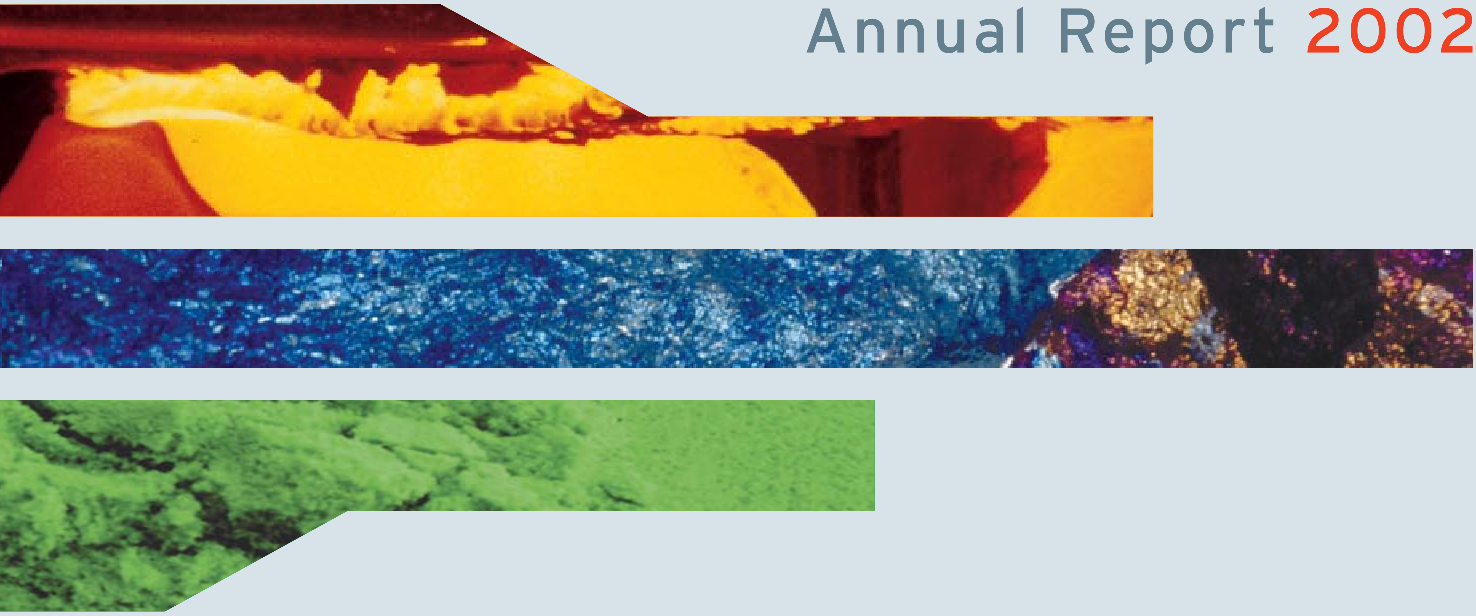
# Annual Report 2002



ERAMET

Board of Directors
following the meeting
of March 26th, 2003

## Chairman and Chief Executive Officer

Jacques Bacardats

## Directors

Jacques Bacardats
Robert Castaigne
Cyrille Duval
Edouard Duval
Georges Duval
*Vice-Chairman*
*and Senior Executive Vice-President*
Patrick Duval
François Henrot
Pascal Lafleur
Jean-Lucien Lamy
George T. Lowy
Louis Mapou
Jacques Rossignol
Wilhelm Scheider
Antoine Treuille

AREVA represented
by Frédéric Tona

## Auditors

Ernst & Young Audit
4, rue Auber – 75009 Paris

Deloitte Touche Tohmatsu
185, avenue Charles-de-Gaulle
92200 Neuilly-sur-Seine Cedex

# Contents

# Three

## Eramet Alliages

Aubert & Duval *Holding*
Aubert & Duval *Alliages*
Aubert & Duval *Fortech*
Aubert & Duval *Tecphy*
Erasteel

→ Turnover **€720 million**
→ **5,128** employees

### Activities

Production of high-performance special steels and superalloys, production of pre-machined parts in those materials or aluminium and titanium, including:

→ Bars, sheets, wires, strips, coils and sections…
→ Forged or closed-die forged parts…

## Eramet Manganèse

Eramet Manganèse Alliages (70%)
Comilog (60%)

→ Turnover **€879 million**
→ **7,060** employees

### Activities

Production of manganese alloys (ferromanganese, silicomanganese and refined alloys) and chemical derivatives of manganese such as oxides, sulphate and chloride.

Industrial services: recovery and recycling of metals contained in oil catalysts, electric batteries and acid solutions from the electronic industry.

## Eramet Nickel

Le Nickel-SLN (60%)
Sandouville Refinery
Eurotungstène Poudres (51%)

→ Turnover **€501 million**
→ **2,357** employees

### Activities

Production of ferronickel and high-purity nickel.

Production of nickel and cobalt salts.

Production of cobalt and tungsten powders.

# growing businesses

## World positions

- World's leading producer of high-speed steels.
- A major world producer of high-performance special steels and superalloys.
- World number two producer of closed-die forged parts for aeronautics and power generation.

## Markets

- The aerospace, power generation (gas turbines), tooling, automotive & transport and mechanical construction industries, etc. for production of parts with advanced properties that undergo severe mechanical constraints at high temperatures or are used in corrosive environments and for wear-resistant parts.

## World positions

- World's leading producer of manganese alloys with a wide product range.
- World's leading producer of chemical derivatives of manganese.
- World's second-largest producer of high-grade manganese ore.

## Markets

- Iron and steel industry (manganese alloys).
- Chemical industries: electric batteries, ferrites, fertilisers and animal feeds (chemical derivatives of manganese).

## World positions

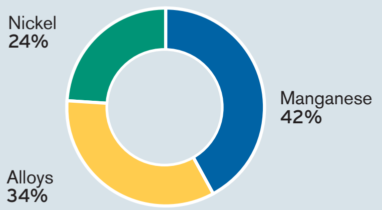
- World's leading producer of ferronickel.
- Among the world top three producers of high-purity nickel.

## Markets

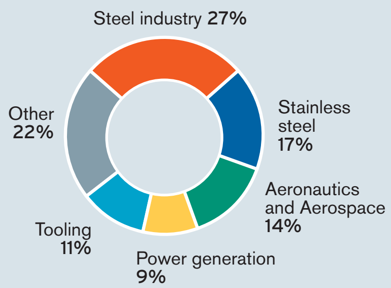
- Stainless steel industry (ferronickel).
- Aeronautics, power generation, electronics, surface treatment, coinage, etc. (high-purity nickel).
- Chemicals (nickel chloride).
- Tyre production (cobalt chloride).
- Diamond tools (cobalt powders), tungsten carbide tools (tungsten powders).

# Eramet 2002:
# A growing mining and metallurgical group developing on global markets

Turnover by division

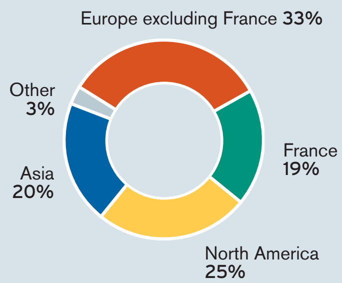



Turnover by main market *




* Estimate.

Turnover by consuming area in 2002




**Turnover:**
€2,096 million

**Employees:**
14,700

Eramet is an integrated mining and metallurgy group that produces non-ferrous metals and their chemical derivatives, high-performance special steels, superalloys and high-performance parts for industry.

With its historical roots in nickel mines, which it has been operating for over a century in New Caledonia, the recently formed Group actively pursues a policy of growing and broadening its business base.

Focusing on the development of high value-added materials, the Group has global leadership positions in all three of its lines of business: high-performance alloys & special steels, manganese and nickel.

Its products include high-purity metals, ferroalloys, metal chemical derivatives, forged parts, bars, sheets, wire and metal powders. They are used in the aerospace, iron and steel metallurgy, stainless steel, power generation, tooling, chemical, transport and medical sectors.

**Eramet's strategy is to continue growing in each of its businesses by drawing on the substantial complementarity and synergy between its activities.**

- The Group's ambition is to be a long-term partner for its customers, with a reputation for quality and reliability of its products and services.

- For its shareholders, the Group's objective is to provide comparable profitability to its major international competitors.

- Eramet is also determined to develop the skills and motivation of its teams and to constantly strive to improve working and safety conditions while contributing to the protection of the environment.

# Group Organisation and Management

## Executive Committee

Patrick André, Jacques Bacardats, Jean-Didier Dujardin, Georges Duval, Dominique Franchot, Alain Robert.

## Chairman

Yves Rambaud (1)

## General Manager

Jacques Bacardats (2)

## Corporate Secretary and CFO

Michel Hémonnot (3)

## Corporate Chief Financial Officer

Jean-Didier Dujardin (4)

## Human Resources

Dominique Franchot

## Technical Department

Antoine Greco

*Trappes Research Centre (CRT)*

*TEC Ingénierie*

## Financial Department

Jean-Didier Dujardin

## Corporate Information Systems Department

Alain Audié

## Eramet International

## Corporate Purchasing Department

Edouard Duval

## External Communications

Alain Ray (5)

## Eramet Alliages

Aubert & Duval *Holding*,
AD *Alliages*, AD *Fortech*, AD *Tecphy*
Erasteel

Georges Duval (6), Alain Pradoura,
Edouard Duval, Francis Avanzi.

## Eramet Manganèse

Eramet Manganèse Alliages (70%)
Comilog (60%)

Patrick André, Marcel Abéké.

## Eramet Nickel

Le Nickel-SLN (60%)
Sandouville Refinery
Eurotungstène Poudres (51%)

Alain Robert

(1) Chairman of the Board of Directors until March 3rd, 2003.
(2) Appointed Director and elected Chairman and CEO at the Board of Directors meeting of March 26th, 2003.
(3) Corporate Secretary and CFO until March 21st, 2003.
(4) Corporate Chief Financial Officer as of March 24th, 2003.
(5) Advisor to the Chairman, External Communications Manager and Investor Relations Manager until April 30th, 2003.
On that date, he is replaced by Philippe Joly as Investor Relations Manager and by Olivier Beaunay as Group Communications Manager.
(6) Vice-Chairman and Senior Executive Vice-President of Eramet.

# Yves Rambaud: The Group has great strengths that allow it to pursue an ambitious strategy of growth and improved profitability

The 30 years during which I have managed then chaired what is now the Eramet Group have been a period of change, challenge and achievement.

First the Nickel division had to be modernised, turned around and developed. Then its activities could be extended into neighbouring businesses. At the same time, its shareholding went through several major changes.

A great many difficulties had to be overcome, including the phasing-out of the 10% export tax on sales in New Caledonia that had a stranglehold on the company, the 60% reduction in SLN's workforce, the collapse in nickel prices, the unreasonable debt assigned to the "new" SLN created in 1974, the French franc's overvaluation against the dollar and the political events in New Caledonia in 1984/1988 and then in 1996/1997.

## It has also been a time of successes...

All these challenges gave rise to a bigger, more diversified and more commercially, technically and financially robust Group. Over the past 15 years, despite the ups and downs of the economic climate, Eramet has always made a profit, paid its shareholders a dividend and maintained an extremely healthy financial structure.

"My deepest wish is that this new development phase takes place in accordance with the values on which Eramet's success and sometimes its specificity have been built."

The recipe for that success is simply the determination and hard work of the men and women that make up the company, together with their cohesiveness and the clear-sighted priority given to the long term – in other words, an ambitious vision of the Group's future.

Now Eramet's future must be built and the Group's development must be continued through new stages. In all its businesses, the Group has great strengths that allow it to pursue an ambitious growth and profitability improvement

strategy for every activity. In parallel, the Group, thanks to its technical skills, financial structure and, above all, its people, is able to continue its expansion whenever the opportunity arises.

My deepest wish is that this new development phase takes place in accordance with the values on which Eramet's success and sometimes its specificity have been built: professionalism, cohesiveness, clear-sightedness, long-term vision, courage, openness, making human considerations the priority and living up to demanding industrial ethics…

Wherever the Group is active, it must defend and assert those common values. But at the same time, its international development entails being attentive to local cultures and taking them into account. We have to adapt to the political and social environments of the countries and regions where we carry out our businesses.

I am fully confident that, under Jacques Bacardats' chairmanship, the Group will essentially follow that path, in the best interest of its employees and shareholders alike.

**Yves Rambaud**
*Chairman*

* Chairman of the Board of Directors until March 3rd, 2003.

# Jacques Bacardats: The Group has the financial resources needed

### What is Eramet's situation at the end of 2002?

In a context of global economic crisis, apart from China, Eramet, which is active on cyclical markets, experienced contrasting situations in its different divisions. These diverse market conditions had direct repercussions on our 2002 results, which are very disappointing. Nevertheless, the Group made an overall profit, which bears out the importance of having different but complementary activities. Eramet proved its ability to weather sharp downturns on some of its markets. Moreover, the Group's financial situation remains healthy with, in particular, a debt-to-equity ratio (excluding mining indemnity) of 5%, a substantial decrease thanks to the reduction in net indebtedness in 2002. The Group has the financial resources needed to continue its development.

### How did the three divisions evolve in that context?

The Nickel division recorded respectable results with a significant rise in demand and prices compared with 2001. The Manganese division was confronted with technical problems in the ramp-up of new facilities (the Boulogne-sur-Mer blast furnace, France and Moanda industrial complex, Gabon) on top of market difficulties. Finally, the Alloys division experienced a contrasting year, with continued firm activity in the first half as delivery delays from 2001 were caught up, followed by a sharp downturn in the second half. On AD*H*'s two main markets – aerospace and power generation – new orders fell sharply and business slumped heavily in tooling. However, both markets will return to growth in the long term.

### How did you withstand those difficult conditions?

Actions were taken to adjust to new market conditions, particularly in Alloys where the workforce was reduced by approximately 10%. In parallel, a multi-year performance improvement and cost reduction plan was launched early in the year. In the Manganese division, major actions were taken to solve the technical problems involved in the ramp-up of new facilities. Furthermore, aggressive actions were taken to reduce inventory. Working capital was cut by €71 million in the Manganese division and €67 million in the Alloys division. At Group level, cost reduction actions were implemented. For example, a Group Purchasing department reporting to General Management was created with a 5% savings target, excluding raw materials and energy, on a full-year basis.

### In that context, will you slow down your capital investment and industrial upgrading programme?

No. We have not called our strategic capital expenditure into question. We will maintain these investments regardless of adverse conditions. They are crucial to Group's sustained competitiveness.
In the Nickel division, the SLN 75 programme, designed to raise annual production capacity to 75,000 tonnes, is making very satisfactory progress. Highly innovative techniques are being implemented in both the plant (furnace renovation, dust extraction facilities) and the mine (beneficiation unit). In the Alloys division, construction work for the new plant for aircraft engine and structural parts in Pamiers, France began in the first quarter of 2003. The order was placed for the 40,000-tonne press. This plant should be commissioned in 2005, when the aerospace market is likely to be in an upswing.

### In addition to the capital investment programme, what other strengths can Eramet draw on to prepare for the future?

We have technological leadership in our three businesses. In mining, Eramet has developed world-class know-how in mineralurgy and ore beneficiation. In Manganese, we have cutting edge new facilities such as the Boulogne-sur-Mer blast furnace and the Moanda beneficiation and sintering plant.

* Appointed a Director and elected Chairman and CEO of Eramet at the Board of Directors meeting of March 26th, 2003.

# to continue its development

In Alloys, we have a technological edge in special alloy processing and in forging and closed-die forging techniques. We must keep up that position.
Our constant research efforts are supported by the fact that the Trappes Research Centre is now a wholly-owned subsidiary.
In addition, we emphasise the importance of training and we foster measures that ensure skills are passed on younger generations.
Finally, our bases on the five continents enable us to be close to our customers, wherever they are. In particular, in 2002, we continued to develop our sales network with the opening of an office in Brazil. In China, we have enhanced our industrial presence in manganese alloy production and developed the capabilities of our sales office in Shanghai.

### What is Eramet's position on safety and on protecting the environment?

We are in businesses that entail a certain amount of danger. Constant awareness of industrial safety is a core responsibility for management. Our duty is to take every possible step to keep workplace risks to a minimum.

"Constant alertness to industrial safety is a core responsibility for management"

Actions are being taken on every site to mobilise personnel on safety issues, in parallel with the systematic strengthening of safety teams.
On environmental issues, we want to be recognised as responsible producers. Our aim is to play a part in the evolution of regulations and contribute our expertise so that new rules are drawn up on the best possible scientific bases and are applied without delay. In our new facilities, we have selected the best available techniques on the market.

### What is your vision of the Eramet Group today?

We are looking at how to make the Group more cohesive. This does not just involve the juxtaposition of three divisions. We have to draw more benefit from our complementarities and develop inter-division synergy.
The Group's role has to be defined more precisely as regards research, human resources and communications, finance and so on. We will also focus on how the head office is organised in relation to the divisions' organisation.
The creation of the Group Purchasing department is the first concrete step in this drive for greater cohesiveness.

### What is the outlook for 2003?

In early 2003, great economic uncertainty persists in relation to the international context. However, we remain confident in the orientations we have chosen, as the Group has a robust financial situation and front-rank global positions. We are active on diversified markets that are cyclical but show medium-term growth, even if some of them are currently in a slump. Our solid balance sheet enables us to weather this period by making the necessary cost reductions without delay and making sure we are ready for the upturns. In particular, we unfailingly keep up our capital investments and our research efforts.

Now, in early 2003, this determined, forward-looking approach is also supported by the healthy situation of the nickel market.

To sum up, in 2003 we must combine greater short-term rigor with ambition for the Group's future. ■

# Eramet and the Stock Exchange

## The Eramet share is listed on the primary market of the Paris Stock Exchange (code: 13175) and is part of the Euronext SBF 250 index

### Eramet share prices in 2002

The Eramet share price was €34.60 at the end of 2001 and was relatively stable in the first half of 2002, remaining in the €36 - €39 bracket from February to May before dropping below €34 in late June. The highest price of the year – €39.80 – was on March 1st.

From July onward the share price slid continuously, hitting a low of €13.90 on October 18th. A significant upturn began in November and the last closing price of 2002 was €21.05.

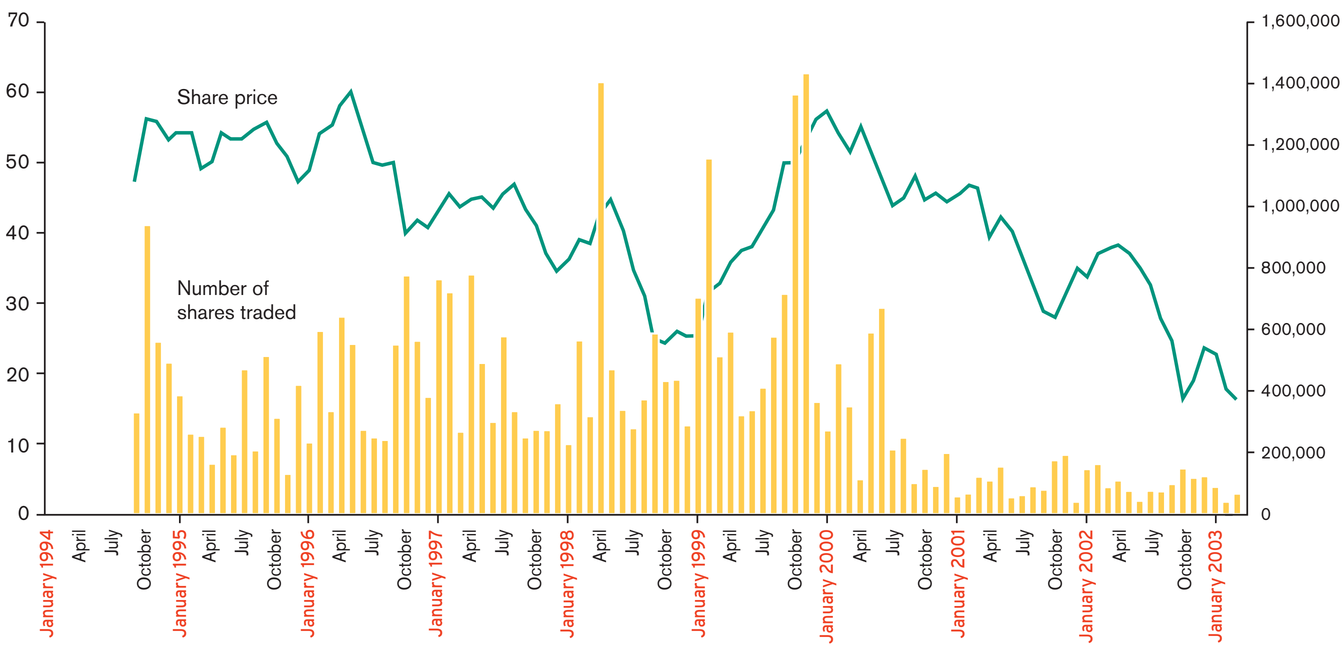
Over 2002 as a whole, the share price decreased 39.16%, which was slightly more than the Euronext CAC 40 index (–33.75%). The SBF 250 index lost 31.13% over the period.

Daily trading volumes remained generally low with an average of 4,928 shares, i.e. €146,000 traded per day.

Allowing for the share purchase options called by employees (350 options exercised), the total number of shares issued as of December 31st, 2002 was 25,048,043.

Consequently, Eramet's market capitalisation was approximately €527 million at the end of 2002.

**Eramet share price (monthly average)** in euros



## Corporate governance

The Shareholders' Meeting held on May 23rd, 2002 ratified the directorship of AREVA, which had been provisionally appointed at the Board of Directors meeting of March 27th, 2002 to replace COGEMA.

The Shareholders' Meeting renewed the authorisation given to the Board of Directors for the Company to buy back its own shares within the limit of 10% of the share capital, in accordance with article 225-209 of the Code of Commerce.

The Shareholders' Meeting also approved the modifications made to bring the by-laws into compliance with the French law May 15th, 2001 on new economic regulations (NRE law).
In that context, during the Board of Directors meeting that followed the Shareholders' Meeting, the Board appointed Yves Rambaud Chairman of the Board of Directors of Eramet, Jacques Bacardats Chief Executive Officer of Eramet and Georges Duval Vice-Chairman and Senior Executive Vice-President of Eramet.
Furthermore, Mrs Anne Lauvergeon gave in her resignation from her directorship of Eramet in order to comply with the law on holding concurrent corporate offices. The Board co-opted Mr Jean-Lucien Lamy, Chairman and CEO of F.C.I., AREVA's connectors division, as a Director of Eramet.

The Board of Directors met four times in 2002.
The Compensation Committee, comprised of Mr Jacques Rossignol, Mr Frédéric Tona and Mr Wilhelm Scheider, met once and the Accounts Committee, which is composed of four Directors, Mr Robert Castaigne, Mr François Henrot, Mr George T. Lowy and Mr Antoine Treuille, met twice.

The Director's Charter was approved by all the members of the board of Directors. ■

## Stock market data

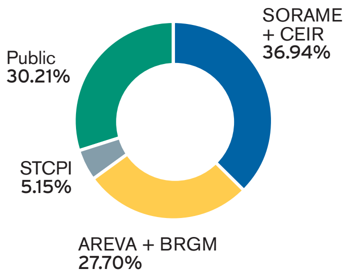
| as on Dec. 31st | Price in FRF/€ high | low | as on Dec. 31st | Market Capitalisation (FRF/€ million) | Volume (daily average) |
|---|---|---|---|---|---|
| *1994* | *380* | *310* | *345* | *5,058* | *37,385* |
| *1995* | *383* | *271* | *320* | *4,876* | *15,673* |
| *1996* | *406* | *229* | *272* | *4,215* | *23,981* |
| *1997* | *349* | *217* | *228* | *3,553* | *22,172* |
| *1998* | *313* | *145* | *168* | *2,620* | *24,176* |
| 1998 in euros | 47.72 | 22.11 | 25.60 | 399 | 24,176 |
| 1999 in euros | 58.75 | 23.15 | 57.00 | 1,393 | 33,810 |
| 2000 in euros | 61.75 | 41.90 | 43.55 | 1,076 | 14,100 |
| 2001 in euros | 47.80 | 22.00 | 34.60 | 855 | 4,664 |
| 2002 in euros | 39.80 | 13.90 | 21.05 | 527 | 4,928 |

| Earnings per share | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|---|---|---|---|---|
| *FRF per share* | *13.44* | *28.63* | *19.90* | *25.04* | *18.07* | *8.98* | | | |
| Euro per share | 2.05 | 4.36 | 3.03 | 3.82 | 2.75 | 1.37 | 4.42 | -0.13* | 0.23 |
| **Dividend excluding tax credit** | | | | | | | | | |
| *FRF per share* | *5.40* | *6.60* | *6.60* | *7.50* | *7.48* | *7.48* | | | |
| Euro per share | 0.82 | 1.00 | 1.00 | 1.14 | 1.14 | 1.14 | 1.30 | 1.14 | 1.00 |
| Yield in %, including tax credit, based on the price as on Dec. 31st | 2.35 | 3.09 | 3.64 | 4.93 | 6.68 | 3.00 | 4.48 | 4.90 | 7.13(1) |

(1) on the basis of a 50% tax credit

* Including the effect of the provision for SMC.
Before the effect of the provision for SMC, income per share was €1.98

### Shareholding
(as on December 31st, 2002)




## Investor relations

### Eramet

**Philippe Joly**
Tour Maine-Montparnasse
33, avenue du Maine
75755 Paris Cedex 15
Tel: + 33-1 45 38 42 02

**BNP-PARIBAS**
**GIS émetteurs**
Les Collines de l'Arche
75450 Paris Cedex 9
Tel: + 33-1 40 14 74 68

# Eramet key figures

## Weak global economic activity, excluding China, weighed on the Group's results

→ Consolidated turnover (€2,096 million) decreased 6% compared with 2001, reflecting contrasting situations from division to division. Sales improved slightly in the Nickel division (+3%), fell sharply in the Alloys division (-13%) and decreased slightly in the Manganese division (-4%).

