec. 31st, 2001	24,723,360	75	195	661	17	(3)	945
Appropriations to retained earnings & reserves				(3)		3	0
Dividends paid				(28)			(28)
Capital increases	324,683	1	9				10
Currency translation adjustments					(7)		(7)
Purchase of own shares							0
Other adjustments				17			17
Net (loss) income for the period 24,275,188						6	6
Shareholders' equity as at Dec. 31st, 2002	25,048,043	76	204	647	10	6	943
Appropriations to retained earnings & reserves				6		(6)	0
Dividends paid				(25)			(25)
Capital increases	529,531	2	8				10
Currency translation adjustments					(26)		(26)
Purchase of own shares							0
Other adjustments				4	(2)		2
Net (loss) income for the period 24,647,285						(107)	(107)
Shareholders' equity as at Dec. 31st, 2003	25,577,574	78	212	632	(18)	(107)	797
Appropriations to retained earnings & reserves				(107)		107	0
Dividends paid				(25)			(25)
Capital increases	167,370	1	6				7
Currency translation adjustments					(6)		(6)
Purchase of own shares				11			11
Other adjustments				(15)			(15)
Net (loss) income for the period 25,138,630						342	342
Shareholders' equity as at Dec. 31st, 2004	25,744,944	79	218	496	(24)	342	1,111

<b>Details of other adjustments</b> (in millions of euros)	As on December 31st		
	2004	2003	2002
Application of new accounting standards	(20)	2	20
Changes in assessment methods			(3)
Other adjustments	5		
TOTAL	(15)	2	17

# GLOSSARY

### $\rightarrow$ PROCESSES

#### **PYROMETALLURGY**

A high temperature process for reducing oxides to metal by mixing them with a reducing agent and melting them in a blast furnace or an electric furnace.

#### **HYDROMETALLURGY**

A chemical process for separating metal from oxide in an aqueous medium by leaching, followed by solvent extraction and electrolysis.

#### **POWDER METALLURGY**

The production of high grade alloys by pulverising a stream of liquid metal, thus producing powder which is compacted at very high pressure and high temperature.

#### FORGING

The hot shaping of metal between two tools to produce simple shapes.

#### **CLOSE DIE-FORGING**

The process of 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).

#### ROLLING

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

#### $\rightarrow$ PRODUCTS

#### ALLOYS

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

#### **FERROALLOYS**

Alloys containing iron and at least one other metal, such as nickel, manganese and chromium, which are added to liquid steel to produce alloy steels with the desired properties.

#### **SUPERALLOYS**

Alloys of several metals in which nickel is generally predominant (nickel-based superalloys), which have high mechanical strength at elevated temperatures and which are resistant to corrosion. They are used in the manufacture of parts for the aeronautics and aerospace industries in power generation, the chemical industry and environmental protection equipment.

#### **HIGH SPEED STEELS**

A family of alloy 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.

Design-Editing: W Printel

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Tour Maine Montparnasse 33, avenue du Maine, F-75755 Paris Cedex 15 Tel.: 33 (0)1 45 38 42 42 / Fax: 33 (0)1 45 38 41 28 Internet: www.eramet.fr