### Operating income fell significantly as a result of difficulties in Alloys and Manganese, despite growth in Nickel.

→ Consolidated operating income was €49 million, compared with €96 million in 2001. In Nickel, operating income improved significantly, driven by the upturn on the stainless steel market and the rise in nickel prices. It decreased in Manganese, particularly because of production difficulties on several sites.

In Alloys, operating income fell heavily due to the slump in business resulting from the sharp drop in orders for aerospace, gas turbines and tooling.

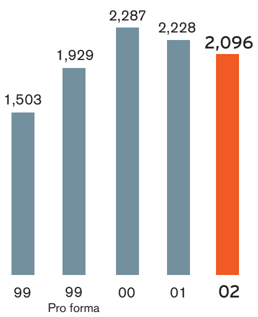
The gross return on capital employed* for the Group was 3%, down from 6.5% in 2001.

### Cash flow and the substantial reduction in working capital made it possible to carry out a major capital investment programme, while significantly reducing the debt-to-equity ratio.

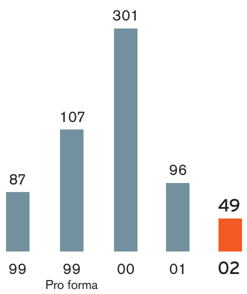
→ Cash flow of €187 million in 2002 (€211 million in 2001) and the substantial reduction (€152 million) in working capital led to a significant decrease(€183 million) in net financial debt. As on December 31, 2002, the debt-to-equity ratio** was reduced to 5%, compared with 19% at the end of 2001.

The Group's capital investments totalled €128 million, compared with €165 million in 2001. The development plan announced at the start of the year was undertaken. It concerns, on one hand, nickel production capacity extension in New Caledonia and, on the other hand, the construction of a specialised plant for aircraft engine and structural parts on the Pamiers site in the Southwest of France.

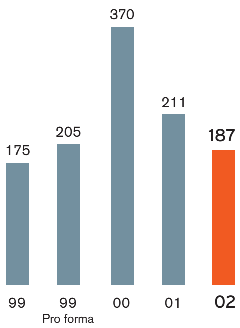
**Turnover**
in millions of euros



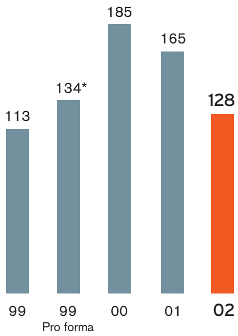

**Operating profit**
in millions of euros




**Operating cash flow**
in millions of euros
(before change in working capital)




**Capital expenditure**
in millions of euros




* Estimate.

## In a difficult international situation, the Group's results reflect the favourable effects of the distribution of its activities on different but complementary markets.

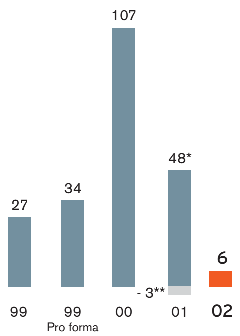
➔ 2002 results are positive thanks to the Nickel division. In 2001, slack business in Nickel was offset by the good results of the Alloys division (excluding SMC).
The Group share of net income is €6 million, i.e. € 0.23 per share, compared with a net loss of €3 million (€-0.13 per share) in 2001, which took into account an extraordinary provision of €51 million net of tax with respect to Special Metals Corp. Before that provision, the Group share of net income in 2001 was €48 million, i.e. €1.98 per share.

## The proposed dividend is in line with the Group's desire to maintain significant compensation for shareholders, even in cycle troughs.

➔ A net dividend of €1 per share, i.e. a global payment of €1.50 per share in the event of a 50% tax credit, will be proposed at the Shareholders' General Meeting. The net dividend represents over 4 times the income per share and the global payment represents a yield of 7% on the basis of the share price at the end of 2002. ■

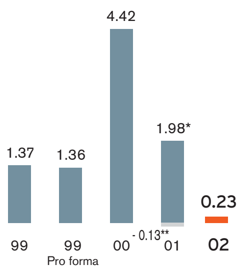
* Operating profit/ net operating capital employed as of January 1st, 2002 (net operating capital = fixed assets + working capital - provisions).
** Net financial debt/shareholders equity + minority interests.

**Group net income**
in millions of euros



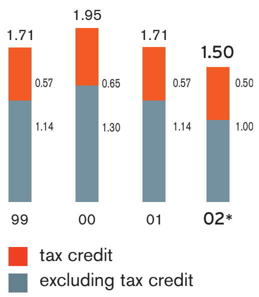

* Before provision for SMC.
** After provision for SMC.

**Net income per share**
in euros




* Before provision for SMC.
** After provision for SMC.

**Dividend per share**
in euros




* If the tax credit is 50%.

# Sustainable Growth
# on Global Markets

Through activities that included beneficiation of natural mining resources in the Nickel and Manganese divisions, processing of nickel and manganese ore from the USA to China and from Norway to New Caledonia and development of new alloy types for high-technology industries, Eramet's development has always targeted sustainable growth.

# The Eramet Group's Environmental Charter

### → Control and reduce the environmental impact of the group's industrial activities

As a responsible industrial company, the Eramet Group carries out its activity in such a way as to keep its health and environmental impact as low as possible, both internally and externally, while ensuring that the cost of such effort remains economically bearable.

### → Control the risks and impacts related to products sold by the Group

The Eramet Group's environmental policy includes a specific part concerning the potential risks and impacts arising from the characteristics and use of its products. Controlled and reasonable management of these risks is one of its priorities.

### → Promote a continuous improvement trend

The Group's action corresponds to a trend of continuously improving its environmental performance. This commitment is one of its responsibilities, on a par with ensuring the health and safety of its personnel, complying with commercial agreements or seeking optimised technologies at the best cost.

### → Make the environment a part of every stage in the life of the Group

This determination to make the environment a part of the Group's functioning is shown at every stage in the company's life:

- when designing and starting up a new activity, a project or an investment,
- throughout the daily operation of facilities,
- when bringing an activity to an end.

### → Strictly comply with regulations

Strict compliance with the regulations that are applicable to sites is the first guarantee of responsible management of their impact. Any non-compliant situation must be temporary, justified and notified to the relevant administrative body.

### → Develop self-knowledge to improve and communicate

Accurate knowledge of the reality of our impact is a necessity. Knowing how to anticipate and assess both progress and difficulties is essential for a policy's implementation.
Communicating on the results achieved is becoming a regulatory obligation. By setting up an Environmental Information System (EIS), the Eramet Group is providing itself with the resources needed to realise its ambition.

### → Anticipate regulatory changes from a sustainable development perspective

The regulatory framework for the Eramet Group is multiple, complex and growing. We have a duty to enable ourselves to acquire full knowledge of that framework, anticipate changes in it and act to raise awareness of our businesses from a perspective of sustainable development that protects our competitiveness.

### → Contribute to the development of scientific knowledge

Scientific knowledge relating to the health or environmental impacts of the Group's activities is complex and constantly evolving. The Eramet Group contributes to the development of research and knowledge relating to its activity.

# Environment: A strong commitment

## → Control and reduce the environmental impact of the Group's industrial activities

Corrective actions taken on the Boulogne-sur-Mer, France, site in 2002 resulted in a 95% reduction in the amount of liquid waste discharged into the sea. Discharge levels are now below the requirements of the site's operating permit. This progress was achieved after a period of significant technical difficulties, through the set-up of a rigorous policy for the management and maintenance of the effluent treatment plant.

Eramet is composed of businesses with diverse backgrounds and traditions. The Group has developed substantially over the past ten years. Aware of the importance of environmental issues for its activity, in 2002 Eramet set up a determined and realistic environmental policy that reflects both the situation of its industrial sites and its values.

The policy is implemented by the Group's environment managers in particular and is based on a commitment made by Eramet's General Management. That commitment is reflected in the principles that make up the Group's Environmental Charter (see page 11).

## Set up of an environmental management system

To achieve these objectives and base its environmental policy on a continuous improvement trend, the Eramet Group has begun the gradual set-up of an Environment Management Systems (EMS) on the basis of the pilot sites selected in 2003.

Some Group entities have already begun processes of this kind. In September 2001, the Tertre (Belgium) site obtained the Eramet Group's first ISO 14001 certification for its copper recycling activity in September 2001.

## Make the environment a part of every stage in the life of the Group

The Eramet Group's policy is to apply the latest standards and norms to its development projects in order to ensure the slightest impact possible under current technology, at an economically acceptable cost. In particular, it acts in the framework of European policy on Best Available Technologies (BAT).

## Compliance with regulatory requirements

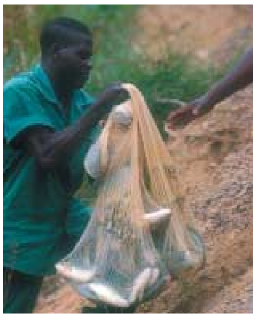
The Eramet Group makes compliance with the regulatory obligations that apply to its industrial sites one of the principles of its environmental policy.

In the event that a site finds itself in a non-compliant situation on a one-off basis, the Group undertakes to:

- keep the relevant regulatory authorities informed of the situation,
- implement, according to principles and schedules approved by those authorities, the corrective actions needed to restore a compliant situation,
- set up the resources needed to assess any impact in terms of health or the environment that the non-compliant situation may have,

## → Contribute to the development of scientific knowledge

In 2002, Eramet contributed to a USD 2.5 million research programme designed to develop knowledge of the ecotoxicity and bioavailability of certain nickel compounds, through the specialised research organisation NIPERA. The work, conducted in cooperation with other major nickel producers, is part of a European Union programme on risk assessment and management for certain metals.



• keep its employees and the local community informed by any appropriate means, with a concern for openness and responsibility.

## Set-up of an Environmental Information System

The Group decided to develop an Environmental Information System (EIS) that functions via a network of Group managers (on HQ, division and site levels) to ensure access to all the knowledge needed to achieve its objectives in terms of environmental policy.

## Regulatory context

The Eramet Group is directly concerned by a very wide set of policies and regulations on the management and protection of public health and the environment because of the diversity of its activities, processes and products.

Nevertheless, Eramet strives to ensure it receives fair treatment on industry-wide regulatory issues and intends to contribute to the promotion of its businesses by defending its markets in conjunction with its customers and partners.

## A network structure

The Eramet Group's environmental policy is implemented, under the responsibility of the Environment Coordination team, by a set of internal and external resources functioning as a network and comprised of Environment Managers for the Group's entities, generic or specific trade associations, external experts, etc.

The Group's HQ, division and site Environment managers all share information in the framework of the Environment Club, which meets two or three times a year. ■

## ➔ Develop self-knowledge to improve and communicate

In the second half of 2002, the management of the Alloys Division launched a series of 12 environmental audits on its industrial sites. These audits are carried out by Group Environmental Coordination representatives and Division environment managers working in pairs and aim to review the actions carried out, identify problems or difficulties and draw up or add to action plans. The results of this systematic in-depth process will be available in March 2003.

## ➔ Strictly comply with regulations

2002 was marked by a major update of the regulations governing the operation of the Doniambo plant (New Caledonia). The August 5th, 2002 decree that authorises the site's capacity extension project overhauls the entire air discharge issue. It sets new performance obligations together with an implementation schedule. Compliance with its requirements, made possible by the improvements expected from the current capital investment project, will guarantee a significant improvement of air quality in Nouméa.

# Stronger bases in high-growth zones

As it develops its businesses, the Group contributes to the economic development of the regions in which it is based, ensures that the skills of its people are enhanced in a satisfactory work environment and strives to reduce the environmental impact of its activities through long-term management.

Eramet is based on all five continents with industrial and sales sites in over 30 countries. Two-thirds of the Group's employees work outside France.

In 2002, Eramet consolidated its presence in China, a high-growth geographic zone. Eramet China, part of the Eramet International network, has new offices in Shanghai that provide the Group with a solid commercial base and the Manganese division has a new manganese alloy production unit following the acquisition of the Guilin plant in Guangxi province in September 2002.

In South America, Eramet International joined forces with Erasteel to establish the Group's first representative office in Brazil with the creation of Erasteel Latin America.

## Ongoing dialogue and a strong commitment to the local community

The Eramet Group contributes actively to the economic development of the regions in which it is based. It is a major partner for social action in certain countries. In New Caledonia, the Doniambo plant has been a key player in the country's economic development for a century. In the mining centres, for example, SLN plays an active role in installing sanitary and social facilities.

In 2002, extensive communication was organised in line with the public enquiry prior to implementation of the changes brought about by the capacity extension programme. This included several presentations to local elected representatives, environmental associations and the residents of neighbouring districts. Moreover, SLN, in partnership with an association promoting business initiatives, supports projects for the creation of local small businesses, particularly in the inner regions of New Caledonia.

In Gabon, Comilog, a 60% Eramet subsidiary, manages a hospital with highly qualified medical staff serving the entire village community.

On all its sites, Eramet supports local sporting and cultural associations, for example in Les Ancizes, near Clermont-Ferrand, France, where Aubert & Duval *Alliages* has been based for a century. Eramet also contributes to the training of young people and adults. In particular, the Group fosters the emergence of local managers in New Caledonia and Gabon. ■

Eramet International has 13 sales offices around the world.

A cross functional approach to the management of environmental, industrial and safety risks.

# Protecting natural resources

The technological developments implemented in the Group are intended to combine industrial progress with the protection of natural resources, with the aim of reducing production costs and improving international competitiveness.
For Eramet's mining activity, in particular, these concerns are factored into the long-term development strategy.

On the Tiébaghi mining site in New Caledonia, the construction of a nickel ore beneficiation plant using environment-friendly technologies increases the value of the Country's mineral resources. In Gabon, the new manganese ore beneficiation unit not only makes the use of lower-content ore possible, but also enables previously unused ore fines to be processed, thus protecting scarce natural resources.

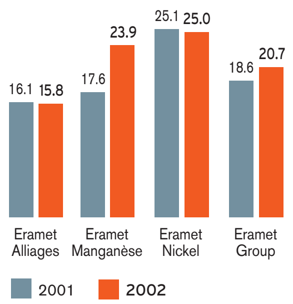
# Improvement needed on safety results, industrial risks were better controlled

In 2002, after three years of improvement, the Group's safety results worsened slightly. Accident frequency and severity rates increased to 20.7 and 0.82 respectively, compared with 18.6 and 0.69 in 2001. This negative trend shows that safety results are fragile despite the programmes implemented. The best results recorded in 2002 were on sites where substantial commitment was obtained from management, personnel representatives and employees.
The actions undertaken in recent years, such as safety audits for workplace accident analysis by internal auditors or the circulation of best practices, continued with concrete results on several sites. Interforge, an Alloys division unit in Issoire (Puy-de-Dôme, France) implemented a structured action plan following an audit conducted in early 2002. As a result, frequency and severity rates were halved.
In the Manganese division, the best results were obtained by the Norwegian units in Porsgrünn and Sauda, which set up original work organisation practices with a shorter chain of command.

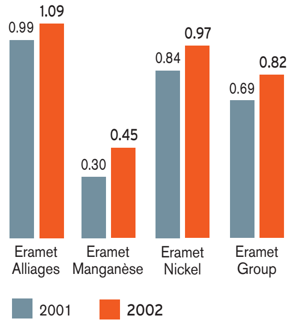
Furthermore, for the first time this year, the occupational physicians for the Group's French-speaking sites met as part of a Health network to share experience and best practices in relation to new regulatory requirements.

The Group's mobilisation on industrial risks continued in 2002. Action plans were drawn up after targeted audits were completed on seven industrial sites – including five "Seveso" classified sites – and will be monitored by the Group Technical Department. Almost 300 actions were identified and are now being carried out. The partnerships developed with the prevention engineers of the Group's main insurance companies also led to action plans based on visit reports and the definition of Group standards in terms of both procedures and technical solutions.

**Lost-time accident frequency rate**




**Lost-time accident severity rate**



# Human Resources:
# a Core Priority for the Group


The Eramet Group was built in stages through the integration of new activities that fit well with its core business (mining and metals conversion) and contribute specific cultures. Beyond the specificities of each company, Eramet has striven to promote common values of professionalism, pragmatism, cohesiveness, giving priority to the long term, a sense of responsibility and a concern for ethics in all circumstances.

## Developing the leadership role of management

In 2002, Eramet continued to implement its policy of developing management's role in leading the Group.

Two major initiatives were launched in 2002. The Executive Committee became more involved in monitoring management teams and the Eramet Management University was created to enhance know-how and cohesiveness.

For five years, the Group has organised an annual New Recruits Day attended by General Management, where the managers of operating divisions and corporate departments present their activities and main orientations and answer questions from new members of staff.

Furthermore, Eramet continued to implement its corporate image policy in 2002. This led to greater presence at jobs fairs for the leading engineering schools in France. Approximately sixty graduates were recruited in 2002 and internal mobility between the Nickel and Manganese divisions now works satisfactorily.

## A new stage in division organisation was reached in 2002, particularly for human resources (HR)

Organisation of the Manganese division was bolstered in terms of production, sales and HR. In Gabon, the HR function was developed and industrial dialogue was revived. Towards the end of the year, the decision was made to set up a HR department in Norway. The aim is to be able to draw on HR policies that are defined in each country and relevant to the employees concerned.

The Nickel division renewed part of its senior management team and further enhanced the leadership and technical abilities of its managers.

In line with SLN75, the 75,000-tonne capacity extension programme in New Caledonia, a new work organisation function was set up to provide an interface between general management, trade unions, company managers and the project team.

In Alloys, the HR function was adapted to the new team management conditions resulting from the unification of Aubert & Duval, Fortech and Tecphy within AD*H*. Key objectives were to improve consistency with group policy and increase efficiency.

## Industrial dialogue – a key concern

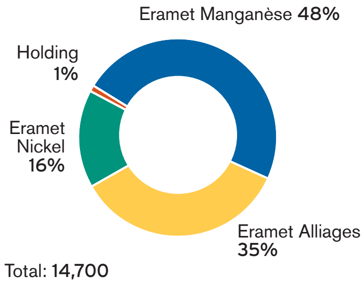
In 2002, Eramet continued to develop industrial dialogue throughout the Group. For example, following the agreement on career development for employee representatives signed in 2001, the individual situation of every representative was examined. In line with the combination of Aubert & Duval, Fortech and Tecphy, four company-wide agreements were signed in Aubert & Duval *Holding*. The agreements primarily cover employee representation, profit-sharing and bonus programmes and the company savings plan.
In addition, a Group agreement was signed with trade unions to ensure the European Works Council reflects changes in Eramet's consolidation structure. This will make New Caledonian delegates fully-fledged members and give non-French-speaking employees greater representation among the Council's officers.

## Training to foster employee ownership of new facilities

With every new capital investment project, Eramet allocates a significant share of the budget to training. For the start-up of the renovated blast furnace in Boulogne-sur-Mer, France, initial training, ongoing training and the training provided in 2002 following the incidents totalled almost 70,000 hours.
Substantial efforts were also made when Moanda Industrial Complex, Gabon went into service, with 27,000 hours of training delivered for Comilog SA employees and the people recruited on the local job market.
Overall, the Group assigns more than 3% of its total wage bill to training. 60% of training is delivered by internal resources, which fosters management involvement and good industrial relations.
For the SLN 75 project, training in 2002 concerned, for example, mining equipment operators in liaison with the Poro technical training centre for mining and quarries (CFTMC).
In addition, the programme of management training for supervisors launched in 2001 was completed in 2002 in both the Le Havre-Sandouville and Boulogne-sur-Mer plants in France. In the Alloys division, vocational training actions such as the "Millennium Blacksmith" programme, a two-year diploma course, continued.
Particular emphasis was placed in 2002 on management training, in line with the guidelines defined as part of the "Réussir Ensemble" (succeeding together) corporate project. This document sets out managers' missions and responsibilities as well as the necessary tools such as the annual assessment interview.

To address the increase in the Group's size and complexity in recent years, priority actions in 2003 will involve formalising practices and procedures, a continuous concern for fairness and efficiency – particularly to employee's suggestions – and a constant focus on safety.

**Group employees by division**




**27,000 training hours were provided for the start-up of the Moanda Industrial Complex in Gabon.**

# Developing Research and Investing for the Future

Innovation is crucial to the improvement of the Group's competitiveness, both through processes in order to optimise the functioning of industrial assets and through products and applications to meet customers' changing needs.
Eramet's research resources comprise decentralised teams, specialised laboratories in the divisions and skill centres grouped together in the Trappes Research Centre, which became a wholly-owned Eramet subsidiary in early 2003.

## Trappes Research Centre – the heart of the Group's R&D assets

The Trappes Research Centre (CRT) is the Group's principal research site and houses 70 engineers and technicians. Its mission is to develop and refine new processes and to optimise existing ones for the various stages in processing ores, metals and recycled materials.

In early 2003, Eramet increased its stake in CRT to 100%.

In 2002, among other projects the teams at CRT worked on SLN 75, the production capacity extension program in New Caledonia. This work particularly focused on the design of the future electrical furnace and involved tests on a pilot facility on the site of its German manufacturer Demag. CRT also conducted several operating tests for the future washing plant for ore beneficiation in Tiébaghi.


In the Manganese division, CRT worked closely with local teams and the Group Technical Department to improve functioning of the Moanda sintering unit in Gabon.

A major contribution was made to the solution of technical problems on the new blast furnace in Boulogne-sur-Mer, France. Other work at CRT led to the definition of the characteristics of a new type of refractory lining that was successfully used to renovate a furnace at the Sauda, Norway plant.

Joint projects with the Alloys division were developed in 2002. They concerned the optimisation of high-speed steel grades and the processes needed to shape them, as well as improvements to casting systems.

## New R&D organisation in the Alloys division

Following the combination of the companies Aubert & Duval, Fortech and Tecphy within Aubert & Duval *Holding,* a common R&D structure was set up in late 2002, leading to the creation of the position of division R&D manager.
Cooperation between Erasteel, AD*H* and CRT teams was stepped up. Work in 2002 particularly concerned the optimising of steel grades and superalloys, processing and refining of liquid metal and hot conversion (forging, closed-die forging and rolling).

## A new technology pole in Trappes

In 2002, the set-up of an Eramet technology centre was completed in Trappes, near Paris. The new unit brings together employees from the Group technical department, TEC Ingénierie and CRT, the site's research centre. CRT's missions were defined and developed to serve the Group's operating entities and customers. The technology centre is also a breeding ground for the specialists and experts needed for the continuous improvement of manufacturing processes, products and service quality in the Group's three divisions.

R&D programmes are defined according to the division's priority objectives: improving customer service (quality, lead time reduction), shortening cycle times and reducing costs.

Digital modelling tools play an increasingly important role in metallurgical research, as they can mean significantly shorter and cheaper development projects. More and more frequently, these projects are carried out far upstream in the framework of partnerships with customers to adapt steel grades to applications and take the user's industrial and economic constraints into account.

For many years, Eramet's research has been based on partnerships forged with universities and engineering schools, whether in France with Ecole Centrale de Paris and Ecole des Mines in Paris, Nancy, Saint-Etienne and Albi, or with institutes and university laboratories in the United Kingdom, Norway and Sweden.

These partnerships, in which each participant contributes a matching vision as well as specialised skills, help to develop the Group's innovation capabilities and maintain their excellence.

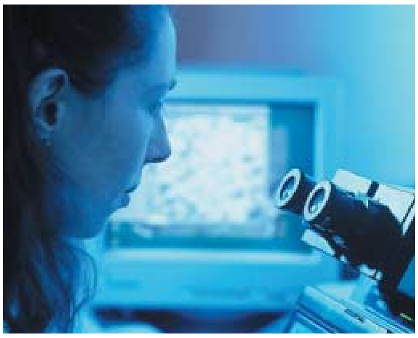
## TEC – mining and metallurgical engineering

TEC Ingénierie groups together the Group's engineering resources and the technological skills needed for the departments in charge of capital investments.

The company employs 60 people, including 45 engineers specialising in mining and metallurgical studies. On behalf of the Group's different companies, TEC carries out surveys, feasibility studies and medium-sized projects and provides project management assistance in mining, mineralurgy, metallurgy, environmental protection and process I.T. In 2002, TEC Ingénierie's teams took part, among other projects, in the production capacity extension programme in New Caledonia, the feasibility study for the future 40,000-tonne press to be installed in the new Pamiers unit (Ariège, France), the improvement of the functioning of the beneficiation unit in Moanda industrial complex (Gabon) and the renovated blast furnace in Boulogne-sur-Mer (France).

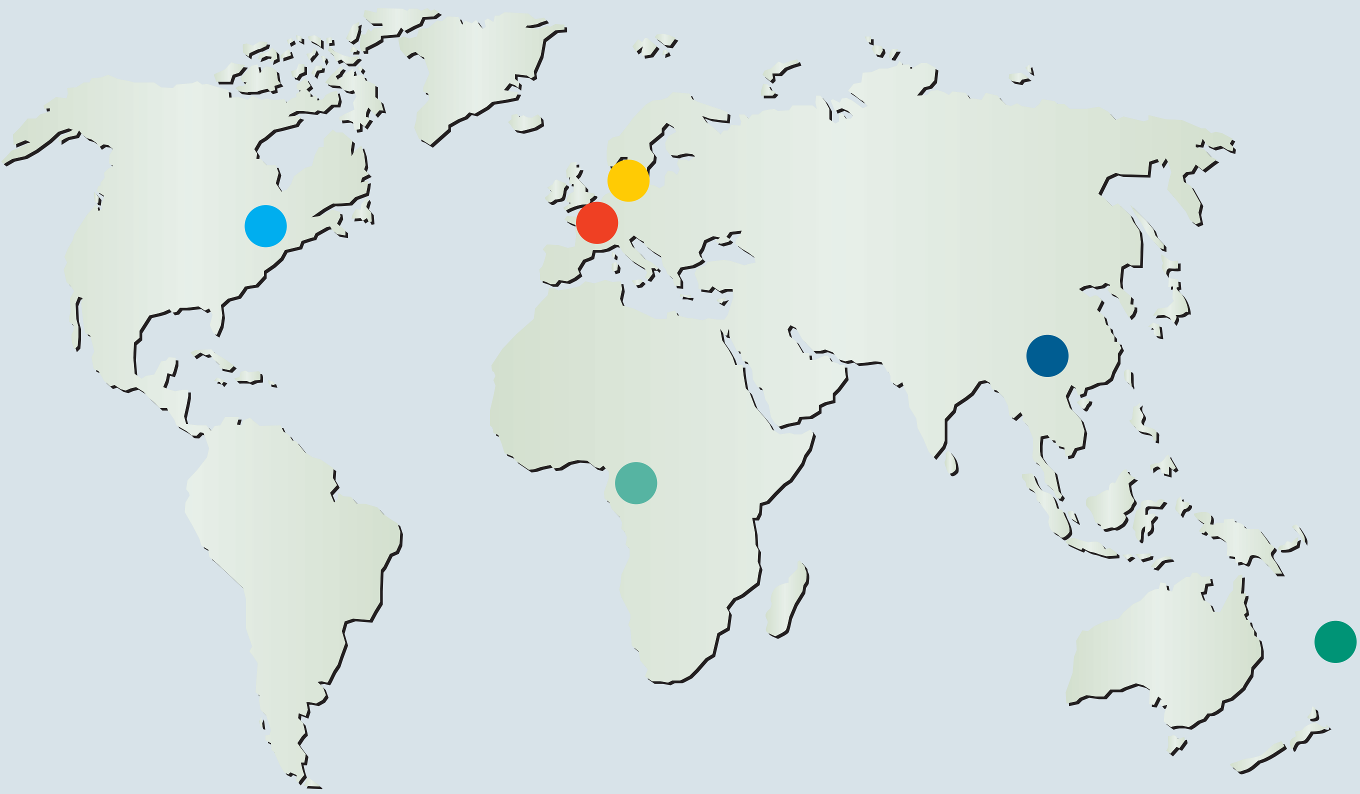
In 2002, TEC Ingénierie also continued to provide services for companies outside the Group. ■

70 engineers and technicians work in the Trappes Research Centre, close to Paris.

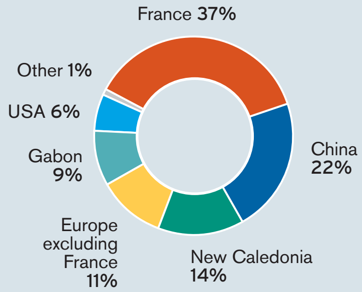


# Eramet in 2002 – greater presence on all five continents

In 2002, Eramet enhanced its presence in China with new offices for the Eramet International network and a new manganese alloy production unit. The Group also established its first sales base in Brazil with the creation of Erasteel Latin America.



Group employees by geographical area




Total: 14,700

- 14 sites in France
- 8 sites in Europe (excluding France)
- 5 sites in the United States
- 3 sites in Asia
- 5 sites in New-Caledonia
- 2 sites in Gabon

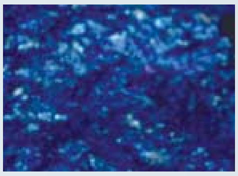
# 2002 Activities

## Eramet Alliages

The Alloys Division had to address a sharp downturn on its main markets – aerospace and gas turbines for Aubert & Duval *Holding* and cutting tools for Erasteel. In response to falling order levels, AD*H* took extensive measures to adjust its plants to the drop in business. The various actions in progress will be continued and intensified in 2003. Erasteel's business slumped heavily in 2001. In the second half of that year, the company launched an adjustment plan, resulting in a slight improvement in results in the second half of 2002.

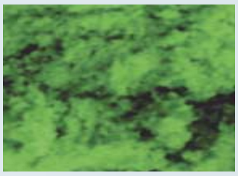
## Eramet Manganèse

The Manganese Division experienced difficult market conditions, in both manganese alloys in the first half of the year and in manganese chemical derivatives. In addition, the production incidents in Gabon, Boulogne-sur-Mer (France) and Norway weighed heavily on margins. The design changes made to the new facilities in Gabon and Boulogne-sur-Mer and the rebuilding of a furnace in Norway led to improvements in production towards the end of the year.



## Eramet Nickel

The Nickel Division benefited from a rise in nickel prices that was driven by the upturn in the stainless steel market, with high demand in China in particular. Shipments were virtually stable with a higher average sales price and improved manufacturing performance in the second half of the year.



# Alloys

Eramet Alliages, the Group's Alloys division, is made up of Aubert & Duval *Holding*, which groups together AD *Alliages*, AD *Fortech* and AD *Tecphy*, and Erasteel.

The division produces and markets, in several forms, high-performance special steels and superalloys, and manufactures pre-machined parts in those materials or aluminium and titanium.

Eramet Alliages has front-rank market positions:
→ world's leading producer of high-speed steels,
→ a major world producer of high-performance special steels,
→ world's second-largest producer of closed-die forged parts for aerospace and power generation.

On seven main production sites in France, Aubert & Duval *Holding* and its subsidiaries make forged and closed-die forged parts in special steel, superalloys, aluminium and titanium, etc. These high performance and high value-added parts are chiefly intended for the aerospace and power generation markets. These companies also make long products (e.g. billets, bars and wire) for a wide range of markets, such as the aerospace, tooling, transport and mechanical construction sectors.

Erasteel makes special steels (high-speed steels) in eight plants in France, Sweden, the United Kingdom and the United States, for the production of cutting tools and industrial tooling.


## Difficult market conditions in aerospace, power generation and tooling

| (In millions of euros) | 2000 | 2001 | 2002 |
|---|---|---|---|
| Turnover | 778 | 827 | 720 |
| Operating cash flow | 80 | 67 | 1 |
| Operating income | 78 | 80 | 32 |
| Investments | 35 | 36 | 41 |
| Employees | 5,321 | 5,327 | 5,128 |

The year was full of contrasts for the Alloys division. Business was still brisk in the first few months as orders from 2001 were fulfilled, but slumped heavily in the second half of the year. The fall in new aerospace orders, together with postponements and cancellations in power generation, drove down business by approximately 30% in the aerospace market and to an even greater extent in gas turbines in the United States.

# Eramet Alliages



The tool steels market was also affected by the downturn in the global economy and the time lag for new automobile model launches. Erasteel's high-speed steel shipments decreased by 16%.

In 2002, the division's turnover was €720 million, which represents a 12.9% downturn compared with 2001. Operating income decreased substantially and was only slightly positive (€1 million).

In that difficult market environment, adjustment actions were taken from the second half of 2002 onwards. At the same time, a medium-term industrial and commercial performance improvement plan was undertaken and the capacity extension program was continued.

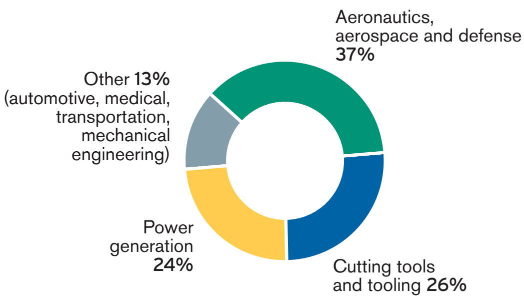
The first measures concerned manpower adjustments, with the emphasis on reducing temporary personnel numbers, in-sourcing subcontracted work and reducing the working week. At Erasteel, these adjustment actions were launched in late 2001. They resulted in a 10% decrease in employee numbers on a full-time equivalent basis, particularly through early retirement, by the end of 2002.
At Aubert & Duval *Holding*, the full-time equivalent workforce was reduced on a similar scale by the end of 2002. Moreover, a Purchasing action plan was launched in order to reduce costs.

## Enhance customer service, optimise industrial performance and improve profitability

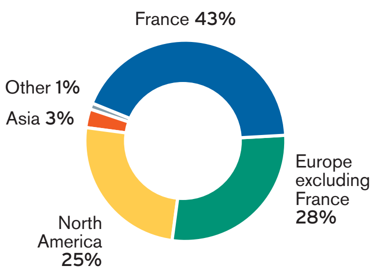
Multi-year industrial and commercial performance improvement plans were launched in the division. Entitled "Réussir Ensemble" (succeeding together) at Aubert & Duval *Holding* and "Horizon" at Erasteel, these programmes are designed to enhance customer service (quality and lead time reliability) and optimise industrial performance by gradually shortening cycle times and reducing working capital. At Aubert & Duval *Holding*, three kinds of action targeted working capital: reducing inventory, particularly through raw material purchasing; shortening customer payment times; and working on the manufacturing cycle with the aim of halving cycle times. A steering group was set up and action plans were defined on three priority sites: Les Ancizes, Pamiers and Issoire. Working capital was reduced by €67 million by the end of 2002. The division's net debt was significantly cut.

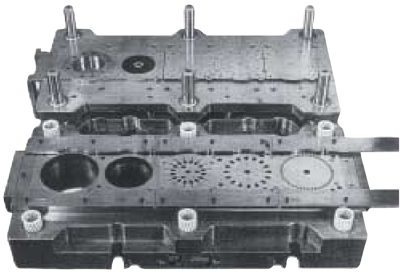
This improvement process was supported by an ambitious communication plan as part of the "Réussir ensemble" corporate project launched in March 2001 following the business combination of Aubert & Duval, Fortech and Tecphy. Communication and management tools were

### Breakdown of turnover by market in 2002




### Breakdown of turnover by consuming area in 2002




created to raise plant employees' awareness of customers' needs and involve the site's managers in the process.

Erasteel's Horizon plan, launched in September 2002, has the same rationale of significantly improving industrial performance and orienting sales towards higher value-added products.

In the unwelded ring rolling market, where AD*H* was below the critical size, an agreement was entered into with the Italian company Forgital, the European leader in ring rolling, in April 2002. The agreement provided for the divestment of a 67% stake in Dembiermont, with AD*H* keeping the remaining 33%.

## Focus on sales development

In a difficult economic environment, the division focused its efforts on the development of high value-added products and parts. AD*H* successfully bid for new contracts for aeronautic turbine parts for the Airbus A380 (GP 7000 and Trent 900 engines). Furthermore, the first structural parts for the Airbus A380 were closed die-forged on the 65,000-tonne press at the AD*H* subsidiary Interforge. One of these parts, the main landing gear box for Goodrich, weighs seven tonnes and is one of the largest parts ever closed die-forged in the world.

Erasteel increased its stake in the UK company Peter Stubs, world leader in high-speed steel section wire, to 78%.
A new heat treatment line for blanks went into service at the Commentry (France) plant in late April 2002. The blanks marketed under the new Linea™ brand are intended for the electronics and precision mechanics markets (drills for watchmaking, punches).

Furthermore, the company stepped up its cooperation with the Japanese group Nachi-Fujikoshi with the signing of two cross-supply contracts. The agreements also consolidate Erasteel's positions on a fast-growing market.

In addition, storage facilities and an office were set up in São Paulo (Brazil) in order to serve the South American market more effectively.

Finally, Aubert & Duval *Holding* and Erasteel decided to create a joint structure in tool steels, a market with high development potential where the two companies' product lines fit together well.

## Aubert & Duval *Holding* produces the main landing gear box for the future Airbus A380

Goodrich selected AD*H* to make the main landing gear box for the future Airbus A380. This part made from 300M-type steel, weighs over 7 tonnes and was produced on Interforge's 65,000-tonnes press. It was designed through a concurrent engineering process that enables the metallurgist to be involved at a very upstream stage in the part design process.
This part will be machined partly by AD*H* before delivery to Goodrich.

For AD*H*, the aim is to bolster its positions in hot working, while Erasteel's objective is to grow in the cold working market. The target is to double turnover within five years.

## Industrial synergies

The industrial specialisation process begun in 2001 continued in 2002. Production transfers were carried out to assign manufacturing tasks to the best equipped sites. As Fortech's titanium activities at Issoire were transferred to Pamiers, Pamiers' aluminium activities were relocated to Issoire, and the Les Ancizes plant's stamping activities were transferred to Pamiers.

As regards Research & Development, a joint AD*H* structure was set up in autumn 2002 and cooperation with Erasteel's R&D teams was intensified. Three priority areas were identified: creating or optimising certain steel and superalloy grades, liquid metal processing and refining, and improving hot conversion processes.

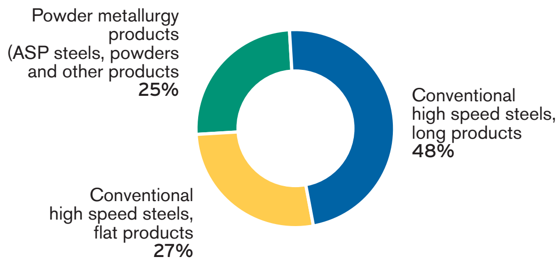
In these three areas, digital modelling has been developed substantially. As well as new steel grades, multi-material turbine disks were developed as part of a European research programme. Moreover, new partnership agreements were signed with customers in order to factor industrial and economic constraints into the part design process as far upstream as possible. Significant progress was also made in remelting and ingot casting.

## Capacity extension investments to prepare for the future

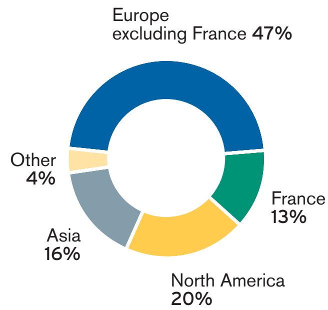
The division's capital expenditure program continued in order to support development on new markets. In addition to the takeover of Peter Stubs (United Kingdom), Erasteel grouped together its two United States facilities – in Fairfield (New Jersey) and Mc Keesport (Pennsylvania) – onto a single site in Boonton (New Jersey). This relocation should make optimised flows and shorter lead times possible. It will be supported by a USD 5.3 million investment in a new annealing furnace. At the Les Ancizes plant in France, a new slag remelting furnace came on stream in the second quarter of 2002.

Furthermore, a €5 million capital investment was launched at AD *Tecphy's* Firminy plant for the manufacturing of parts for deepwater oil drilling platforms. This included the installation of an 18-meter digitally controlled machining tower in 2002. A heat treatment furnace, also capable of

**Erasteel: sales by product in 2002**




**Erasteel: sales per consuming area in 2002**



processing parts over 18 meters, is to be installed. The second stage will concern the commissioning of a digitally controlled parallel lathe and a second heat treatment furnace.
The 40,000-tonne programme at Pamiers (Ariège, France) for the construction of a new unit for the production of aircraft engine and structural parts, including a 40,000-tonne press, is progressing on schedule. Administrative authorisations have been granted and orders have been placed for the main equipment. The new unit should be in operation in early 2005.

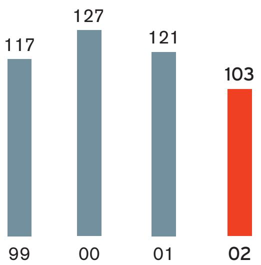
## Protecting the environment – a growing concern

In September 2002, the division's management decided to launch a series of environmental audits on twelve sites in France and Sweden. The findings were expected in March 2003. This will be followed by specific action plans for each site. An ISO 14001 certification programme has been launched with Erasteel's Commentry (Allier, France) plant as the pilot site.

In the plants, actions were focused on two areas – soil conditions and waste management.
In France, seven out of nine sites have carried out soil surveys with a view to setting up corrective actions. At the Erasteel plant in Långshyttan (Sweden), an internal dump was renovated. Underground water checks are continuing around the site.

As regards waste, selective sorting is in operation on all the division's sites. At Pamiers (Ariège, France), a determined waste management policy was reflected in structured actions with reduction at source, advanced selective sorting and optimised processing. The policy is supported by an extensive employee training set-up.

World consumption of high speed steels
(excluding CIS and China, Eramet estimate)
Index basis 100 = 1993




## Alloys division: new orders received

| in millions of euros | 2000 | 2001 | 2002 | Change 2002/2001 in % |
|---|---|---|---|---|
| Aubert & Duval *Holding* | | | | |
| - forged parts | 366 | 457 | 277 | -39 |
| - long products and specialty products | 236 | 253 | 177 | -30 |
| Sub-total | 602 | 710 | 454 | -36 |
| Erasteel | 208 | 177 | 125 | -29 |
| Total Alloys division | 810 | 887 | 579 | -35 |

# Manganese

Eramet Manganèse, the Group's manganese division, is the world's leading producer of manganese alloys and offers the widest product range on the market. It is also the world's number one producer of manganese derivatives for the chemical industry. These products are used to make batteries, ferrites, fertilisers and animal feeds.

Through its subsidiary Comilog, Eramet Manganèse is the world's second-largest producer of high-grade manganese ore through its deposit in Moanda (Gabon).
The division's business is totally integrated, from ore to ferroalloys and manganese chemical derivatives.

In parallel, Eramet Manganèse has developed industrial services, including the reprocessing of spent oil catalysts and recovering metals from solutions used in printed circuit manufacturing.
The division has a network of 16 industrial sites on four continents (Africa, Asia, Europe and America).


## Contrasting market situations

The world iron and steel industry recovered in 2002 with approximately 6% growth over the year, 3% outside China. World steel production totalled almost 903 million tonnes.
Once again, China was the main growth driver with an estimated 25% increase in steel production compared with 2001.
One of the reasons for this upturn was the rebuilding of inventory after the massive stock reduction actions carried out towards the end of 2001, especially in Western Europe. Moreover, Asian markets were firm except for Japan, where the rise in local production was mostly driven by exports rather than growth in domestic demand. In the United States, output remained at the same level as

| (In millions of euros) | 2000 | 2001 | 2002 |
|---|---|---|---|
| Turnover | 953 | 920 | 879 |
| Operating cash flow | 61 | (3) | (20) |
| Operating income | 92 | 43 | 26 |
| Investments | 126 | 93 | 46 |
| Employees | 5,698 | 5,300 | 7,060 |

# Eramet Manganèse


the previous year. The upturn in business in the fourth quarter for some major steelmakers was not enough to revive US production.

Manganese alloy consumption benefited from this positive trend on the world steel market. Excluding China, it increased 1.8% in 2002 compared with 2001. Consumption of refined alloys, which had dropped substantially in 2001, rose 7% in 2002, while silicomanganese and high-carbon ferromanganese consumption only increased 1.5% and 1%, respectively.

Manganese alloy prices remained low during the first half of 2002 despite the slight upturn in consumption because of the inventory built up in 2001 and of excess supply over demand. Prices improved significantly from the third quarter onward with the end of inventory reductions and the problems encountered by some alloy producers. However, prices fell back slightly at the end of the year due to the uncertainty over demand and the plentiful supply.
In that context, Eramet Comilog's sales did not recover until the last months of 2002.

Eramet Comilog alloy sales volumes were seriously hit throughout the year by the difficulties encountered on several production sites. However, some of the production losses were offset by inventory reduction and external purchases, which allowed the division to maintain its commercial relations with key customers.

Furthermore, the Manganese division had to cope with greater competition from countries with greatly depreciated currencies (South Africa and Brazil).

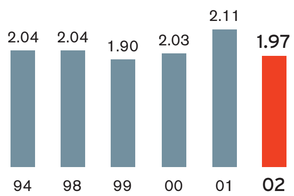
In that context, manganese alloy shipments, including bought-in products, totalled 958,700 tonnes, which represents a 6% decrease compared with 2001.

The manganese ore market was marked by an approximately 7% decrease in the international reference price compared with 2001.

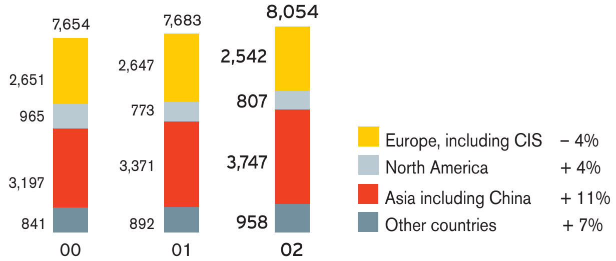
The division's ore sales, excluding intra-Group sales, increased 47% in 2002 to return to a normal level with, in particular, the first sales of sintered ore to external customers (in Korea and Japan).

Sales of the Marietta plant's special products (Ohio, US), including high-purity chrome for

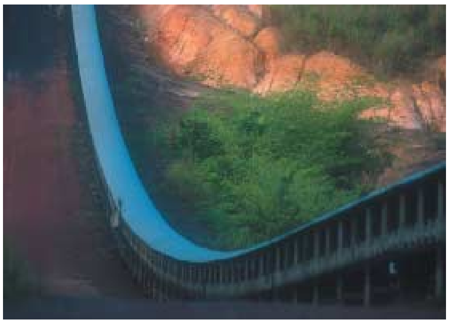
**Manganese ore price**
Contract price for manganese ore exported to Japan for metallurgical uses
(US dollars per 1% of manganese content FOB Australia)




**World consumption of manganese alloys by the steel industry***
(in thousands of tonnes)




Change 2002/2001: world + 5%
* Eramet estimate.



aerospace superalloys, fell 50% compared with 2001, due to the heavy market slump.

On the manganese chemical derivatives market, demand for electrolytic manganese dioxide for alkaline batteries remained low, particularly due to the reduction in intermediate inventory early in the year.

The American market remained very slack and was on a similar level to 1997 for the second year running.

Demand for ferrites for the electronics industry remained low with a 35% drop compared with 2000.

Finally, overall demand for salts and oxides for agriculture remained relatively stable.

As regards environmental services, the division's printed circuit copper solution recycling business enabled it to maintain its positions on the different European markets and results remained satisfactory.

The good results posted in 2001 for the oil catalyst reprocessing activity continued with high output levels. Vanadium prices were sustained by the US Department of Trade's decision to levy anti-dumping duties on imports from South Africa and China.

Ore production at the Moanda mine (Gabon) totalled 1,856 thousand tonnes, which represents a 3.6% increase compared with 2001.

In total, the division's turnover, at €879 million, decreased 4.5% compared with 2001 for the same scope of business and an operating loss of €20 million was recorded.

In 2002, the Manganese division implemented an extensive cost reduction plan, while continuing to ramp up the equipment acquired in 2001.

## Improve the division's competitiveness by cutting costs and refocusing on core business

In response to a difficult situation, the Manganese division implemented an extensive cost reduction and manpower adjustment programme in 2002.

The division's actions concerned the reduction of working capital (inventory, receivables, etc.), which was cut by €71 million, as well as the consolidation of purchasing structures.

The market downturns in electrolytic manganese dioxide for alkaline batteries and in the special products made at the Marietta (Ohio) plant,

## Eramet Comilog Manganese and China: eight years of productive cooperation

Eramet Comilog has been active in China since 1995. Over the past two years, Eramet Comilog has set up new management procedures and developed technical assistance services. The Asian financial crisis of the late 90's had negative impact on the two joint ventures' business. A cost reduction plan was implemented. This swiftly improved the competitive position of two manganese alloy production units. Six years on, the Guangxi plant's productivity has been improved substantially through technology transfers and coke consumption has been reduced.

# Eramet Manganèse

together with the disappointing results of the Norwegian plants, which were made worse by the rise of the Norwegian kroner, led to the set-up of a manpower reduction plan. The division's total workforce was reduced by 200 in 2002 and further downsizing plans are scheduled in Belgium and Norway. As a result, Erachem Comilog's Belgian workforce is to be reduced by 12% in 2003 and the first half of 2004. Approximately 100 jobs will be cut at Eramet Norway by 2004, which represents a 9% reduction. The first 50 job cuts will be implemented in 2003.

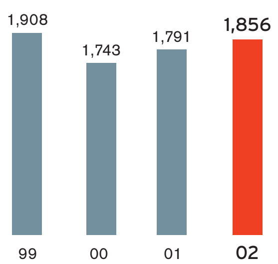
In 2002, the division's strategy of refocusing on its core business resulted in the signing of two agreements, one for the sale of the carbon black businesses to the Imerys group and one for the sale of the Sadaci plant - a unit located near Ghent (Belgium) that specialises in ferrovanadium and molybdenum production – to the Chilean company Molymet.
By the end of 2002, the division's net indebtedness had been reduced by 20%, which represents a €50 million decrease.

## Continued ramp-up of new production equipment

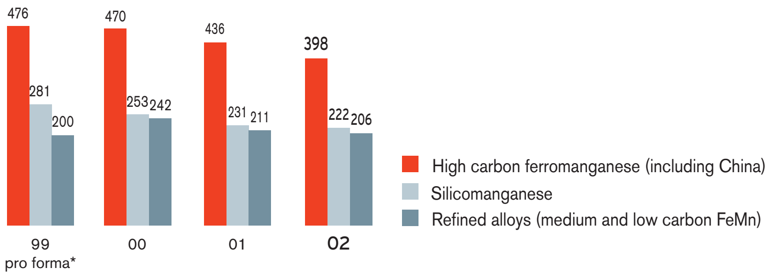
The facilities started up in 2001 and intended to improve the competitiveness of the manganese alloy plants encountered a series of technical difficulties in 2002. Changes were made to the equipment to solve these problems.

In Gabon, ramp-up of the Moanda beneficiation and sintering plant continued to go more slowly than expected. However, at the end of the year, major progress was made in the sintering unit's functioning, both in machine utilisation with production at 85% of capacity and in the quality of particle size distribution with a substantial decrease in the fines rate.
Total ore production, including sinter, at 1,856,000 tonnes, was 4% higher than in 2001.
As regards the Transgabonais railway, which carries ore more than 600 km from Moanda mine to Owendo minerals port in Libreville, a satisfactory agreement on tolls was signed with the operator at the end of September. Discussions are continuing on terms and conditions for track maintenance.

**Comilog**
**Manganese ore production**
(including sinter) - Moanda (Gabon)
(in thousands of tonnes)




**Production of manganese alloys for the steel industry**
(in thousands of tonnes)




* For all Eramet Manganèse plants on an annualized basis including the plants acquired from Elkem on June 30th, 1999.

At Comilog France's Boulogne-sur-Mer plant, blast furnace 7, which was upgraded in line with the construction of Moanda Industrial Complex (CIM), had a very difficult year with two major technical incidents in March and June, which required long stoppages as well as design adjustments.

Production losses were only partly offset by good performance on blast furnace 5. Blast furnace 7 was restarted on schedule in late September, with the target of reaching rated capacity by the end of 2003.

These incidents led to design changes for some equipment and a review of operating procedures for these new production tools.

In Norway, changes in load composition disrupted operations on two out of four electric furnaces. These difficulties were resolved in the third quarter of 2002. Furthermore, the stack and refractories were successfully rebuilt on blast furnace 12 at the Sauda plant.
Gas processing equipment set up on the Porsgrunn and Sauda sites exceeded objectives, on terms of both dust emission quantity and operating safety.

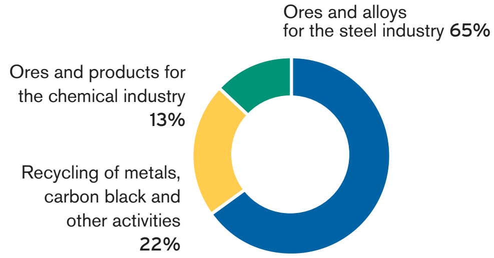
Eramet Comilog stepped up its presence in China through the takeover of the Guilin plant in Guangxi province in September 2002. This manganese alloy production unit is comprised of four blast furnaces, two electric furnaces, a power station and a sintering line. At the time of the acquisition, these facilities were only partly in operation.
A major performance upgrading programme has been launched for the facilities. Over the long term, it will make the plant one of the most competitive in China, the country that currently has a high growth rate for steel production.

## A determined health and environmental approach

Despite the set-up of action plans designed to improve safety and security, particularly in Boulogne-sur-Mer following the audit carried out in late 2001, the division's safety results worsened slightly in 2002, especially in Gabon. The efforts made over the past three years will be bolstered by greater management involvement.

The division has made the protection of the environment a core component of its industrial policy. Whether in Gabon with the beneficiation and sintering unit, in France with the dry dust removal system on the renovated blast furnace in Boulogne-sur-Mer or in Norway with gas processing facilities, the division factors environmental concerns into its capital investment decisions at a very early stage. In 2002, efforts related to the structuring of Environment teams at Comilog France's Boulogne-sur-Mer plant and the start of a ISO 14 001-type certification process.

Breakdown of turnover by activity



# Nickel

Eramet is the world's largest producer of ferronickel, an alloy developed specially for the stainless steel industry. The Group is also one of the world's three leading producers of high-purity nickel, which is used in superalloys for aerospace and power generation. The Group is also one of the western world's top five producers of nickel. Eurotungstène, the Group's 51% subsidiary based near Grenoble, France, produces ultra-fine cobalt powders for the diamond tool market and tungsten powders for making cemented carbides, which are used for the machining of metals.

| (In millions of euros) | 2000 | 2001 | 2002 |
|---|---|---|---|
| Turnover | 564 | 485 | 501 |
| Operating cash flow | 165 | 41 | 73 |
| Operating income | 205 | 85 | 108 |
| Investments | 24 | 36 | 40 |
| Employees | 2,346 | 2,333 | 2,357 |


## Upturn in stainless steel market with a rise in nickel prices

Despite a depressed global economic situation, China excepted, world production of austenitic stainless steel grew over 7% following an almost 3% fall in 2001. This good performance is partly due to the end of inventory reductions across the industry. On the other hand, slack demand in Europe and Japan was offset by approximately 20% growth in demand for stainless steel in China. The availability of recycled stainless steel scraps decreased further, leading to a 12% rise in the consumption of primary nickel in stainless steel in 2002. In China, nickel demand continued to rise, driven by relocations of nickel-consuming industries in the country, particularly nickel-plating and nickel batteries. Moreover, China, which currently consumes almost 20% of the world's stainless steel, is swiftly developing its own integrated stainless steel production.

On the other hand, global production of superalloys for the aerospace, land turbine and electronic (batteries and nickel-iron alloys) markets were very depressed in 2002.
In total, world demand for nickel rose 5.3% to 1,155,000 tonnes in 2002.

# Eramet Nickel

The global nickel supply increased 2.3%, which was less than expected. Australian producers using acid leaching processes continued to record below-target results. Other producers also faced difficulties in ramping up their production facilities.

Russian nickel exports increased approximately 45% to 276,000 tonnes in 2002. A substantial part of that increase (60,000 tonnes) is made up of the transfer of the inventory built up in Russia from 1999 to 2001 by Norilsk Nickel to storage sites outside Russia as a bank guarantee for the credits obtained by that company.

Supply and demand on the world nickel market was almost balanced, with an excess of approximately 10,000 tonnes only.
As at the end of 2002, LME nickel inventory was 22,000 tonnes and western producers' inventories were low.
In total, world nickel inventory in LME-approved warehouses and on production and trading sites represented just 10 weeks' consumption, a relatively small amount, at the end of 2002.
Most of the world's excess inventory is now controlled by just one player, Norilsk Nickel. Consequently, the Russian producer's decisions as regards sales volumes will have more influence than ever on the nickel market.

The average LME nickel price (USD 6,775/tonne, i.e. USD 3.07/lb.) gained 13.9% in 2002 compared with 2001 (USD 5,950/tonne, i.e. USD 2.70/lb.), with an average price of USD 7,107/tonne (USD 3.22/lb.) reached in the fourth quarter.

It is worth noting that global extension possibilities for nickel production in the coming years are very limited until the start-up of the next major projects, scheduled for 2006 at the earliest. The upshot is that demand on the nickel market may exceed supply if the global economy returns to its average long-term growth rate.

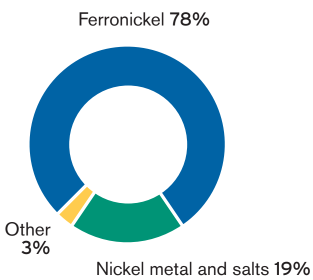
With the extension project now in progress, Eramet is in a good position to benefit fully from this favourable situation when new capacity starts up in 2004.

## Sustained sales performance

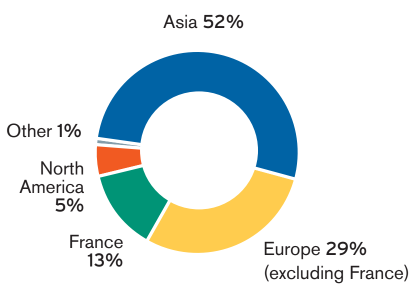
In 2002, shipments of nickel-based products totalled 59,122 tonnes, a slight decrease on 2001.

Sales of SLN 25® ferronickel increased slightly to 47,799 tonnes in a highly favourable market context. The share of ferronickel sales to Asia increased, while American demand fell sharply. SLN's first ferronickel sales contract with China was signed in December 2002.

### Consolidated sales by product

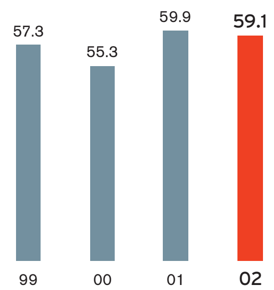



### Consolidated sales by consuming area




### Consolidated nickel deliveries

(in thousands of tonnes)



To prepare for the shutdown of an electric furnace for approximately four months in early 2004, as part of the programme to increase capacity to 75,000 tonnes, steps were taken to start building up ferronickel inventory to maintain normal sales levels in 2004.

Shipments from the Le Havre-Sandouville refinery (nickel metal and chloride) decreased 7.5%. Shipments of Nickel HP® (high-purity nickel) fell even more sharply as a result of the sudden downturn on the superalloy market. Sales of SELNIC® nickel chloride were stable despite a difficult electroplating market. The emphasis was on developing high value-added products. Eurotungstène had a less favourable year because of the downturn on its main markets after the record results achieved in 2001. Turnover dropped 18% to €34.8 million due to an over 30% fall in the sintered carbides market and the fall in metal prices. Nevertheless, the company increased its market share and sales volumes in diamond tools through a 22% increase in sales of Next® polymetal powders and stable sales of cobalt powders. Financial results remained satisfactory.

In total, the division's turnover increased 3.3% to €501 million and operating income improved 78% to €73 million.

The Nickel division continued its performance improvement actions while striving to achieve full production capacity utilisation.

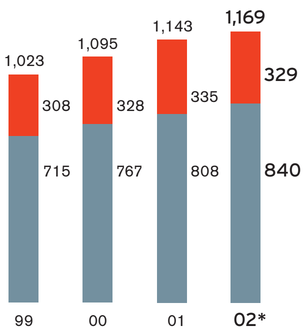
## Produce at full capacity and improve performance

In New Caledonia, the Doniambo plant's metallurgical production increased 1.5% to 59,867 tonnes of nickel in ferronickel or matte form, compared with 58,973 tonnes in 2001.

Mining production, excluding laterites, totalled 2,612,173 tonnes, which was slightly less than in 2001. Output was affected by a large number of strikes, many of which originated outside SLN, leading to 1,200 tonnes in nickel production losses at the Doniambo plant. In addition, the 15-day interruption of the electricity supply from the Yaté dam following a line breakage led to an additional nickel production loss of 420 tonnes.

### World nickel supply

(in thousands of tonnes)

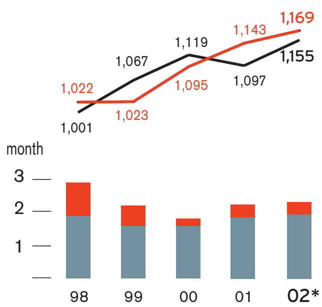



Production from CIS, Cuba and China

Production from the western world and sales of strategic inventory from the USA (until 1999)

* Eramet estimate.

### World nickel supply and demand




LME inventory (in month of consumption)

Producers inventory (in month of consumption)

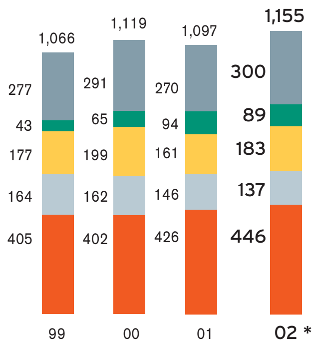
Demand (in thousands of tonnes)

Supply (in thousands of tonnes)

* Eramet estimate.

### World nickel apparent consumption

(in thousands of tonnes)




Europe
Japan
North America
China
Other

* Eramet estimate.

# Eramet Nickel

Taking into consideration those production losses, the lower availability of hydroelectric electricity and the high price of heating oil, SLN's production cost increased in 2002. However, at unchanged economic conditions, the production cost price was very close to its 2001 level.

Actions intended to optimise production and improve performance continued. A new computer-aided maintenance management package and expert systems for automated furnace operation are being installed. A purchasing cost reduction plan has also been launched.
Capital investment projects in the mines, intended to improve the centres' productivity, continued. An extensive programme for the renewal and expansion of the mining equipment pool is in progress.

At the Le Havre-Sandouville refinery, nickel production (nickel metal and chloride nickel) was voluntarily limited to 11,444 tonnes, which represents a 12% decrease on 2001, in order to adjust to difficult market conditions. Consequently, cobalt production, at 175 tonnes, was also 12% lower.

Major actions were launched to reduce purchasing expenses for chemical reagents and for maintenance. Furthermore, a training programme on management review was carried out for all personnel. This is part of an objective-based management process focusing on quality and safety.

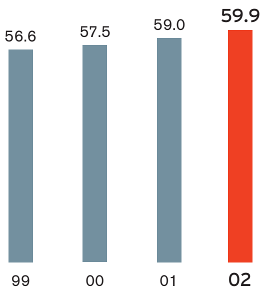
## The 75,000-tonne programme – a core issue for the future

The extension programme approved in late June 2001 by SLN's Board of Directors, which aims to increase annual production capacity at the Doniambo plant to 75,000 tonnes, moved forward on schedule.

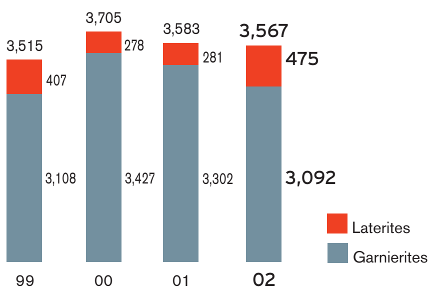
At the plant, the main project management and supply contracts for the rebuilding of the furnace FD10 and for dust processing equipment have been signed. The rebuilding of the furnace should lead to a significant increase in power and it is being done in close cooperation with suppliers, SLN and Eramet teams (technical department and Trappes research centre). A pilot furnace has been set up in conjunction with Demag to conduct life-size tests on materials and equipment.

At the Tiébaghi mine, where production is to be increased fourfold to one million tonnes, orders have been placed for mining equipment and an extensive training programme for its future operators

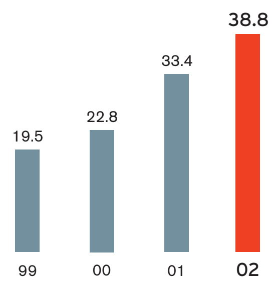
**SLN's metallurgical production**
(in thousands of tonnes of nickel content in ferronickel and matte)




**SLN's mining production**
(in thousands of tonnes of wet ores including sub-contractors)




**Capital expenditure** (in millions of euros)
**Nickel activity** (excluding Eurotungstène)





has begun in cooperation with the New Caledonian mining and quarrying training centre (CFTMC).

A tender has been put out for the creation of seashore ore inventory and the building of sea loading facilities. As regards the beneficiation plant, design and equipment studies and the examination of environmental protection issues continue.
A support plan covering training, changes in work conditions and jobs, and the organisation of work during the stoppage of the Doniambo furnace has been launched. Its aim is the successful integration of the capital investment programme within SLN. In that framework, an information and consultation structure involving trade unions and the plant departments most closely involved in the SLN 75 programme has been set up. A second, identical structure is being set up at Tiébaghi to work on employment and training issues.

## Improving the protection of the environment – a commitment for the years to come

A renovation programme for the rotary kiln electrostatic filters was undertaken in 2002 and will continue in 2003. Atmospheric dust emissions were reduced by 30% in 2002. A waste management plan was also launched.

In line with the operating permit obtained in late July for the 75,000 tonne project, a commitment was made to cut atmospheric dust emissions from the Doniambo plant by two-thirds. To achieve this, new dust conditioning equipment will be set up and an additional electrostatic filter will be installed to reduce discharges in fumes.

Revegetation actions on mining sites were developed further in 2002 with hydraulic sowing programmes. 5.7 hectares were revegetated in 2002 through this technique. Since 1994, 17 hectares have been sown hydraulically and a total of 55 hectares have been revegetated.

## Improvement in emissions on the Doniambo, New Caledonia site

Substantial progress was made on dust emissions at the Doniambo (New Caledonia) plant in 2002 with a 30% decrease in total emissions compared with 2001. Further progress still has to be made to reach the levels set by the new decree of August 5, 2002. The decree provides for the gradual implementation of its requirements. Start-up of the dust treatment facilities and a new electrostatic filter for recycling fumes from the electric furnaces, planned for 2003-2004 as part of the site's capacity extension project, should make a significant contribution to this progress.
Rotary kiln 11's performance now complies with the new decree, as not a single daily average was over the regulatory threshold in 2002.

# 2002 Financial Commentary and analysis

The Group's structure remained unchanged in 2002. The 2002 acquisitions and divestments were for non-significant amounts and cancelled each other out. The financial statements for 2002 are, therefore, directly comparable with the financial statements for 2001.

## Highlights

While Eramet benefited from the rise in nickel prices, particularly in the second half of the year, the Group's production and sales were negatively affected by production difficulties and the downturn on some of its markets.

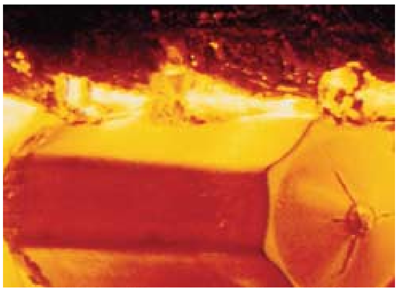
In the Nickel division, despite strong demand from the stainless steel industry, growth in ferronickel sales was slight, on one hand, due to the necessary build-up of inventory under the programme to extend production capacity to 75,000 tonnes, and on the other hand, because of production incidents, some of which had external causes.

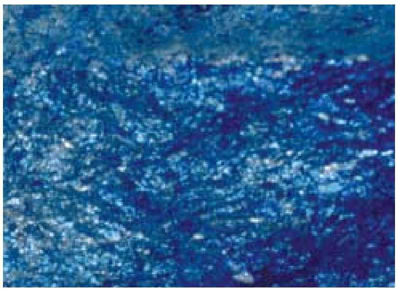
In the Manganese division, sales volumes for manganese alloys decreased compared with 2001 and were badly hit by the technical difficulties encountered on the Moanda beneficiation and sintering unit in Gabon, on blast furnace 7 in Boulogne-sur-Mer, France and on a Norwegian furnace.

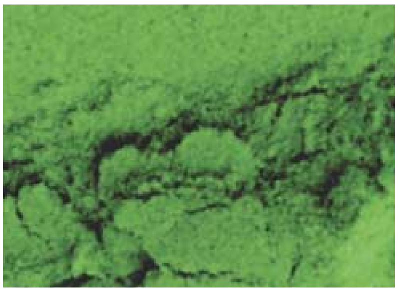
The fall in new orders in aerospace, as well as postponements and cancellations in power generation, led to a sharp fall in business in the second half of the year in the Alloys division.

Exchange rate movements had a negative effect on income, as the US dollar rate was less favourable than in 2001 and the Norwegian kroner appreciated significantly.

Regarding the Group's capital investments, the major capacity increase projects at the Doniambo ferronickel production plant (the 75,000-tonne programme) and at the Pamiers plant, which includes a 40,000-tonne press, progressed on schedule. The amounts recorded in the 2002 accounts were still low.







## Income Statement

### Turnover

Turnover, at €2,096 million, decreased by 6% compared with the previous year, taking into account the contrasting situations of the different divisions.

Eramet Nickel's turnover, at €501 million, rose slightly (3%) because of higher nickel prices (2002 average: USD 3.07/lb compared with USD 2.70/lb in 2001), despite the depreciation of the US dollar.

Eramet Manganèse's turnover decreased 4% to €879 million, the 6% fall in manganese alloy sales volumes due to operating difficulties on several production sites was only partly offset by the upturn in sales prices during the last months of 2002 and by a substantial increase in ore sales outside the Group.

Turnover for Eramet Alliages' fell by 13% to €720 million.
Turnover for the AD*H* Group decreased by 11%, mainly over the second half of the year as a result of the downturn in aerospace and power generation business. Erasteel's turnover dropped by 13% because of the slump on the tool steels markets. Furthermore, changes in structure in the Alloys division had 1% negative impact on turnover.

### Operating income

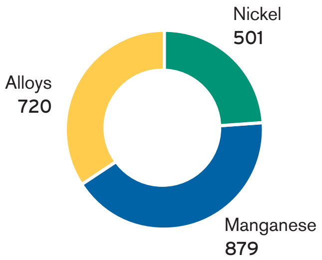
Operating income decreased significantly at €49 million compared with €96 million in 2001.

This decrease takes into account the following contrasting variations:

→ A substantial improvement in the Nickel division, at €73 million compared with €41 million in 2001, because of the rise in nickel prices.

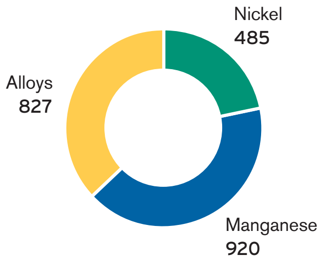
→ A downturn in the Manganese division, at an operating loss of €–20 million compared with €–3 million in 2001, despite major productivity gains,

**Turnover 2002**
in millions of euros




(excluding holding company, consolidation adjustments and miscellaneous)

**Turnover 2001**
in millions of euros




(excluding holding company, consolidation adjustments and miscellaneous) mainly due to technical production difficulties, the effect of the significant appreciation of the Norwegian kroner on production costs and a slight decrease in manganese alloy prices.

→ A very sharp decline in the Alloys division, which achieved income of €1 million compared with €67 million in 2001, as a result of the slump in business and sales prices, with the adjustment measures taken at Erasteel and AD*H* (including a 10% manpower reduction) not fully taking effect until the end of the year.

## Financial result

Financial result improved substantially (€14 million income vs. expense of €18 million in 2001), due to unrealized gains on investment securities, the reduction in net average debt over the period, positive foreign exchange effects and the reversal of financial provisions.

## Exceptional items

The exceptional charge of €–16 million is chiefly made up of restructuring expenses incurred in the Manganese and Alloys divisions and exceptional depreciation of inventories in the Alloys division.

## Amortisation of goodwill

Given the persistent difficulties in the American steel industry, it appeared advisable to record a depreciation of goodwill (€-14 million) for the subsidiary Eramet Marietta Inc in the Manganese division.

## Group net income

The Group share of net income was €6 million (vs. a €3 million net loss in 2001), which represents €0.23 per share.

## Parent company's income

Eramet S.A., which, in addition to its role of holding company, carries on an industrial and commercial activity in the nickel sector, achieved turnover of €548 million and net income of €16 million.

## Dividends

A dividend of €1 per share with respect to 2002 is to be proposed to the Annual General Meeting, which represents a total distribution of €25 million.
The dividend per share will be payable in cash for €0.50 and, at the shareholder's choice, either in cash or shares for €0.50.

## Consolidated income statement

in millions of euros

| | 2002 | 2001 |
|---|---|---|
| **Turnover** | 2,096 | 2,228 |
| **Operating income** | 49 | 96 |
| Financial (costs) income | 14 | (18) |
| **Income before exceptional items** | 63 | 78 |
| Exceptional items | (16) | (67) |
| **Income before tax of consolidated entities** | 47 | 11 |
| Income tax | (22) | (10) |
| **Net income of consolidated entities** | 25 | 1 |
| Share in net income of equity accounted affiliates | 2 | 2 |
| Amortisation of goodwill | (15) | (1) |
| **Consolidated income** | 12 | 2 |
| Minority interests | (6) | (5) |
| **Group net income** | 6 | (3) |





## Financing

→ The Group's cash flow, at €187 million (€211 million in 2001) and the substantial reduction in working capital requirements (€152 million) resulted in operating cash flow of €340 million.

→ Net capital investments totalled €141 million. They include, for a small amount (€20 million), the first expenditure for the large programme of organic growth investments approved in 2001 (ferronickel production capacity increase and construction of a new unit for manufacturing aircraft engine and structural parts).

→ The dividends paid in 2002, both by the parent company Eramet S.A. and the other non fully-owned companies in the Group, total €36 million (compared with €45 million in 2001).

→ Capital was increased by €10 million following shareholders' exercise of their options for the payment of the Eramet dividend.

In total(*), the Group's net debt decreased significantly from €254 million at December 31st, 2001 to €71 million at the end of 2002.

(*) Currency translation adjustments.

## Cash flow statement 2002

in millions of euros

| | 2002 | 2001 |
|---|---|---|
| **Operating cash flow** | 187 | 211 |
| Changes in working capital requirements (increase) / decrease | 152 | (62) |
| Miscellaneous | 1 | 2 |
| **Net cash flow (from operating activities)** | 340 | 151 |
| Net investments | (141) | (215) |
| **Net cash flow (at constant exchange rates)** | 199 | (64) |
| Net distribution | (26) | (44) |
| **Net change in cash (at constant exchange rates)** | 173 | (108) |
| Impact of exchange rate fluctuations | 10 | (6) |
| **Net change in cash** | 183 | (114) |

## Balance sheet

→ Fixed assets were virtually unchanged at €1,181 million compared with €1,206 million on December 31st, 2001.

→ Current assets (excluding cash) decreased by €202 million to €1,156 million because of lower inventories (€672 million vs. €797 million) and receivables (€354 million vs. €413 million). The inventory reduction plan in the Manganese and Alloys divisions, which was launched in 2001 and stepped up in early 2002 has clearly achieved its objectives and will be continued in 2003.

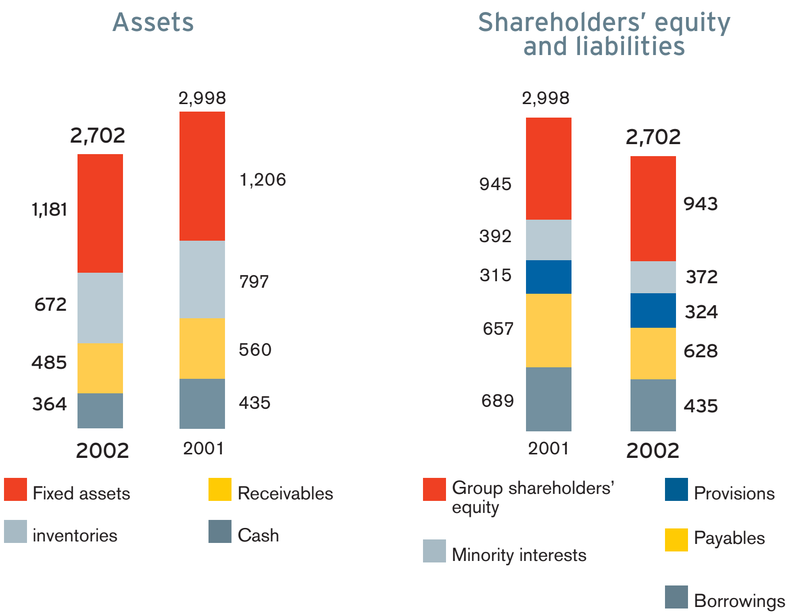
→ Cash, at €364 million, decreased from year-end 2001 (€435 million) following operations to optimise financial assets and liabilities.

→ Total net equity was virtually unchanged at €1,315 million.

→ Net borrowings, at €71 million, only represent 5% of net equity (1).

## Consolidated balance sheet

in millions of euros




(1) If the balance of the mining indemnity was classified as financial debt, net borrowings would not exceed 14% of total net equity.

# Annual Report 2002

## Financial statements, notes and resolutions proposed by the Board of Directors dated March 26, 2003

## Contents

Consolidated financial statements

# The Board of Directors after the meeting of March 26th, 2003

Chairman and Chief Executive Officer
Jacques Bacardats

| Directors | Principal responsibilities |
| --- | --- |
| Jacques Bacardats | Chairman and Chief Executive Officer [5] |
| Robert Castaigne | Chief Financial Officer and member of the Executive committee of TotalFinaElf [1] |
| Cyrille Duval | Chief Executive Officer of SORAME and CEIR [1] |
| Edouard Duval | Chairman and Chief Executive Officer of SORAME [1] |
| Georges Duval | Director of SORAME and CEIR (Vice-Chairman and Senior Executive Vice-President of Eramet) [1] |
| Patrick Duval | Chairman and Chief Executive Officer of CEIR [1] |
| François Henrot | Managing Partner of Rothschild & Cie [1] |
| Pascal Lafleur | Director of various Corporations [2] |
| Jean-Lucien Lamy | Chairman and Chief Executive Officer of FCI, AREVA Connectors Division [4] |
| George T. Lowy | Former Executive Officer and Partner in the law firm of Cravath, Swaine & Moore (New York) [1] |
| Louis Mapou | Chief Executive Officer of ADRAF (New Caledonia) [2] |
| Jacques Rossignol | Former Chief Operating Officer of Arianespace [1] |
| Wilhelm Scheider | Former Chairman of Krupp GmbH (Krupp Holding) [1] |
| Antoine Treuille | Executive Managing Director of Mercantile Capital Partners [1] |
| AREVA represented by Frédéric Tona | Executive Vice-President of COGEMA's Mines and Chemicals Sector [3] |

## Statutory auditors

| | |
| --- | --- |
| Ernst & Young Audit | 4, rue Auber – 75009 Paris |
| Deloitte Touche Tohmatsu | 185, avenue Charles-de-Gaulle – 92200 Neuilly-sur-Seine |

(1) Director appointed by the General Meeting of Shareholders on July 21, 1999 for a period of 4 years ending at the close of the General Meeting held to adopt the financial statements for the year 2002.
(2) Director nominated at the Board Meeting on March 29, 2001, and confirmed by the General Meeting on May 30, 2001, for the period ending at the close of the General Meeting held to adopt the financial statements for the year 2002.
(3) Director nominated at the Board Meeting on March 27, 2002, and confirmed by the General Meeting on May 23, 2002, for the period ending at the close of the General Meeting held to adopt the financial statements for the year 2002.
(4) Director nominated at the Board Meeting on May 23, 2002, and confirmed the General Meeting on May 23, 2002, for the period ending at the close of the General Meeting held to adopt the financial statements for the year 2002.
(5) Director nominated at the Board Meeting on March 26, 2003, subject to ratification by the Annual General Meeting on May 21, 2003, and elected Chairman and Chief Executive Officer. His term of office expires at the end of the Annual General Meeting held to approve the financial statements for 2002.

# Consolidated balance sheet (in millions of euros)

## Assets

| | Notes | At December 31 2002 | 2001 | 2000 |
|---|---|---|---|---|
| Goodwill | 5 | 51 | 57 | 53 |
| Intangible assets | | 87 | 69 | 72 |
| Tangible assets | | 977 | 1,014 | 971 |
| Financial investments | | 47 | 54 | 117 |
| Equity accounted affiliates | 6 | 19 | 12 | 14 |
| **Total fixed assets** | 3.4 | **1,181** | **1,206** | **1,227** |
| Inventories | 7 | 672 | 797 | 725 |
| Trade accounts receivable | 8 | 354 | 413 | 462 |
| Other receivables | 9 | 131 | 147 | 108 |
| Cash | 10 | 364 | 435 | 481 |
| **Total current assets** | | **1,521** | **1,792** | **1,776** |
| **Total assets** | | **2,702** | **2,998** | **3,003** |

## Shareholder's equity and liabilities

| | Notes | At December 31 2002 | 2001 | 2000 |
|---|---|---|---|---|
| Share capital | | 76 | 75 | 75 |
| Share premium | | 204 | 195 | 194 |
| Reserves | | 647 | 661 | 594 |
| Currency translation adjustment | | 10 | 17 | 11 |
| Net (loss) income | | 6 | (3) | 107 |
| **Group shareholders' equity** | | **943** | **945** | **981** |
| Minority interests | 11 | 372 | 392 | 373 |
| **Total consolidated net equity** | | **1,315** | **1,337** | **1,354** |
| **Provisions for contingencies and expenses** | 12 | **324** | **315** | **323** |
| Borrowings | 13 | 435 | 689 | 621 |
| Trade accounts payable | | 209 | 271 | 278 |
| Other payables | 14 | 419 | 386 | 427 |
| **Total liabilities** | | **1,063** | **1,346** | **1,326** |
| **Total shareholders' equity and liabilities** | | **2,702** | **2,998** | **3,003** |

# Consolidated income statement (in millions of euros)

| | Notes | At December 31 2002 | 2001 | 2000 |
|---|---|---|---|---|
| Turnover | 3 | 2,096 | 2,228 | 2,287 |
| Other operating income | | 34 | 33 | 33 |
| External purchases and charges | | (858) | (837) | (752) |
| Personnel costs | | (496) | (508) | (508) |
| Other operating costs | | (539) | (609) | (564) |
| Miscellaneous taxes and levies | | (52) | (56) | (54) |
| Depreciation of fixed assets | | (151) | (145) | (134) |
| Provisions (net) | | 15 | (10) | (7) |
| Operating income | 3 | 49 | 96 | 301 |
| Financial income (costs) (net) | 19 | 14 | (18) | (28) |
| Income before exceptional items | | 63 | 78 | 273 |
| Exceptional items | 20 | (16) | (67) | (3) |
| Income tax | 21 | (22) | (10) | (83) |
| Net income of consolidated entities | | 25 | 1 | 187 |
| Share in net income of equity accounted affiliates | 6 | 2 | 2 | (24) |
| Amortisation of goodwill | | (15) | (1) | (1) |
| Total consolidated net income | | 12 | 2 | 162 |
| Minority interests | 11 | (6) | (5) | (55) |
| Group net (loss) income | | 6 | (3) | 107 |
| Net (loss) income per share (€) | | 0.23 | (0.13) | 4.42 |
| Net (loss) income per share fully diluted (€) | | 0.23 | (0.13) | 4.40 |

Changes in finished goods inventories in 2001 and 2000 amounting to € 67 million and € 47 million respectively have been reclassified and included in External purchases and charges.

## Consolidated cash flow statement (in millions of euros)

| | Notes | At December 31 | | |
|---|---|---|---|---|
| | | 2002 | 2001 | 2000 |
| **Operating activities** | | | | |
| Net income of consolidated entities | | 25 | 1 | 187 |
| Elimination of non-cash items | | | | |
| – Amortisation, depreciation and provisions | | 144 | 215 | 143 |
| – Change in deferred taxation | | 14 | (5) | 40 |
| – Losses (gains) on disposal of fixed assets | | 4 | | |
| **Operating cash flow before changes in working capital** | 3 | 187 | 211 | 370 |
| Dividends from equity accounted companies | | 1 | 2 | 2 |
| Changes in operating working capital | 15 | 152 | (62) | (46) |
| **Net cash flow from operating activities** | | 340 | 151 | 326 |
| **Investing activities** | | | | |
| Purchases of fixed assets | | (148) | (201) | (299) |
| Disposals of fixed assets | | 17 | 16 | 9 |
| Net change in deferred charges and accounts payable for fixed assets | | 4 | (23) | 16 |
| Changes in Group composition | | (8) | (2) | (10) |
| | | (135) | (210) | (284) |
| Indemnity re New Caledonia | | | | |
| – amount included in net income | | (6) | (5) | (5) |
| **Net cash used in investing activities** | | (141) | (215) | (289) |
| **Financing activities** | | | | |
| to Group shareholders | | (28) | (31) | (28) |
| to minority shareholders | | (8) | (14) | (10) |
| Increases in share capital | | 10 | 1 | 16 |
| **Net cash used in financing activities** | | (26) | (44) | (22) |
| Currency translation adjustments | | 10 | (6) | (9) |
| **(Decrease) increase in net cash position** | 16 | 183 | (114) | 6 |
| Opening net borrowing position | 16 | (254) | (140) | (146) |
| Closing net borrowing position | 16 | (71) | (254) | (140) |

# Changes in group shareholders' equity

| (in millions of euros) | Weighted average no of shares | Number of shares | Share capital | Share premium | Consolidated reserves | Currency translation adjustments | Net income for the year | Total shareholders' equity |
|---|---|---|---|---|---|---|---|---|
| **Shareholders' equity as at December 31, 1999** | | 24,431,596 | 75 | 183 | 619 | 7 | 27 | 911 |
| Dividends paid | | | | | (1) | | (27) | (28) |
| Appropriations to retained earnings and reserves | | | | | | | | |
| Capital increase in cash | | 267,764 | | 11 | | | | 11 |
| Capital increase in kind | | | | | | | | |
| Effect of adoption of French accounting standard 99/02 | | | | | | | | |
| Purchase of own shares | | | | | (18) | | | (18) |
| Other changes in consolidated reserves | | | | | (6) | | | (6) |
| Currency translation adjustments | | | | | | 4 | | 4 |
| Net income for 2000 | 24,208,492 | | | | | | 107 | 107 |
| **Shareholders' equity as at December 31, 2000** | | 24,699,360 | 75 | 194 | 594 | 11 | 107 | 981 |
| Dividends paid | | | | | | | (31) | (31) |
| Appropriations to retained earnings and reserves | | | | | 76 | | (76) | |
| Capital increase in cash | | 24,000 | | 1 | | | | 1 |
| Capital increase in kind | | | | | | | | |
| Purchase of own shares | | | | | (7) | | | (7) |
| Other changes in consolidated reserves | | | | | (2) | | | (2) |
| Currency translation adjustments | | | | | | 6 | | 6 |
| Net income for 2001 | 24,172,050 | | | | | | (3) | (3) |
| **Shareholders' equity as at December 31, 2001** | | 24,723,360 | 75 | 195 | 661 | 17 | (3) | 945 |
| Dividends paid | | | | | (28) | | | (28) |
| Appropriations to retained earnings and reserves | | | | | (3) | | 3 | |
| Capital increase in cash | | 324,683 | 1 | 9 | | | | 10 |
| Capital increase in kind | | | | | | | | |
| Effect of adoption of French accounting standard 00/06 | | | | | 20 | | | 20 |
| Purchase of own shares | | | | | | | | |
| Other changes in consolidated reserves | | | | | (3) | | | (3) |
| Currency translation adjustments | | | | | | (7) | | (7) |
| Net income for 2002 | 24,275,188 | | | | | | 6 | 6 |
| Shareholders' equity as at December 31, 2002 | | 25,048,043 | 76 | 204 | 647 | 10 | 6 | 943 |

As at December 31, 2002, Eramet SA held 549,933 of its own shares. These had been purchased essentially in 2000 and 2001 in the context of a share buy-back programme which had been officially announced on July 2, 1999 and approved by the Meeting of Shareholders on July 21, 1999. In accordance with terms of the official public announcement, the total amount invested in the share buy-back programme has been deducted from shareholders' equity.
In 2002, dividends of € 28 million were paid out for 2001 including € 10 million in shares, resulting in the issue of 324,333 shares and a corresponding increase in share capital.
The exercise of subscription options during the year in respect of 350 shares also accounted for an increase in shareholders' equity.
In prior years, stock options were allotted to the Group's employees and managerial staff in accordance with resolutions passed by:

- the Ordinary General Meeting of Shareholders on June 15, 1994 for a maximum of 771,657 shares prior to September 30, 1994;
- the Extraordinary General Meeting of Shareholders on June 8, 1995 for a maximum of 350,000 shares prior to June 8, 2000 (shares for which options had not been exercised were cancelled by the Extraordinary General Meeting of Shareholders on May 27, 1998);
- the Extraordinary General Meeting of Shareholders on May 27, 1998 for a maximum of 350,000 shares prior to May 27, 2003;
- the Ordinary/Extraordinary General Meeting of Shareholders on July 21, 1999 for a maximum of 500,000 shares prior to July 21, 2004.

## Changes in group shareholders' equity

### Share options

| Date of shareholders' meeting | Date of Board meeting | Option price | Original number of beneficiaries | Number of beneficiaries Jan. 1, 2002 | Type (1) | Options: Allocated | Options: Exercised or expired prior to Jan. 1, 2002 | Options: Exercised in 2002 | Options: Expired in 2002 | Options: Exercisable as from Jan. 1, 2003 | Options: Number of beneficiaries Jan. 1, 2003 | Options: Expiry date of schemes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06.15.1994 | 09.15.1994 | € 35.83 | 3,791 | | S | 770,253 | (770,253) | | | | | 09.14.2001 |
| 06.08.1995 | 06.08.1995 | € 45.73 | 31 | 25 | S | 70,000 | (11,600) | | | 58,400 | 25 | 06.07.2003 |
| 06.08.1995 | 12.17.1996 | € 37.50 | 38 | 31 | S | 114,400 | (22,680) | (350) | | 91,370 | 31 | 12.16.2004 |
| 06.08.1995 | 12.16.1997 | € 33.08 | 39 | 36 | S | 104,500 | (7,800) | | | 96,700 | 36 | 12.15.2005 |
| 07.21.1999 | 09.15.1999 | € 47.14 | 5,646 | 5,259 | A | 423,450 | (29,025) | | | 394,425 | 5,259 | 09.14.2007 |
| 05.27.1998 | 12.14.1999 | € 54.00 | 80 | 76 | A | 166,500 | (5,500) | | | 161,000 | 76 | 12.13.2007 (2) |
| 05.27.1998 | 12.12.2001 | € 32.60 | 61 | 61 | S | 153,000 | | | | 153,000 | 61 | 12.11.2009 (3) |
| **Total** | | | | | | 1,802,103 | (846,858) | (350) | | 954,895 | | |

(1) S = subscription option.
A = purchase option.
(2) The shares may not be sold before December 14, 2004.
(3) May be exercised only as from December 12, 2003. The shares may not be sold before December 14, 2005.

# Notes to the financial statements

## 1. Principal events

### 1.1 Activities

The Group's business structure remained basically unchanged in 2002, with compensating acquisitions and disposals during the year involving only insignificant amounts. The financial statements for 2002 are thus directly comparable with those of 2001.

Although Eramet benefited from the increase in nickel prices, especially in the second half of the year, production and sales were adversely affected by production difficulties and a downturn in some of its markets.

In the Nickel division, despite strong demand from the stainless steel industry, sales of ferronickel increased only marginally. This is explained by the need to build up inventory in the context of the programme to increase capacity to 75,000 tonnes, and also to production difficulties provoked in part by external influences.

In the Manganese division, sales volumes of manganese alloys fell from 2001 levels. They were severely penalised by technical difficulties in Gabon with the Moanda enriching and sintering plant, at Boulogne with the number 7 blast furnace and with a Norwegian furnace.

The collapse in orders from the aerospace industry and the rescheduling and cancellation of orders by the power sector triggered a slump in activity in the Alloys division in the second half.

Net income was adversely affected by currency movements, the US dollar exchange rate being less favourable than in 2001 and the Norwegian krone having strengthened significantly.

The Group's capital investments, embracing major projects for capacity increases at the Doniambo ferronickel production plant (to 75,000 tonnes) and at the Pamiers facility (including a 40,000-tonne press) have all proceeded according to plan. The amounts as yet accounted for in 2002 are insignificant.

### 1.2 Accounting change

As from January 1, 2002, the following changes in accounting policies have been implemented:

– Adoption of French Standard 2000-06 resulting in the transfer to reserves of the Group's share of € 24 million of provisions.

– Restatement of nickel inventories on the basis of LIFO (last-in-first-out) resulting in a decrease in Group reserves of € 4 million.

Information relative to these changes is included in Notes 7, 11 and 12.

## 2. Accounting principles and policies

### 2.1 General principles

The Group consolidated financial statements have been prepared on the basis of the accounting policies described in Note 2.2 and in accordance with prescribed French accounting practices.
The French accounting standard 1999-02 was implemented as from 1999 and standard 2000-06 as from January 1, 2002.

### 2.2 Consolidation

#### 2.2.1 Methods of consolidation:

The Eramet Group fully consolidates subsidiaries in which it controls over 50% of the issued share capital and which are significant in terms of both the Group's investment and also turnover, total assets and net equity.
Other companies over which the Group exercises a significant influence and which are material in terms of both the Group's investment and also turnover, total assets and net equity, are accounted for by the equity method.
The list of consolidated companies is provided in note 25 below.

#### 2.2.2 Goodwill on consolidation

The excess of the consideration paid for a new subsidiary over the Group's share of net equity, restated in accordance with the Group's accounting policies, is apportioned, fully or partially, over the assets and liabilities acquired. Any balance, representing goodwill, is amortised over a fixed period determined in the light of the economic activity and the factors surrounding the investment, but not exceeding 20 years.
Goodwill is eliminated from the financial statements in the year following that in which it becomes fully depreciated.

#### 2.2.3 Foreign currency translation

Assets and liabilities are translated into euros at the closing rate of exchange.
Share capital and retained earnings are stated at their historic rate and net income at the average exchange rate for the year.
Operating revenues and costs, and cash flows, denominated in foreign currencies are translated at the average exchange rate for the financial year.
Resulting exchange differences are included, as appropriate, in shareholders' equity and minority interests.

#### 2.2.4 Earnings per share

Earnings per share are calculated using the weighted average number of shares outstanding in the year, corrected for the effects of potential dilution.

### 2.3 Accounting policies

#### 2.3.1 Intangible assets

Mineral deposits include only costs relative to the acquisition of mineral deposits in 1974 and to permits acquired subsequently.
The gross value of mineral deposits is amortised by reference to production, expressed as a proportion of reserves as originally assessed.

Geological and research costs are charged against revenue in the year in which they are incurred.
Prepaid costs resulting from actuarial changes in pension plans in the United States of America are included in intangible assets and amortised over the expected remaining life of the plans' members.

### 2.3.2 Tangible fixed assets

Fixed assets are depreciated on a linear basis over the following periods:
- Buildings: 20 to 30 years
- Technical installations: 10 to 15 years
- General installations, fittings and fixtures: 5 to 10 years
- Transportation equipment: 4 to 8 years
- Machinery, equipment and tooling: 3 to 10 years
- Office furniture and equipment and computing installations: 3 to 8 years

Assets at mines from which extraction has been discontinued, or unused installations, are fully depreciated either by special increments to normal depreciation charges or by an exceptional depreciation charge or provision for loss of value.

### 2.3.3 Financial investments

Investments in non-consolidated entities are stated at the lower of cost and current value. Current value is estimated by reference to both the value of net assets and expected future earnings.

### 2.3.4 Inventories

Inventories are stated at the lower of cost, which includes only production costs, and realisable value. Any costs associated with under-activity are excluded.
Inventories of nickeliferous products are stated at the lower of cost and realisable value. Given the high price volatility of nickel, the Group values these inventories using the LIFO (last-in-first-out) method; the base year is 1988. This somewhat uncommon approach minimises the effect of price changes on net income.

### 2.3.5 Accounts receivable and payable

Accounts receivable denominated in euros are stated at nominal value.
Accounts receivable and payable denominated in other currencies are valued in euros at the year-end rate of exchange, or at the forward contract rate, as appropriate. Resulting unrealised exchange losses and gains are written off to the income statement.
The provision against doubtful accounts receivable is based on an individual risk assessment of each customer.

### 2.3.6 Marketable securities

These are stated at the lower of cost or market value. A provision is booked to cover any potential capital loss. No account is taken of unrealised gains.

### 2.3.7 Investment grants

Investment grants received are credited to the income statement over the same period over which the corresponding assets are depreciated. Outstanding balances are included in the balance sheet under other payables.

### 2.3.8 Deferred taxation

Deferred taxation is accounted for using the liability method. Deferred tax assets are recognised only to the extent they are considered recoverable.
A provision is recorded against irrecoverable distribution tax on proposed dividends payable out of net income for the year.
The net balance between deferred tax assets and liabilities is included, as appropriate, under other receivables or other payables.

### 2.3.9 Provision for contingencies and expenses

These provisions, which take into account the specific characteristics of the relevant business sector, cover all contingencies and expenses known at the time the financial statements are finalised.
The special sectorial contingency provisions booked in previous years to recognise specific business risks have been reclassified under shareholders' equity in compliance with French accounting standard 2000-06 (see “General principles” above).

### 2.3.10 Retirement indemnities

Provision has been made for that part of retirement indemnities, pensions and other benefits payable under various labour agreements and not covered by insurance policies or other provisions.
The provision is estimated based on length of service, current remuneration and on the expectation of employees remaining with the Group until their retirement age.
Prepaid costs (or gains) resulting from actuarial revaluations of pension plans in the United States of America are, in compliance with international accounting standards, included in intangible assets and amortised over the expected remaining life of the plans' members.

### 2.3.11 Currency

The notes below are expressed in millions of euros.

## 3. Sectorial information (in millions of euros)

| | At December 31 | | |
|---|---|---|---|
| | 2002 | 2001 | 2000 |
| **Turnover** | | | |
| **By division** | | | |
| Nickel | 501 | 485 | 564 |
| Alloys | 720 | 827 | 778 |
| Manganese | 879 | 920 | 953 |
| Holding company and miscellaneous | (4) | (4) | (8) |
| Total | 2,096 | 2,228 | 2,287 |
| **By region** | | | |
| France | 401 | 387 | 341 |
| Europe excluding France | 690 | 780 | 841 |
| North America | 526 | 603 | 616 |
| Asia | 412 | 375 | 406 |
| Other | 67 | 83 | 83 |
| Total | 2,096 | 2,228 | 2,287 |
| **Operating income** | | | |
| **By division** | | | |
| Nickel | 73 | 41 | 165 |
| Alloys | 1 | 67 | 80 |
| Manganese | (20) | (3) | 61 |
| Holding company and miscellaneous | (5) | (9) | (5) |
| Total | 49 | 96 | 301 |
| **Gross operating cash flow (2)** | | | |
| **By division** | | | |
| Nickel | 108 | 85 | 205 |
| Alloys | 32 | 80 | 78 |
| Manganese | 27 | 43 | 92 |
| Holding company and miscellaneous | 20 | 3 | (5) |
| Total | 187 | 211 | 370 |
| **Fixed assets** | | | |
| **By division** | | | |
| Nickel | 245 | 246 | 257 |
| Alloys | 282 | 268 | 331 |
| Manganese | 637 | 662 | 622 |
| Holding company and miscellaneous | 17 | 30 | 17 |
| Total | 1,181 | 1,206 | 1,227 |

## 3. Sectorial information (continued)

(in millions of euros)

| | At December 31 | | |
|---|---|---|---|
| | 2002 | 2001 | 2000 |
| **Fixed assets** | | | |
| **By region** | | | |
| France | 345 | 319 | 367 |
| Europe excluding France | 213 | 201 | 196 |
| North America | 181 | 220 | 214 |
| Asia | 38 | 28 | 29 |
| Other | 404 | 438 | 421 |
| Total | 1,181 | 1,206 | 1,227 |
| **Industrial investments** | | | |
| **By division** | | | |
| Nickel | 40 | 36 | 24 |
| Alloys | 41 | 36 | 35 |
| Manganese | 46 | 93 | 126 |
| Holding company and miscellaneous | 1 | | |
| Total | 128 | 165 | 185 |
| **Average number of employees in consolidated companies** | | | |
| **By division** | | | |
| Nickel | 2,430 | 2,416 | 2,392 |
| Alloys | 5,069 | 5,503 | 5,313 |
| Manganese | 5,174 | 5,292 | 5,551 |
| Holding company and miscellaneous (1) | | | |
| Total | 12,673 | 13,211 | 13,256 |

(1) Nickel division and holding company are combined.

(2) Operating cash flow before change in working capital adjustment.

## 4. Fixed assets (in millions of euros)

| Cost | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Jan. 1, 2002 | Additions | Share in net income of equity accounted companies | Disposals, retirements and adjustments | Changes in Group composition and method of consolidation | Currency translation adjustments | Dec. 31, 2002 |
| Goodwill | 78 | 5 | | (1) | 8 | (1) | 89 |
| Intangible assets | 152 | 8 | | (3) | 25 | (3) | 179 |
| Tangible assets | 2,537 | 120 | | (34) | (12) | (58) | 2,553 |
| Financial investments | 152 | 6 | | (12) | (13) | (1) | 133 |
| Equity accounted affiliates | 12 | | 2 | (1) | 7 | (1) | 19 |
| Total | 2,931 | 139 | 2 | (51) | 15 | (64) | 2,973 |

| Depreciation and provisions | | | | | | | Net book value |
|---|---|---|---|---|---|---|---|
| | Jan. 1, 2002 | Charge for the year | Disposals, retirements and adjustments | Changes in Group composition and method of consolidation | Currency translation adjustments | Dec. 31, 2002 | Dec. 31, 2002 |
| Goodwill | 21 | 18 | (1) | 1 | (1) | 38 | 51 |
| Intangible assets | 83 | 14 | (5) | | | 92 | 87 |
| Tangible assets | 1,523 | 132 | (28) | (22) | (29) | 1,576 | 977 |
| Financial investments | 98 | (13) | 1 | | | 86 | 47 |
| Equity accounted affiliates | | | | | | | 19 |
| Total | 1,725 | 151 | (33) | (21) | (30) | 1,792 | 1,181 |

### Intangible assets

The net book value of intangible assets, at € 87 million (2001: € 69 million), includes mineral reserves for € 62 million (2001: € 64 million), of which € 49 million (2001: € 51 million) relates to Gabon.
Geological costs of € 6 million (2001: € 5 million) incurred in the year were fully amortised.
As from this year, intangible assets include part of the pension cost, € 22 million (2001: € 3 million), relative to the Manganese division's activities in the United States of America, which is being written off over 10 years.

### Tangible assets

Tangible assets include mainly land and buildings for a net book value of € 251 million (2001: € 253 million) and industrial installations for € 611 million (2001: € 655 million). In all three divisions certain assets, mostly fully depreciated, were disposed of or scrapped.

### Financial investments

Financial investments include loans of USD 70 million (2001: USD 76 million) advanced in connection with its investment in SMC, and fully provided in 2001 following the granting to SMC of protection from its creditors under Chapter 11 of US bankruptcy laws.
Other financial investments represent essentially shares in non consolidated affiliates for € 23 million (2001: € 32 million). Shares in Comilog representing 4.2%, previously excluded from the consolidation, have been included in 2002; the original sales contract not having been executed. The shares were stated in the balance sheets of 2001 and 2000 at € 14 million.

## 5. Goodwill (in millions of euros)

| | Cost | | | | | |
|---|---|---|---|---|---|---|
| | Year of acquisition | Jan. 1, 2002 | Disposals, retirements and adjustments | Changes in Group composition | Currency translation adjustments | Dec. 31, 2002 |
| Fortech | 1994 to 1998 | 19 | | | | 19 |
| Eramet Norway | 1999 | 20 | | | 1 | 21 |
| Eramet Marietta | 1999 | 16 | | | (2) | 14 |
| Comilog | 1996 | 9 | | | | 9 |
| Peter Stubs | 2001 to 2002 | 6 | | 10 | | 16 |
| Miscellaneous | 1993 to 2001 | 8 | | 2 | | 10 |
| Total | | 78 | | 12 | (1) | 89 |

| | Amortisation | | | | | | Net book value |
|---|---|---|---|---|---|---|---|
| | Jan. 1, 2002 | Charge for the year | Disposals, retirements and adjustments | Changes in Group composition | Currency translation adjustments | Dec. 31, 2002 | Dec. 31, 2002 |
| Fortech | 6 | 1 | | | | 7 | 12 |
| Eramet Norway | 2 | 1 | | | | 3 | 18 |
| Eramet Marietta | 2 | 14 | | | (2) | 14 | |
| Comilog | 7 | | | | | 7 | 2 |
| Peter Stubs | 1 | 1 | | 1 | | 3 | 13 |
| Miscellaneous | 3 | 1 | | | | 4 | 6 |
| Total | 21 | 18 | | 1 | (2) | 38 | 51 |

A value impairment test on the goodwill relative to Eramet Marietta Inc., resulted a charge for amortisation of € 14 million (of which € 13 million is exceptional), reducing the asset to its residual value.
For negative goodwill on consolidation, see Note 12.

## 6. Equity accounted affiliates (in millions of euros)

| | Jan. 1, 2002 | Share in net income | Dividends received | Adjustments | Changes in Group composition and method of consolidation | Currency translation adjustments | Dec. 31, 2002 |
|---|---|---|---|---|---|---|---|
| Special Metals Corp. (SMC) and subsidiaries | 0 | | | | | | 0 |
| Port Minéralier d'Owendo | 7 | 2 | (1) | | | | 8 |
| Bear Metallurgical Corporation | 4 | | | | | (1) | 3 |
| Forges M. Dembiermont | | | | | 7 | | 7 |
| Stahlschmidt | 1 | | | | | | 1 |
| Total | 12 | 2 | (1) | | 7 | (1) | 19 |

Following sale of a controlling interest in Forges M. Dembiermont to Forgital, the remaining 33.2% has been accounted for by the equity method as from January 1, 2002.
The investment in SMC was fully provided against in 2001.

## 7. Inventories (in millions of euros)

| | Dec. 31, 2002 | Dec. 31, 2001 | Dec. 31, 2000 |
|---|---|---|---|
| Merchandise, raw materials and other supplies | 236 | 307 | 276 |
| Work in progress, intermediate and finished goods | 494 | 549 | 496 |
| Gross | 730 | 856 | 772 |
| Provision | (58) | (59) | (47) |
| Net | 672 | 797 | 725 |

In compliance with French accounting standard 2000-06, the inventory price fluctuation provision, booked in previous years as an insurance against a possible fall in the price of nickel, has been cancelled. A provision of € 9 million (2001: € 12 million) has been retained to reduce the inventories concerned to a value based on LIFO (last-in-first-out). All divisions contributed to the significant decrease in inventories.

## 8. Trade accounts receivable (in millions of euros)

| | Dec. 31, 2002 | Dec. 31, 2001 | Dec. 31, 2000 |
|---|---|---|---|
| Gross | 367 | 434 | 483 |
| Provision | (13) | (21) | (21) |
| Net | 354 | 413 | 462 |

Trade accounts receivable, net of provisions, decreased in all divisions. All trade accounts receivable are due in less than one year.

## 9. Other receivables (in millions of euros)

| | Dec. 31, 2002 | Dec. 31, 2001 | Dec. 31, 2000 |
|---|---|---|---|
| Income taxes | 28 | 29 | 2 |
| Social and tax receivables | 26 | 45 | 49 |
| Other trade receivables | 72 | 59 | 62 |
| Fixed asset receivable | | 1 | 1 |
| Prepayments | 5 | 16 | 7 |
| Deferred charges | 17 | 12 | 5 |
| Gross | 148 | 162 | 126 |
| Provision | (17) | (15) | (18) |
| Net | 131 | 147 | 108 |

Deferred charges correspond to costs associated with the opening of mines in the Nickel division, which are charged against income as a function of production, and to costs associated with the commissioning of industrial installations in the Manganese and Alloys divisions.
Other receivables are practically all categorised as less than one year.

## 10. Cash and marketable securities

At December 31, 2002 this includes marketable securities for € 308 million, consisting mainly of euro monetary funds. Following disposals during the fourth quarter of 2002, the unrecorded unrealised gain, net of tax payable, shows a decrease of € 20 million to € 6 million.

## 11. Minority interests (in millions of euros)

| | Dec. 31, 2002 | Dec. 31, 2001 | Dec. 31, 2000 |
|---|---|---|---|
| January 1 | 392 | 373 | 336 |
| Share in net income | 6 | 5 | 55 |
| Capital increase in cash | | | 5 |
| Changes in Group composition | | | |
| Adjustments arising from changes in percentage interests | (17) | 23 | (14) |
| Effect of adopting French standards 99/02 & 00/06 | 5 | | |
| Other changes in consolidated reserves | | | (2) |
| Currency translation adjustments | (6) | 5 | 5 |
| Dividends paid | (8) | (14) | (12) |
| December 31 | 372 | 392 | 373 |

This item includes essentially € 130 million for Comilog (the state of Gabon, Cogema and miscellaneous shareholders), € 170 million for Le Nickel-SLN (Nisshin Steel and STCPI), € 12 million for Eurotungstène Poudres (Sandvik), and € 53 million for Eramet Manganèse Alliages (Areva).

## 12. Provisions for contingencies and expenses (in millions of euros)

| | Jan. 1, 2002 | Charge for the year (net) | Changes in Group composition and transfers | Currency translation adjustments | Dec. 31, 2002 |
|---|---|---|---|---|---|
| Personnel | 101 | 11 | 20 | (10) | 122 |
| Major repairs and refurbishments | 32 | (13) | 6 | | 25 |
| Sectorial contingencies | 17 | (6) | (2) | | 9 |
| Major litigation | 12 | | | | 12 |
| Miscellaneous | 92 | 9 | (28) | (2) | 71 |
| | 254 | 1 | (4) | (12) | 239 |
| Deferred taxation | 53 | 14 | 14 | (1) | 80 |
| Negative goodwill | 8 | (4) | 1 | | 5 |
| Total | 315 | 11 | 11 | (13) | 324 |
| Operating income | | (7) | | | |
| Financial income (costs) net | | (1) | | | |
| Exceptional items | | 9 | | | |
| Income taxes | | 14 | | | |
| Amortisation of goodwill (net) | | (4) | | | |
| Total | | 11 | | | |

Provisions relating to personnel include, essentially, provisions for pensions and retirement indemnities. In the Manganese division, a corresponding net cost of € 22 million resulting from actuarial revaluations of pension plans in the United States of America have been included in intangible assets.
The provision for major repairs relates to periodical maintenance costs, mainly in the Nickel and Manganese divisions.
The provision for major disputes associated with the acquisition of Comilog in 1996/1997 remains unchanged since the Group considers that it should be more than adequate to cover all the outstanding issues of contention.
In the interests of prudence, it had been the practice of the Nickel division to set aside tax deductible sectorial provisions which included an inventory price fluctuation provision, a provision for the cost of stripping mine overburden and a provision for prospecting new mining reserves. In compliance with French accounting standard 2000-06, these provisions have been cancelled and € 9 million, net of tax, transferred to reserves.
The technical reinsurance provision concerning Eras, and in previous years included in other provisions, has also been cancelled in compliance with this standard with a net of tax effect of € 14 million.

## 13. Borrowings

### 13.1 By source (in millions of euros)

| | Dec. 31, 2002 | Dec. 31, 2001 | Dec. 31, 2000 |
|---|---|---|---|
| Borrowings from finance houses | 260 | 412 | 349 |
| Finance leases | 8 | 10 | 10 |
| Other borrowings | 27 | 57 | 55 |
| Bank overdrafts | 140 | 210 | 207 |
| Total | 435 | 689 | 621 |

### 13.2 By currency (in millions of euros)

| | Dec. 31, 2002 | Dec. 31, 2001 | Dec. 31, 2000 |
|---|---|---|---|
| Euro zone currencies | 318 | 450 | 389 |
| US dollar | 66 | 185 | 194 |
| CFA francs | 27 | 25 | 15 |
| Pounds sterling | 12 | 16 | 15 |
| Yen | 10 | 5 | 6 |
| Norwegian krone | | 7 | |
| Others | 2 | 1 | 2 |
| Total | 435 | 689 | 621 |

### 13.3 By repayment date (in millions of euros)

| | Dec. 31, 2002 | Dec. 31, 2001 | Dec. 31, 2000 |
|---|---|---|---|
| Under 1 year | 78 | 327 | 380 |
| 1 to 5 years | 332 | 303 | 176 |
| Over 5 years | 25 | 59 | 65 |
| Total | 435 | 689 | 621 |

Eramet S.A. has access to medium and long term credit facilities.
Consequently, borrowings consist of amounts drawn down against these facilities and are classified according to the credit period of the facility used.

### 13.4. By interest rate

Practically all borrowings are contracted at variable interest rates.

## 14. Other payables (in millions of euros)

| | Dec. 31, 2002 | Dec. 31, 2001 | Dec. 31, 2000 |
|---|---|---|---|
| Income taxes | 20 | 11 | 38 |
| Payroll and fiscal | 128 | 133 | 153 |
| Other trade payables | 114 | 76 | 60 |
| Accounts payable for fixed assets | 33 | 26 | 39 |
| Unearned income | 1 | 11 | 3 |
| Dividends payable | 3 | 3 | 3 |
| Koniambo indemnity | 120 | 126 | 131 |
| Total | 419 | 386 | 427 |

All payables are due in less than one year with the exception of the Koniambo indemnity for which the payments schedule is detailed in Note 22.

## 15. Change in operating working capital (in millions of euros)

| | 2002 | 2001 | 2000 |
|---|---|---|---|
| Decrease (increase) in inventories | 111 | (56) | (121) |
| Decrease (increase) in accounts receivable | 57 | 55 | (12) |
| (Increase) decrease in other receivables | (1) | (18) | 11 |
| (Decrease) increase in trade payables | (62) | (16) | 59 |
| Increase (decrease) in other payables | 47 | (27) | 17 |
| Total | 152 | (62) | (46) |

## 16. Analysis of net borrowings (in millions of euros)

| | 2002 | 2001 | 2000 |
|---|---|---|---|
| Cash balances | 435 | 481 | 378 |
| Borrowings | (689) | (621) | (524) |
| Net (borrowings) as at January 1 | (254) | (140) | (146) |
| Cash balances | (71) | (46) | 103 |
| Borrowings | 254 | (68) | (97) |
| Net change | 183 | (114) | 6 |
| Cash balances | 364 | 435 | 481 |
| Borrowings | (435) | (689) | (621) |
| Net (borrowings) as at December 31 | (71) | (254) | (140) |

## 17. Employees

The total average number of employees in consolidated group companies

| | 2002 | 2001 | 2000 |
|---|---|---|---|
| Managerial staff | 908 | 923 | 921 |
| Supervisory and office staff | 3,760 | 3,912 | 3,.892 |
| Workforce | 8,005 | 8,376 | 8,443 |
| Total | 12,673 | 13,211 | 13,256 |

## 18. Directors' and management's remuneration

Total remuneration for the ten highest paid employees of the parent company for 2002 was € 2.4 million. Directors' board attendance fees paid by the parent company for the year totalled € 0.1 million.

## 19. Financial income costs net (in millions of euros)

| | 2002 | 2001 | 2000 |
|---|---|---|---|
| Dividends | | 1 | |
| Provisions (net) | 5 | | |
| Exchange differences | 5 | | (10) |
| Miscellaneous items (net) | 4 | (19) | (18) |
| Total | 14 | (18) | (28) |

Miscellaneous items (net) include gains on disposal of marketable securities; € 22 million for Eramet SA and € 6 million for Société Le Nickel (SLN).

## 20. Exceptional items (in millions of euros)

| | 2002 | 2001 | 2000 |
|---|---|---|---|
| (Loss) on disposal of fixed assets | (4) | | |
| Depreciation and provisions (net) | (13) | (70) | (3) |
| Miscellaneous items (net) | 1 | 3 | |
| Total | (16) | (67) | (3) |

Exceptional items include principally: € 8 million of exceptional provisions against inventories at Aubert & Duval *Alliages*, € 5 million of restructuring costs in the Alloys division, a loss of € 2 million on the disposal of Forges M. Dembiermont, € 2 million of restructuring costs in the Manganese division, less € 6 million for that part of the indemnity relative to Poum-Koniambo which has accrued to the Group.

## 21. Income taxes

### 21.1 Analysis of charge (in millions of euros)

| | 2002 | 2001 | 2000 |
|---|---|---|---|
| Current taxation | (8) | (14) | (42) |
| Deferred taxation | (14) | 5 | (40) |
| Distribution taxes | | (1) | (1) |
| Total | (22) | (10) | (83) |

Financial income and income taxes have been restated to include in financial income the gain on disposal of shares in sea-going vessels.

### 21.2 Effective rate of taxation (in millions of euros)

| | 2002 | 2001 | 2000 |
|---|---|---|---|
| Consolidated income before exceptional items | 63 | 78 | 273 |
| Exceptional items | (16) | (67) | (3) |
| **Consolidated income before tax** | **47** | **11** | **270** |
| Standard rate of French taxation | 33.1/3% | 33.1/3% | 33.1/3% |
| **Notional tax charge** | **16** | **4** | **90** |
| Adjustments to notional tax charge | | | |
| – permanent differences between accounting and taxable profits | (14) | (12) | (10) |
| – additional contributions in France | (1) | | 3 |
| – difference in rates payable in other countries | (1) | | (1) |
| – reduced tax rates | (2) | (1) | |
| – withholding tax on intragroup transactions | | 1 | 1 |
| – tax credits | (1) | (1) | |
| – miscellaneous items | 25 | 19 | |
| **Tax charge** | **22** | **10** | **83** |
| Effective rate | 46% | 98% | 31% |

Miscellaneous items include deferred tax assets written off (mainly Eramet Marietta Inc. and Erachem Comilog Europe) and unused tax losses brought forward (mainly Comilog SA, Comilog France and Eramet Marietta Inc.).

### 21.3 Analysis of deferred taxation (in millions of euros)

| | 2002 | 2001 | 2000 |
|---|---|---|---|
| Elimination of losses and gains on intra group transfers | 10 | 12 | 16 |
| Temporary differences | 72 | 101 | 87 |
| Tax losses carried forward | 18 | 12 | 15 |
| Miscellaneous items | | 1 | (3) |
| **Deferred tax asset** | **100** | **126** | **115** |
| Differences between tax and accounting values of fixed assets | 28 | 26 | 32 |
| Elimination of entries booked for fiscal purposes | 100 | 105 | 104 |
| Other temporary differences | 51 | 43 | 36 |
| Taxation on proposed intra group distributions | 1 | 1 | 1 |
| Miscellaneous items | | 4 | 4 |
| **Deferred tax liability** | **180** | **179** | **177** |
| **Net deferred liability** | **80** | **53** | **62** |

### 21.4 Unrecorded deferred tax asset

In accordance with the accounting principles set out in Note 2, a deferred tax asset of € 74 million in respect of tax losses carried forward has not been accounted for.

## 22. Caledonian mining reserves

The Caledonian mining reserves issue, which, in view of the high stakes involved, considerably preoccupied the management of both SLN and the Group between 1996 and 1998, was satisfactorily resolved in 1998.

The issue originated in a claim by SMSP, a Caledonian mining company controlled by the Northern Province, in association with the Canadian nickel producer Falconbridge, one of Eramet's major global competitors, to part of SLN's mining reserves in order to supply a new plant to be built in the Northern Province.

The agreement concluded in February 1998 with government officials provides for an exchange of mining rights on condition that the Northern plant is built, with SMSP receiving the much richer reserves of the Koniambo mine owned by SLN, in exchange for SMSP's poorer Poum reserves. This exchange is accompanied by an indemnity from the French State to compensate for the effect on SLN's and Eramet's businesses of the difference in reserves between the two deposits.

• The first stage of the agreement was implemented in the second half of 1998:

– SLN and SMSP transferred their mining rights in Koniambo and Poum respectively to SAS Poum-Koniambo, an independent entity responsible for holding them until their final assignment. The transfer of Koniambo, for a gross sales price of € 8 million, was included under exceptional items in the consolidated financial statements for 1998.

– the indemnity, determined following a valuation by the Group's bankers and the French State at € 152 million net of tax (€ 125 million for SLN and € 27 million for Eramet), was paid to the two companies.

• The second stage will be accomplished when the promoters commence construction of the Northern plant, provided this takes place before January 2006. SAS Poum-Koniambo will then transfer Poum and Koniambo to SLN and SMSP respectively with SLN and Eramet consequently acquiring an irrevocable right to the full amount of the indemnity.

This second stage could be implemented earlier by Eramet and SLN, since the latter could, as from the end of 2002, exercise the option to unconditionally renounce its claim to the Koniambo reserves, thereby acquiring an irrevocable right to the indemnity received.

• Should the promoters of the Northern plant, Falconbridge and SMSP, abandon their project, or if it is not commenced before January 2006, the Poum and Koniambo deposits would be returned respectively to SMSP and SLN.

Eramet and SLN would then be obliged to repay that part of the indemnity to which they have not acquired an irrevocable right (unearned) plus interest for the period from the date of receipt.

This unearned balance, which as at December 31, 2002 totalled € 120 million, will progressively diminish so as to compensate for loss of use of the reserves. It would fall to € 92 million if these were to be restored at the final deadline of January 2006.

### Unearned indemnity (in millions of euros *)

| | SLN | Eramet | Total |
|---|---|---|---|
| December 2002 | 103 | 17 | 120 |
| September 2003 | 97 | 15 | 112 |
| September 2004 | 88 | 14 | 102 |
| September 2005 | 80 | 12 | 92 |

* Excluding interest which has been provided for in the accounts

## 23. Post balance sheet events

On February 12, 2003, SIMA (Alloys division) sold its former head office in Neuilly-sur-Seine. The transaction will be accounted for in 2003. Also at the beginning of 2003, Sadaci (Manganese division) was disposed of at a loss which was provided against in 2002. The contract for the sale of Erachem Comilog Europe's "carbon black" business should be finalised in the first half of 2003 after official authorisations have been obtained. The gain arising from this transaction has not been accounted for in 2002.

## 24. Commitments (in millions of euros)

| | Dec. 31, 2002 | Dec. 31, 2001 | Dec. 31, 2000 |
|---|---|---|---|
| **Commitments given:** | | | |
| Endorsements, pledges and guarantees | 85 | 85 | 81 |
| Warranties | 146 | 153 | 109 |
| **Commitments received:** | | | |
| Endorsements, pledges and guarantees | 5 | 3 | 3 |
| Warranties | Nil | Nil | Nil |
| Credit lines | 128 | 88 | 172 |

These figures do not include routine business-related orders (i.e. orders received from customers or placed with suppliers), orders for the acquisition of fixed assets which, as at December 31, 2002, were part of regular capital investment programmes, nor do they include commitments arising from shareholder agreements within companies in which third parties hold a minority interest (reciprocal intra group agreements to acquire minority interests estimated, on the basis of book net assets, at approximately € 76 million).

Following Comilog SA's share capital increase at the end of 2002, the state of Gabon has an option to acquire, prior to the end of 2005, 75,302 shares representing 3.23% of the capital at the subscription price.

Forward exchange contracts relate almost entirely to the American dollar and are taken out to cover the Group's present and future positions; they are thus of a long term nature.
As at December 31, 2002, dollar-denominated outstanding forward exchange contracts totalled USD 446 million, these being in the form of forward sales, tunnels or sales options at a minimum average rate of 0.9326 €//USD.
Cover is to protect part of the Group's future cash flows, principally trading transactions for 2003 (USD 370 million).
Longer term contracts concern the Alloy division's transactions for the years 2004 to 2006 (USD 76 million).

## 25. Principal consolidated subsidiaries

| Entity | Country of incorporation | Consolidated (C) or Equity accounted (EA) | Percentage holding |
|---|---|---|---|
| **Eramet** | France | Parent company | |
| **Nickel** | | | |
| Le Nickel-SLN | New Caledonia | C | 60.00 |
| Cominc | New Caledonia | C | 60.00 |
| Eramet Holding Nickel (EHN ex Sepi) | France | C | 100.00 |
| Eurotungstène Poudres | France | C | 51.15 |
| **Alloys** | | | |
| Eramet Alliages | France | C | 100.00 |
| Erasteel | France | C | 100.00 |
| Erasteel Commentry | France | C | 100.00 |
| Erasteel Champagnole | France | C | 100.00 |
| Erasteel Kloster AB | Sweden | C | 100.00 |
| Peter Stubs Ltd | United Kingdom | C | 78.00 |
| Erasteel Ltd. | United Kingdom | C | 100.00 |
| Erasteel Inc. | U.S.A. | C | 100.00 |
| Erasteel GmbH | Germany | C | 100.00 |
| Erasteel Italiana Srl | Italy | C | 100.00 |
| Erasteel Japan KK | Japan | C | 100.00 |
| Erasteel Korea Ltd. | Korea | C | 100.00 |
| Erasteel Far East Ltd. | Taiwan | C | 100.00 |
| Erasteel Latin America | Brazil | C | 100.00 |
| Société Industrielle de Métallurgie Appliquée (SIMA) | France | C | 100.00 |
| Special Metals Corp. (SMC) and its subsidiaries | U.S.A. | EA | 38.45 |
| Stahlschmidt | Germany | EA | 50.00 |
| Interforge | France | C | 94.00 |
| Traitement Compression Service (TCS) | France | C | 51.00 |
| Ms-P2 | France | C | 100.00 |
| Aubert & Duval *Holding* (AD*H* ex Ciram) | France | C | 100.00 |
| Aubert & Duval *Alliages* (ADA) | France | C | 100.00 |
| Aubert & Duval *Fortech* (ADF) | France | C | 100.00 |
| Aubert & Duval *Tecphy* (ADT) | France | C | 100.00 |
| Financière Brown Europe | France | C | 85.00 |
| Brown Europe | France | C | 85.00 |
| **Manganese** | | | |
| Eramet Holding Manganèse (EHM) | France | C | 100.00 |
| Eramet Comilog Manganèse | France | C | 100.00 |
| Eramet Manganèse Alliages (EMA) | France | C | 69.50 |
| Eramet Marietta, Inc. | U.S.A. | C | 69.50 |
| Eramet Norway AS | Norway | C | 69.50 |
| Comilog SA | Gabon | C | 60.47 |
| Comilog Holding | France | C | 60.47 |
| Comilog International | France | C | 60.47 |
| Comilog Lausanne | France | C | 60.47 |

## 25. Principal consolidated subsidiaries (continued)

| Entity | Country of incorporation | Consolidated (C) or Equity accounted (EA) | Percentage holding |
|---|---|---|---|
| Port Minéralier d'Owendo SA (PMO) | Gabon | EA | 21.98 |
| Sadaci | Belgium | C | 60.47 |
| MMM Immo SA | Belgium | C | 60.47 |
| Unimin AG | Switzerland | C | 60.47 |
| Sodépal | Gabon | C | 60.42 |
| Erachem Comilog Europe | Belgium | C | 60.47 |
| Comilog US | U.S.A. | C | 60.47 |
| GCMC | U.S.A. | C | 60.47 |
| Bear Metallurgical Corp | U.S.A. | EA | 29.93 |
| Erachem Comilog Inc. | U.S.A. | C | 60.47 |
| Eramet Comilog North America Inc. | U.S.A. | C | 60.47 |
| Comilog France | France | C | 59.12 |
| Comilog Dunkerque | France | C | 59.12 |
| Comilog Italia | Italy | C | 59.12 |
| Miner Holding BV | Holland | C | 60.47 |
| Comilog Asia Ltd | Hong-Kong | C | 60.47 |
| Comilog Asia Ferro Alloys Ltd. | Hong-Kong | C | 60.47 |
| Shaoxing Comilog Ferro Alloys Ltd. | China | C | 42.33 |
| Guangxi Comilog Ferro Alloys Ltd. | China | C | 42.33 |
| Guilin Comilog Ferro Alloys Ltd. | China | C | 60.47 |
| Comilog Far East Development Ltd. | Hong-Kong | C | 60.47 |
| Eramet Canada | Canada | C | 60.47 |
| Sulfamex | Mexico | C | 60.47 |

C = Consolidated.
EA = Equity accounted.

As compared with the financial statements published for 2001, the composition of the consolidation has changed as follows:
Peter Stubs Ltd. (Alloys division), previously accounted for by the equity method, is consolidated as from January 1, 2002 following the purchase of 33% to increase the holding to 78%;
Forges M. Dembiermont (Alloys division), previously consolidated, is accounted for by the equity method as from January 1, 2002 following transfer of control to Forgital and reduction of the investment to 33.2%;
HFT, previously treated as an investment in non consolidated subsidiaries, is now consolidated following an increase in the holding to 100%, the subsequent merger with Steiner-Bronzavia (already a consolidated entity) and a change of name to Ms-P2 (Alloys division); all as at January 1, 2002;
Because of the non significant nature of their contribution to the Group, HTM Inc., Microsteel, Améta, Forges de Montplaisir, CMM, CIMD, Supa and Transmet (Alloys division) have been deconsolidated as at January 1, 2002; the investments are stated at a value based on net equity as at December 31, 2001;
at the end of 2002, the Chinese company Guilin Comilog Ferro Alloys Ltd. became a fully owned subsidiary (Manganese division).
Further, the following changes were effected in the percentage holdings in consolidated subsidiaries:
increase of 32% in the investment in Financière Brown Europe (Alloys division) to 85%;
Comilog SA's (Manganese division) capital increase at the end of 2002 was fully subscribed for € 39 million, bringing the holding at the year end up to 60.47%. The Group's share of net income for the year represents 55.35%, which takes account of the 4.2% excluded from the consolidation at the end of 2000 and consolidated in 2002 (see Note 4 Fixed assets).

## 26. Summarised financial statements of Eramet S.A. (Parent company)

# Balance sheet (in millions of euros)

### Assets

| | At December 31 | | |
|---|---|---|---|
| | 2002 | 2001 | 2000 |
| Intangible assets | 1 | 1 | 1 |
| Tangible assets | 15 | 16 | 20 |
| Financial investments | 947 | 890 | 658 |
| **Total fixed assets** | **963** | **907** | **679** |
| Inventories | 63 | 59 | 75 |
| Trade accounts receivable | 50 | 42 | 61 |
| Other receivables | 31 | 21 | 20 |
| Cash | 93 | 230 | 105 |
| **Total current assets** | **237** | **352** | **261** |
| **Total assets** | **1,200** | **1,259** | **940** |

### Shareholders' equity and liabilities

| | At December 31 | | |
|---|---|---|---|
| | 2002 | 2001 | 2000 |
| Share capital | 76 | 75 | 75 |
| Share premium | 204 | 195 | 194 |
| Reserves | 511 | 291 | 274 |
| Net income | 16 | 247 | 49 |
| **Shareholders' equity** | **807** | **808** | **592** |
| Tax related provisions | 44 | 45 | 45 |
| **Total net equity** | **851** | **853** | **637** |
| **Provisions for contingencies and expenses** | **6** | **7** | **9** |
| Borrowings | 220 | 303 | 195 |
| Trade accounts payable | 68 | 51 | 68 |
| Other payables | 55 | 45 | 31 |
| **Total liabilities** | **343** | **399** | **294** |
| **Total shareholders' equity and liabilities** | **1,200** | **1,259** | **940** |

# Income statement (in millions of euros)

| | At December 31 | | |
|---|---|---|---|
| | 2002 | 2001 | 2000 |
| Turnover | 543 | 513 | 597 |
| Other operating income | 5 | 4 | (1) |
| External purchases and charges | (510) | (487) | (542) |
| Miscellaneous taxes and levies | (3) | (3) | (2) |
| Personnel costs | (25) | (21) | (20) |
| Depreciation of fixed assets | (4) | (4) | (4) |
| Provisions (net) | (2) | (1) | (1) |
| Operating income | 4 | 1 | 27 |
| **Financial income (net)** | **10** | **19** | **22** |
| **Income before exceptional items** | **14** | **20** | **49** |
| **Exceptional items** | **2** | **226** | **(2)** |
| Employee profit sharing | | (1) | (2) |
| Income tax | | 2 | 4 |
| Net income | 16 | 247 | 49 |
| Net income per share (€) | 0.63 | 9.99 | 1.97 |

# Cash flow statement (in millions of euros)

| | At December 31 | | |
|---|---|---|---|
| | 2002 | 2001 | 2000 |
| **Operating activities** | | | |
| Net income | 16 | 247 | 49 |
| Elimination of non-cash items | 24 | (218) | 3 |
| **Operating cash flow before changes in working capital** | **40** | **29** | **52** |
| Changes in operating working capital | 8 | 31 | (32) |
| **Net cash flow from operating activities** | **48** | **60** | **20** |
| **Investing activities** | | | |
| Purchases of fixed assets | (82) | (336) | (20) |
| Disposals of fixed assets | | 324 | |
| Net change in deferred charges and accounts payable for fixed assets | (1) | | 1 |
| | (83) | (12) | (19) |
| Indemnity re New Caledonia – amount included in net income | (1) | (1) | (1) |
| **Net cash used in investing activities** | **(84)** | **(13)** | **(20)** |
| **Financing activities** | | | |
| Dividends paid | (28) | (31) | (28) |
| Increases in share capital | 10 | 1 | 11 |
| **Net cash (used in) flow from financing activities** | **(18)** | **(30)** | **(17)** |
| **(Decrease) Increase in net cash position** | **(54)** | **17** | **(17)** |
| Opening net borrowing position | (73) | (90) | (73) |
| Closing net borrowing position | (127) | (73) | (90) |

# Statutory auditors' report

To the shareholders of Eramet

In our capacity as statutory auditors, we have audited the accompanying consolidated financial statements of Eramet, expressed in euros, for the year ended December 31, 2002.

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit.

We conducted our audit in accordance with French auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance that the consolidated financial statements are free of material misstatement. An audit includes an examination, on a test basis, of evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes an assessment of the accounting principles used and significant estimates made by management, as well as an evaluation of the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

While in no way qualifying our opinion, we draw your attention to note 1.2 to the consolidated financial statements which explains adjustments resulting from the implementation, as from January 1, 2002, of French standard 2000-06 relative to the accounting for liabilities, and to the change to LIFO (last-in-first-out) in the accounting for nickel inventories.

In our opinion, the consolidated financial statements present fairly, in all material respects, in accordance with accounting principles generally accepted in France, the financial position of the Group as at December 31, 2002 and the results of its operations for the year then ended.

We have also examined the information provided in the Group management report. We have nothing to report with respect to the fairness of such information and its consistency with the consolidated financial statements.

Neuilly-sur-Seine and Paris, March 27, 2003

Statutory auditors

ERNST & YOUNG Audit
François CARREGA

Deloitte Touche Tohmatsu
Nicholas L.E. ROLT

# Resolutions to be proposed by the Board of Directors

## The following is a translation of the original french text to which reference should be made

### First resolution (2002 annual financial statements)

Having considered the reports of the Board and of the Statutory Auditors, the Meeting adopts the annual financial statements for the year ended December 31, 2002 as presented, and ratifies the operations reflected or summarised in the said reports and statements.

### Second resolution (2002 consolidated financial statements)

Having considered the reports of the Board and of the Statutory Auditors, the Meeting adopts the consolidated annual financial statements for the year ended December 31, 2002 as presented, and ratifies the operations reflected or summarised in the said reports and statements.

*The detailed financial statements are included with the documents to be made available to shareholders; a commentary thereon is included in the annual report.*

### Third resolution (related party agreements as defined by the French Commercial Code)

Having considered the special report of the Statutory Auditors on related party agreements defined in article L225-38 and subsequent articles of the French Commercial Code, the Meeting approves the report and ratifies the transactions referred to therein.

*The Statutory Auditors' special report refers to two agreements (a technical assistance agreement and a marketing agreement) with LE NICKEL-SLN which continued to be implemented in 2002.*

*This report is included with the documents made available to shareholders.*

### Fourth resolution (Appropriations of net income and payment of dividend)

The Meeting approves the following appropriations of net income for the year as proposed by the Board:

| | |
|---|---|
| Net income | € 15,712,020.71 |
| Retained earnings brought forward (*): | € 248,513,655.06 |
| Transfer to legal reserve | € 99,028.32 |
| Available for distribution | € 264,126,647.46 |

Distribution:

| | |
|---|---|
| Net dividend of € 1.00 per share (with an attached tax credit of € 0.50**) on 25,048,043 shares | € 25,048,043.00 |
| Retained earnings carried forward | € 239,078,604.46 |

Should, when the dividend becomes payable, new shares be created following the exercise by employees of subscription options, retained earnings carried forward would be correspondingly reduced. (* Retained earnings includes an amount of € 619,917.23 corresponding to the unpaid dividend on its own shares held by Eramet and voted at the Annual General Meeting on May 23, 2002.)

The Meeting takes note of the dividends distributable in respect of 2002 and of the previous three years:

| | Exercices | | | |
|---|---|---|---|---|
| | 1999 | 2000 | 2001 | 2002 |
| **Number of shares remunerated** | 24,431,596 | 24,699,360 | 24,723,360 | 25,048,043 |
| Net dividend | € 1.14 | € 1.30 | € 1.14 | € 1.00* |
| Tax credit | € 0.57 | € 0.65 | € 0.57 | € 0.50** |
| **Gross dividend** | **€ 1.71** | **€ 1.95** | **€ 1.71** | **€ 1.50*** |

(**) on the basis of a tax credit of 50%.

## Fifth resolution
(Dividend payment terms)

The Company's memorandum and articles of association empower the Meeting to grant each shareholder, in respect of all or part of the declared dividend, an option to choose between payment in shares or in cash.

The Meeting resolves that the dividend will be payable as follows:
– Option A: payment wholly in cash.
– Option B: payment of € 0.50 per share in cash and the balance in shares.

The possibility of receiving part payment in shares is offered to all shareholders and relates to the balance of the net dividend (excluding the tax credit) of € 0.50 per share. This option (option B) must be exercised between June 2 and 16, 2003 inclusive.

### Option A - Payment in cash
The Meeting resolves that, for all shares in respect of which no option has been made to receive part of the dividend in shares, the dividend will be paid fully in cash after expiry of the time allowed for administrative matters, that is as from June 26, 2003.

### Option B - Payment partly in cash and partly in shares
As from this date, shareholders having opted to receive payment partly in shares will receive a cash payment on account equal to € 0.50 per share, the balance being paid by the issue of new shares with full dividend rights as from January 1, 2003.

The issue price of the new shares will be equal to 90% of the average opening quoted price during the twenty trading days immediately preceding the date of the Meeting, less the amount of the dividend.

As the average opening quoted price of Eramet's shares during the twenty trading days immediately preceding the date of this Meeting is € X per share, the issue price of the new shares corresponding to 90% of this amount, net of the dividend, is € X per share.

Subscriptions must be for a whole number of shares. If the amount of the dividend for which the option is exercised does not correspond to a whole number, the shareholder will have the choice between being allotted the next highest number of shares and paying the difference in cash, or receiving the next lowest number of shares together with a cash settlement for the difference.

The Meeting empowers the Board, who may delegate in accordance with relevant legislation, to implement this decision, perform all operations arising from the exercise of the option including the resulting capital increase, charge against available reserves the costs of such increase, adjust the legal reserve and to modify the clause in the memorandum and articles of association relative to share capital and the authorised number of shares.

*The Board proposes to the Meeting that net income be appropriated as described in the fourth resolution and to pay, in respect of the 25,048,043 shares making up the Company's share capital as at the date of the Meeting, a net dividend of € 1 per share, or a total of € 25,048,043.*
*On the basis of a tax credit of 50%, the gross dividend will be € 1.50 per share.*
*The dividend will be paid, at the option of shareholders, either wholly in cash or a combination of cash and shares, the latter with full dividend rights as from January 1, 2003.*

## Sixth resolution
(Confirmation of Directors' appointments)

The Meeting confirms the nominations as director of:
– Jean-Lucien Lamy, nominated at the Board meeting on May 23, 2002, following the resignation of Anne Lauvergeon, for the remainder of his predecessor's term of office, i.e. until the Shareholders' Meeting held to approve the financial statements for 2002;
– Jacques Bacardats, nominated at the Board meeting on March 26, 2003, following the resignation of Yves Rambaud, for the remainder of his predecessor's term of office, i.e. until the Shareholders' Meeting held to approve the financial statements for 2002.

*The Meeting is invited to confirm the nominations as director, of Jean-Lucien Lamy and Jacques Bacardats, at the Board meetings on May 23, 2002 and March 26, 2003 respectively to replace Anne Lauvergeon and Yves Rambaud*

## Seventh resolution
(Reappointment of directors)

The Meeting confirms the reappointment for a period of four years, i.e. until the Shareholders' Meeting held in 2007 to approve the financial statements for 2006, of the following directors:
– Jacques Bacardats
– Cyrille Duval

– Edouard Duval
– Georges Duval
– Patrick Duval
– François Henrot
– Pascal Lafleur
– Jean-Lucien Lamy
– Louis Mapou
– Jacques Rossignol
– Antoine Treuille
and of:
– AREVA, represented by Frédéric Tona.

## Eighth resolution
(Non reappointment and appointment of directors)

The Meeting appoints Rémy Autebert, Pierre-Noël Giraud and Michel Somnolet as directors for a period of four years, i.e. until the Shareholders' Meeting held in 2007 to approve the financial statements for 2006, to replace Robert Castaigne, George T. Lowry and Wihelm Scheider whose term of office expires with this Meeting.

*The Meeting is invited to reappoint, for a period of four years, the following twelve directors: Jacques BACARDATS, Cyrille DUVAL, Edouard DUVAL, Georges DUVAL, Patrick DUVAL, François HENROT, Pascal LAFLEUR, Jean-Lucien LAMY, Louis MAPOU, Jacques ROSSIGNOL, Antoine TREUILLE, AREVA, represented by Frédéric TONA and to appoint three new directors: Rémy AUTEBERT, Pierre-Noël GIRAUD and Michel SOMNOLET to replace Robert CASTAIGNE, George T. LOWRY and Wihelm SCHEIDER.*

## Nineth resolution
(Reappointment of Statutory Auditors)

The Meeting reappoints the Statutory Auditors for a period of six years, i.e. until the Shareholders' Meeting held in 2009 to approve the financial statements for 2008:

– titular auditors – ERNST & YOUNG AUDIT, represented by François CARREGA, and DELOITTE TOUCHE TOHMATSU, represented by Nicholas L.E. ROLT
and
– substitute auditors – Jean-Marc MONTSERRAT and DELOITTE TOHMATSU AUDIT.

*The Meeting is invited to reappoint, for a period of six years both the titular and substitute auditors.*

## Tenth resolution
(Authorisation to deal in and cancel the Company's shares)

Having considered the information circular submitted for approval to the Paris Stock Exchange regulatory authorities, the General Meeting, pursuant to articles L225-209 of the French Commercial Code, authorises the Company, through its Board, to purchase up to a maximum of 5% of its own shares on March 31, 2003 with a view to:

– stabilising the share price by, if necessary, intervention in the market
– trading in its shares in the light of market conditions,
– using the shares as a means of exchange, notably in the context of growth by acquisition or the issue of shares to new shareholders,
– their retention or, if appropriate, their sale or transfer by whatever means,
– the granting of share purchase options to employees of the Company and/or companies in which Eramet controls, directly or indirectly, 50%,
– their cancellation, on condition that the Meeting adopts resolution 11 authorising a reduction in the Company's share capital.

The purchase, sale, transfer or exchange of these shares may be effected by any means, including, when appropriate, the use of derivatives; the maximum number of shares which may be included in a block acquired or transferred can represent the total of the share buy-back programme authorised.

Payment may be effected by any means.

The maximum purchase price may not exceed € 60 per share and the minimum selling price may not be less than € 10 per share.

The funds committed to this share buy-back programme will not exceed € 75,144,120 representing the purchase of 1,252,402 shares at a maximum price of € 60.

This authorisation is valid only until the close of the Shareholders' Meeting held to adopt the financial statements for 2003.

To permit compliance with this resolution, all necessary powers are conferred on the Board, who may delegate those powers, to enable it to:
– pass all trading orders, make all necessary arrangements notably for the maintaining of share registers recording the purchase and sale of shares,
– make all necessary declarations to the Stock Exchange regulatory authorities,
– comply with all other formalities and generally take all necessary steps.

## Extraordinary general meeting

### Eleventh resolution (Authorisation of share capital reduction by cancellation of shares)

Having considered the Statutory Auditors' report, on condition that shareholders adopt resolution 10 which authorises trading by the Company in its own shares, the Meeting authorises the Board to cancel, on its own initiative, in one or more steps, all or part of the shares held by it in accordance with the authority to buy its own shares.
This authorisation, which is valid for up to a maximum of 5% of the Company's share capital, at the end of 24 months from the date of this Meeting and replaces all prior authorisations.
The Meeting empowers the Board to take all necessary steps to overcome any opposition, to cancel shares, to record the reduction in share capital, to account for the difference between the cost and nominal value of the shares cancelled in the share premium account and available reserves, consequently modify the Company's memorandum and articles of association and generally take all necessary steps and complete all formalities.

*Pursuant to articles L225-209 of the French Commercial Code, the Meeting is invited to approve a share buy-back programme enabling the Company, through its Board, to purchase up to a maximum of 5% of its own shares.*
*The objective of this programme is to stabilise the share price by, if necessary, intervention in the market, use shares as a means of exchange, notably in the context of growth by acquisition or to allot share purchase options to employees of the Company and/or companies in which Eramet controls, directly or indirectly, 50% .*

### Twelfth resolution
(Capital increase reserved for employees)

Having considered the report of the Directors and the Statutory Auditors' special report and pursuant to articles L225-129 and L225-138 of the French Commercial Code and L443-5 of the Employment Code, the Meeting authorises the Board, with powers to delegate, to increase the share capital, in one or successive step(s), by a maximum of € 500,000, by the issue of new shares reserved for current and former employees of the Company participating in a company saving scheme or a voluntary employee savings association.

It resolves to cancel, in favour of these employees and former employees, the preferential subscription rights concerning the shares to be issued under this resolution, and renounce all rights to the shares allotted gratuitously within the context of this resolution.

These powers are granted for a period of 26 months from the date of this Meeting.

The share subscription price will be determined in compliance with the provisions of article L443-5 of the Employment Code.

The powers include the express renunciation by the shareholders in favour of the employees referred to above of their preferential subscription rights in respect of the shares to be issued.

*In order to comply with the provisions of §VII of article L225-129 of the French Commercial Code introduced by article 29-1 of the February 19, 2001 law on employee saving schemes, we propose to issue new shares for cash which would be reserved for Company employees in compliance with article L443-5 of the Employment Code. The maximum amount of such capital increase would be € 500,000.*

### Thirteenth resolution (Share capital increase by the issue of shares, other forms of financial instrument and/or share subscription warrants with maintenance of shareholder preferential subscription rights)

Having considered the special report of the Statutory Auditors, and in accordance with paragraph 3 of article L 225-129-III of the French Commercial Code, the Meeting authorises the Board to increase the nominal share capital by up to a maximum of € 12,000,000 by the successive or simultaneous issue, on one or more occasions, in France or in other countries, of financial instruments conferring immediate or future rights to a participation in the Company's share capital in the form of:

a) ordinary shares by:
– the issue of new shares for cash or against outstanding debt, with or without a premium, or;
– by capitalisation of all or part of existing reserves or share premium account, to be realised by a bonus issue or increase in the nominal value of existing shares, or;
– a combination of the above.

b) financial instruments, other than shares conferring the right, directly or indirectly, by conversion, exchange, reimbursement, presentation of a warrant or any other means of attribution, at any time or on fixed dates, to such shares issued as giving a right to participation in the share capital. These financial instruments may take the form of convertible debenture stock, debenture stock with share subscription warrants, convertible debenture stock, debentures with share subscription warrants, debentures repayable in shares or any other instrument compatible with current legislation

These instruments may be denominated in euros, foreign currency, or in a currency unit based on a basket of currencies up to a maximum nominal value of € 12,000,000 or its equivalent in the currency of issue as at the date on which the decision is taken to issue the financial instruments concerned.

c) warrants, to be issued for cash and/or by a bonus issue, conferring on holders the right to subscribe for shares in the Company. These warrants may be issued independently or attached to shares or to the financial instruments referred to in a) and b) above.

Current shareholders would retain their preferential subscription rights, in proportion to the number of shares held, in all circumstances under a), b), and c) above. The Board will determine, for each issue, the conditions and limits in which shareholders may exercise their subscription rights in compliance with current legislation.
The Board may institute for the benefit of shareholders a reducible subscription right which would be exercisable in proportion to their rights and restricted to demand.

If the issue of shares, warrants or other financial instruments is not fully subscribed by existing shareholders under the terms of the issue, the Board may, at its own discretion and subject to compliance with relevant legislation, limit the issue to the amount subscribed (it being noted that in the case of a share issue under (a) above, at least 75% thereof should be taken up), reallocate the unsubscribed shares, warrants or other instruments or offer some or all to the public.

If financial instruments are issued conferring the right to shares on presentation of a warrant, the Board has full powers to determine the conditions under which the Company may purchase the subscription warrants on the Stock Exchange for cancellation.

The issue price of instruments issued under (b) and (c) above, conferring an interest in the company's share capital, shall equal at least the average of the opening price of the Company's shares during ten consecutive Stock Exchange days chosen from the twenty immediately preceding the new issue, corrected as necessary, to take account of the difference in dates.

The Meeting empowers the Board, the latter having the possibility to delegate to its Chairman, to take all steps, in compliance with relevant legislation, to implement the terms of this resolution.

The Meeting decides that fractions arising from the allocation of bonus shares will not be negotiable and empowers the Board to sell them in conformity with the relevant legislation. It also authorises the Board to charge the costs of the increase in capital against the associated premium and to use this premium to increase the legal reserve up to an amount equal to 10% of the new share capital.

The Meeting's authorisation for the Board to effect this capital increase is valid for twenty six months from the date of this meeting and replaces all previous such authorisations.

## Fourteenth resolution

(Capitalisation of reserves, profits, premium accounts and other reserves)

The Meeting:

**1.** authorises the Board to increase the share capital, at any time and by any amount which it may determine, by capitalisation of reserves, profits, premiums and other reserves admissible by law including such an increase in conjunction with a cash issue of new shares under the provisions of resolution 13 and in the form of a bonus issue or an increase in the nominal value of existing shares or a combination of the two;

**2.** decides that the maximum by which share capital may be increased for these purposes is € 12,000,000;

**3.** authorises the Board, which has powers of delegation to its Chairman, to implement this decision, in particular:

– to determine form and conditions of the transactions authorised and in particular the amount and nature of the reserves and share premium account to be capitalised, determine the number of new shares to be issued or the amount by which the nominal value of existing shares is to be increased, determine the date, which may be retroactive, from which the new shares confer full dividend rights or the increase in the nominal value will take effect and, where appropriate, record the necessary transactions in the share premium account and notably the costs associated with the issue;

– to decide, where appropriate, as a departure from article L225-149 of the French Commercial Code, that fractions arising from the allocation of bonus shares will not be negotiable and will be sold, the proceeds of sale being returned to shareholders within 30 days of registration of their new shares;

– to take all steps necessary to implement all transactions decided upon, complete all resulting formalities and make the required modifications to the memorandum and memorandum and articles of association.

The authorisation conferred upon the Board by this Meeting is valid for twenty six months from the date of this meeting and replaces all previous such authorisations.

## Fifteenth resolution (Share capital increase by the issue of shares, other forms of financial instrument and/or share subscription warrants without shareholder preferential subscription rights)

Having considered the Statutory Auditors' special report and pursuant to paragraph 3 of article L225-129-III of the French Commercial Code, the Meeting authorises the Board to increase the share capital by a maximum of € 12,000,000 by the successive or simultaneous issue, on one or more occasions, in France or in other countries, of financial instruments conferring immediate or future rights to a participation in the Company's share capital as follows:

**I) issues by the company in the form of:**

a) ordinary shares, by the issue of new shares for cash or against outstanding debt, with or without a premium,

b) financial instruments, other than shares conferring the right, directly or indirectly, by conversion, exchange, reimbursement, presentation of a warrant or any other means of attribution, at any time or on fixed dates, to such shares issued as giving a right to participation in the share capital. These financial instruments may take the form of convertible loan stock, debenture stock with share subscription warrants, convertible debenture stock, debentures with share subscription warrants, debentures repayable in shares or any other legally authorised financial instruments.
These instruments may be denominated in euros, foreign currency, or in a currency unit based on a basket of currencies up to a maximum of € 12,000,000 or its equivalent in the currency of issue as at the date on which the decision is taken to issue the financial instruments concerned.

c) share subscription warrants conferring on holders the right to subscribe for shares in the Company. These warrants may be issued independently or attached to shares or to the financial instruments referred to in a) and b) above.

Stock defined under (a), (b) and (c) above may be issued as consideration in the context of a public offer to acquire shares in another company.

As the result of issues of instruments under b) and c) above, share capital may not be increased by an amount in excess of € 12,000,000 in respect of issues under b) or c), plus the nominal value of any shares issued to protect the rights of holders of instruments referred to under b) and c) above.

**II)** issues by one or more of Eramet's subsidiaries in euros, foreign currency, or in a currency unit based on a basket of currencies, on the French or international markets:

a) debentures with subscription warrants for shares in Eramet;

b) financial instruments conferring the right, directly or indirectly, by conversion, exchange, reimbursement, presentation of a warrant or any other means of attribution, at any time or on fixed dates, to such shares issued as giving a right to participation in Eramet's share capital. These financial instruments may take the form of shares with share subscription warrants, convertible debenture stock, debenture stock with share subscription warrants, convertible debenture stock, debentures with share subscription warrants, debentures repayable in shares or any other legally authorised financial instruments.

The total nominal value of ordinary shares which may be created as the result of issues under (a) and (b) above shall not have the effect of increasing nominal share capital by in excess of € 12,000,000 plus the nominal value of any shares to be issued to preserve the rights of warrant holders under (a) and b) and the holders of financial instruments under (b) above.

**III)** The Meeting resolves to suppress preferential subscription rights in all circumstances under (a), ( b), and (c) of paragraph I and under (a) and (b) of paragraph II above but the Board may accord non-negotiable preferential subscription rights to shareholders for a limited period to be defined in respect of issues on the French market.

The Meeting also resolves to suppress preferential subscription rights for ordinary shares in Eramet issued in respect of financial instruments and warrants under (b), and (c) of paragraph I) and under (a) and (b) of paragraph II above.

If financial instruments are issued with share warrants attached, the Board will be authorised to determine the conditions for, and timing of, purchase in the market of the warrants for cancellation.

**IV)** The Meeting resolves that the issue price of:

1) shares issued under paragraph I (a) above;

2) instruments representing part of the share capital and issued under paragraphs I (b) and II (b) above;

3) warrants issued under paragraphs I (c) and II (a) and (b) above shall equal at least the average of the opening price of Eramet's shares during ten consecutive Stock Exchange days chosen from the twenty immediately preceding the new issue, corrected as necessary, to take account of the difference in dates, it being understood that the issue price of warrants shall be such that the sum of the latter and the cost of exercising the option shall equal at least 105% of this average.

**V)** The Meeting empowers the Board, the latter having the possibility to delegate to its Chairman, to take all steps in compliance with relevant legislation to implement the terms of this resolution.

The Meeting authorises the Board to charge the costs of the increase in capital against the associated premium and to use this premium to increase the legal reserve up to an amount equal to 10% of the new share capital.

The Meeting's authorisation for the Board to effect this capital increase is valid for twenty six months from the date of this Meeting and replaces all previous such authorisations.

## Sixteenth resolution
(Limitation of new issues)

The Meeting, resolves that:

– the increases in share capital resulting from the new issues authorised by resolutions 13 and 15 cannot exceed € 12,000,000, increased by additional amounts necessary to reserve the rights of holders of financial instruments to shares in the equity capital and of holders of share subscription warrants.

– the total nominal amount of financial instruments other than shares issued under the authorisation of resolutions 13 and 15 may not exceed € 12,000,000 or its equivalent in foreign currency, or a currency unit based on a basket of currencies.

*The Meeting is invited to revalidate, until the date of the Shareholders' Meeting held to approve the annual financial statements for 2004, the original powers given to the Board by the Meeting held on May 30, 2001 to increase the share capital on one or more occasions:*

– *with or without preferential subscription rights, by the issue of shares, various financial instruments and/or share subscription warrants within a maximum limit of € 12,000,000.*
– *by the capitalisation of reserves, retained profits, share premium accounts or others permitted by legislation, also within a maximum limit of € 12,000,000.*

## Seventeenth resolution
(Use of authorisations during a take-over bid)

The Meeting expressly authorises the Board to make full or part use, within legal limits, of the various powers resulting from resolutions 13 and 15 adopted by this Meeting in the event of a public offer or offers being received for the Company's outstanding capital, whether in the form of a cash or a share offer.

This authority is valid until the Shareholders' Meeting held to adopt the financial statements for the year ended December 31, 2003.

*The Meeting agrees that the powers granted by resolutions 13 and 15 may be used in the event of a take-over bid. This authority expires with the Shareholders' Meeting held to adopt the financial statements for 2003.*

## Eighteenth resolution (Formalities)

This combined Ordinary and Extraordinary Meeting empowers any bearer of an original version, an extract or a copy of the minutes of this meeting to proceed with all necessary filings or formalities.

*The adoption of this resolution is necessary for the completion of legal formalities arising from the implementation of the other resolutions voted on by the Meeting.*

# NRE Law – Environnement – Decree 2002-221 of February 20, 2002

Pursuant to the above-mentioned decree, information on how the Company takes into account the environmental consequences of its activity will concern the plant it operates in the Le Havre-Sandouville maritime industrial zone. The plant specialises in the production of high-purity electrolytic nickel, nickel chloride and cobalt as well as iron chloride. These products are used in high-tech industries such as aerospace, power generation, electroplating, electronics, petrochemical and food industry catalysts, powder metallurgy and water treatment.

The industrial zone in which the site is located includes approximately fifty units, 16 of which come under “Seveso” regulations. The Eramet plant represents 180 jobs out of a total of approximately 20,000 in the industrial zone.

## Optimised power consumption

The site consumed 49,249,150 kWh in electricity and 63,177 tonnes in purchased steam in 2002. The steam is produced by a specialised company from the residue of chemical activities in the industrial zone. It represents over 65% of the Eramet plant’s energy needs.
Use of the steam made it possible to save approximately 5,200 tonnes of heating oil, as the site only consumed 2,577 tonnes during the year.

## Industrial risk management

The Eramet Group considers the management of the industrial risks arising from its activities as a major priority. Eramet’s Sandouville plant is classified “Seveso” high risk because of its use of chlorine and production of nickel and cobalt chlorides.
For the Sandouville site, 2002 was marked by the actions taken to ensure compliance with the obligations laid down by Seveso II regulations. Authorities were provided with a risk study in July 2002 and a third-party appraisal is scheduled for 2003. A safety management system was set up and internal organisation plan exercises were conducted throughout the year.
Moreover, pursuant to the new regulations of November 2001, a risk assessment of the plant’s workstations was carried out and recorded in a single document.

## The importance of integration with the local environment

Populations live relatively far from the industrial zone, which has developed on a formerly marshy plain. Eramet’s Sandouville plant gives great importance to its integration into the local community. In particular, it has a very active role in AUPAES, the association of users of the Seine estuary alluvial plain, which groups together the companies in the industrial zone.
AUPAES is a forum for discussion and sharing ideas that brings together industrial companies and the town councillors in charge of managing population warning systems. With the aim of openness and dialogue with the public, the Seveso-rated industrial companies that play an active part in the association have launched a communication plan focusing on elected representatives and the media.

## Control the site’s environmental impact

The plant has comprehensive treatment facilities for its liquid and gaseous effluents, allowing it to guarantee control of its environmental impact in accordance with the requirements of its operating permit.

### Control of liquid effluents

The treatment of liquid emissions is the subject of special care that ensures the total neutrality of discharged effluents, thus guaranteeing the site has no impact on the Seine bay.
The operating permit of February 18th, 1997 sets down acceptable discharge values and intervals between checks. For every item to be checked, the permit specifies the threshold concentration that, when multiplied by the related daily output, gives the discharge to be complied with in kilograms per day. The Le Havre town laboratory carries out 3 or 4 unannounced checks per year on all these parameters on behalf of regional industrial and environmental authorities.
The site carries out its own checks for output and pH. On a daily basis, it monitors nickel, cobalt, iron, copper, chemical oxygen demand (COD) and suspended matter (SM). The results of these measurements are supplied monthly to the Le Havre port inspectorate for classified facilities, together with comments on any excess levels and the corrective actions taken to prevent their reoccurrence.

The values recorded in 2002 do not show any exceeding of the authorised annual discharge quantities.

| Discharged elements | Aggregate annual tonnage 2002 (tonnes) | Regulatory limit (tonnes) |
|---|---|---|
| Nickel | 0.83 | 0.94 |
| Cobalt | <0.12 | 0.32 |
| SM | 2.7 | 6.3 |
| COD | 36 | 81.6 |
| Chlorides | 4,412 | 12,319 |

SM: suspended materials, COD: chemical oxygen demand

### Air quality

Atmospheric emissions include chlorine residue from cleaning the scrub columns, nickel dust, SO2, NOx and volatile organic compounds (VOC). The table below gives the values recorded in 2002 for these emissions.

| Elements discharged into air | Aggregate quantity 2002 (tonnes) | Regulatory limit for 2002 (1) (tonnes) |
|---|---|---|
| Chlorine (plant total) | 0.15 | 1.53 |
| SO2 | 96 | 1,110 |
| NOx | 18 | 160 |
| VOC | 97 | 99.8 |
| Nickel dust | Dec. 2002 value: 0.0090 (2) | 1.34 |

(1) Regulatory limits on atmospheric emissions are stated in the operating permit as hourly mass flows. They are calculated and related to annual output in the above table.
(2) Because of technical malfunctions in dust measuring equipment in 2002, an aggregate value cannot be given for the year. However, it should be pointed out that the figure given for December 2002, related mathematically to an annual aggregate, is in line with the values recorded for 2000 and 2001, i.e. 243 and 183 kg/year, respectively.

## Responsible waste management policy

Apart from the 96 tonnes of standard industrial waste and plastics produced in 2002, which were sent to a landfill, the process waste resulting from the plant's activity is recycled or disposed of through the appropriate channels. Out of a total of approximately 4,500 tonnes of process waste, over 95% is recycled as follows:

- 496 tonnes of iron hydroxide was sold to a company specializing in recycling the special metals contained;
- 4,131 tonnes of sulphur was used to make sulphuric acid. The nickel contained was recovered;
- 4 tonnes of oil from maintenance and 50 tonnes of iron scrap were also recycled.

Non-recyclable waste sent to specialised channels includes:

- activated carbon: 22 tonnes
- cleansing sludge: 80 tonnes
- liquid solvents: 21 tonnes
- solvent dross and wax: 18 tonnes
- bleach: 11.5 tonnes.

## Relevant organisation

The Sandouville plant includes a dedicated five-person team that monitors safety, risk control and environmental issues. One person is in charge of the environment on a full-time basis. The department reports to the plant manager and is the correspondent with the workplace physician for monitoring health issues.

# "NRE" law – HR section – Decree 2002-221 of February 20, 2002

Persuant to the above-mentioned decree,information on how the company allows for the social impact of its activities will concern its headquarters in Paris and the plant that Eramet operates in the port industrial zone of Le Havre-Sandouville, France.
Information tat must be provided in the board of directors' report or managing board's report for Stock Exchange-listed companies as from financial 2002.

## 1. Changes in the workforce

| | Scope | | | Comments and Examples |
|---|---|---|---|---|
| | Paris | Sandouville | Total | |
| **Increases** | | | | |
| Hirings on permanent contracts | 18 | 17 | 35 | |
| Hirings on fixed-term contracts | 2 | 1 | 3 | |
| Recruiting difficulties and reasons why | – | – | – | Proposed compensation levels and working conditions are advantages for recruitment. |
| Overtime hours | 0 | 2,207 | 2,207 | |
| External personnel: temporary staff on a full-time equivalent basis | 2.12 | 6.15 | 8.27 | |
| **Decreases** | | | | |
| Manpower reduction plans | | None | | |
| Job-saving plans | | None | | |
| Relocation efforts | | See comments | | Outplacement solutions implemented on a case-by-case basis. |
| Rehirings | | N/a* | | |
| Support measures | | N/a | | |

* Not applicable.

## 2. Working hours

| | Scope | | Comments and Examples |
|---|---|---|---|
| | Paris | Sandouville | |
| Organisation | In Paris, working hours are freely chosen within a given slot, employees declare their own working hours. | In Sandouville, part of the workforce is on 2 x 8-hour and 3 x 8-hour shifts. | |
| Duration for full-time employees | 35 hours | 35 hours | The law on work time adaptation and reduction was implemented through an agreement |
| Duration for part-time employees | Part-time work chosen by the individual at the rate of one day per week | Part-time work chosen by the individual at the rate of one day or half a day per week | |
| Absenteeism rate and reasons | 1.10% for sickness<br>0% for workplace or travel accidents<br>0.76% for maternity leave | 3.26% for sickness<br>0.44% for workplace or travel accidents<br>0% for maternity leave | |

## 3. Compensation

| | Scope | | Comments and Examples |
|---|---|---|---|
| | Paris | Sandouville | |
| Changes in compensation | Eramet SA's salary policy is intended to maintain consistency between the changes in compensation for each personnel category. While ensuring investment levels are maintained and, as far as possible, sustaining the level of employment, the policy aims for steady minimum increases in compensation even in economically difficult periods. | | |
| Social charges | No significant change | | |
| Bonus plan | 4.77% of total salary bill. Based on the Eramet Group's results | | |
| Profit-sharing | 0% | | |
| Employee savings plan | The plan provides for payments with an employer top-up within the limit of 3% of annual compensation. The top-up is 100% up to €240 and 40% over that amount. There are 3 mutual funds, one of which invests in Eramet shares. It is open to all Eramet SA employees. | | |
| Job equality (men/women) | No particular remarks | | |

## 4. Industrial relations

| | Scope | | Comments and Examples |
|---|---|---|---|
| | Paris | Sandouville | |
| Collective agreements | No agreement was signed for the scope of Eramet head office alone. | Additional clause on 35-hour week (transition to variable hours)<br>Agreement on stand-by<br>Agreement on availability for working hours<br>Salary agreement | Management-employee dialogue is favoured and a contractual policy is systematically sought. |

## 5. Health & safety

| | Scope | | Comments and Examples |
|---|---|---|---|
| | Paris | Sandouville | |
| Health conditions | Health, safety & working conditions committee revived in liaison with other Eramet Group companies based at Tour Montparnasse | Special effort on wearing of protective gear and on safety results through set-up of a vigilance group<br>Tidiness and cleanliness inspections | |
| Safety conditions | Working conditions correspond to a head office located in a very tall building. | The Sandouville site is classified Seveso 2, which implies great vigilance in terms of safety. | |

# "NRE" law – HR section – Decree 2002-221 of February 20, 2002

## 6. Training

| | Scope | | Comments and Examples |
|---|---|---|---|
| | Paris | Sandouville | |
| Policy | Training is highly personalised and intended for high-level managers and their assistants. | 40% of training is on health & safety. | |
| Indicators | The training effort represents 3.75% of the total wage bill | The training effort represents 3.90% of the wage bill | |

## 7. Disabled workers

| | Scope | | Comments and Examples |
|---|---|---|---|
| | Paris | Sandouville | |
| Employment | No disabled employees | 6.8 disabled people employed on a full-time equivalent basis | |
| Integration | No particular measures | | |

## 8. Company benefit plan

| | Scope | | Comments and Examples |
|---|---|---|---|
| | Paris | Sandouville | |
| Policy | Benefits are managed by an inter-company committee with a budget of over 0.4% of the total salary bill. The company bears a significant part of the cost of employee meals at an inter-company restaurant. Additional health insurance for eye and dental care is provided for employees at the company's expense. | Cost of a social worker borne by the company. On-site catering with part of meal cost borne by company. Shuttle transport borne by company. | |
| Indicators | – | – | |

## 9. Sub-contracting

| | Scope | | Comments and Examples |
|---|---|---|---|
| | Paris | Sandouville | |
| Extent of sub-contracting | No significant sub-contracting | Concerns industrial maintenance, upkeep of premises, guarding and catering. | |
| Promotion method for International Labour Organisation (ILO) principles | N/a | N/a | |

| | Scope | | Comments and Examples |
|---|---|---|---|
| | Paris | Sandouville | |
| **Subsidiaries** | | | |
| All: control method for compliance with ILO principles | N/a | N/a | |
| **ILO Principles** | | | |
| Child labour | N/a | N/a | |
| Forced or compulsory labour | N/a | N/a | |
| Equal opportunities and compensation | N/a | N/a | |
| Freedom of trade unions and collective bargaining | N/a | N/a | |
| **Local impact of activities** | | | |
| On local employment | | Employment levels are maintened by the set-up of measures favouring early retirement, with retiring employees replaced by younger recruits. | |
| Foreign subsidiaries: method for taking impact on local development into account | | | |
| Foreign subsidiaries: method for taking impact on local population into account | | | |
| **Relations with stakeholders** | | | |
| Integration associations | | | |
| Teaching institutions | | The Sandouville plant's management strives to pool environmental and safety problems and find solutions and preventive measures in close liaison with:<br>– local authorities, elected representatives and associations,<br>– regional health insurance and industrial companies & environmental authorities,<br>– other industrial (larger than Eramet, e.g. oil groups, Renault) in the area concerned. | |
| Environmental protection associations | | | |
| Consumer associations | | | |
| Neighbouring populations | | | |

# Glossary

## 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.

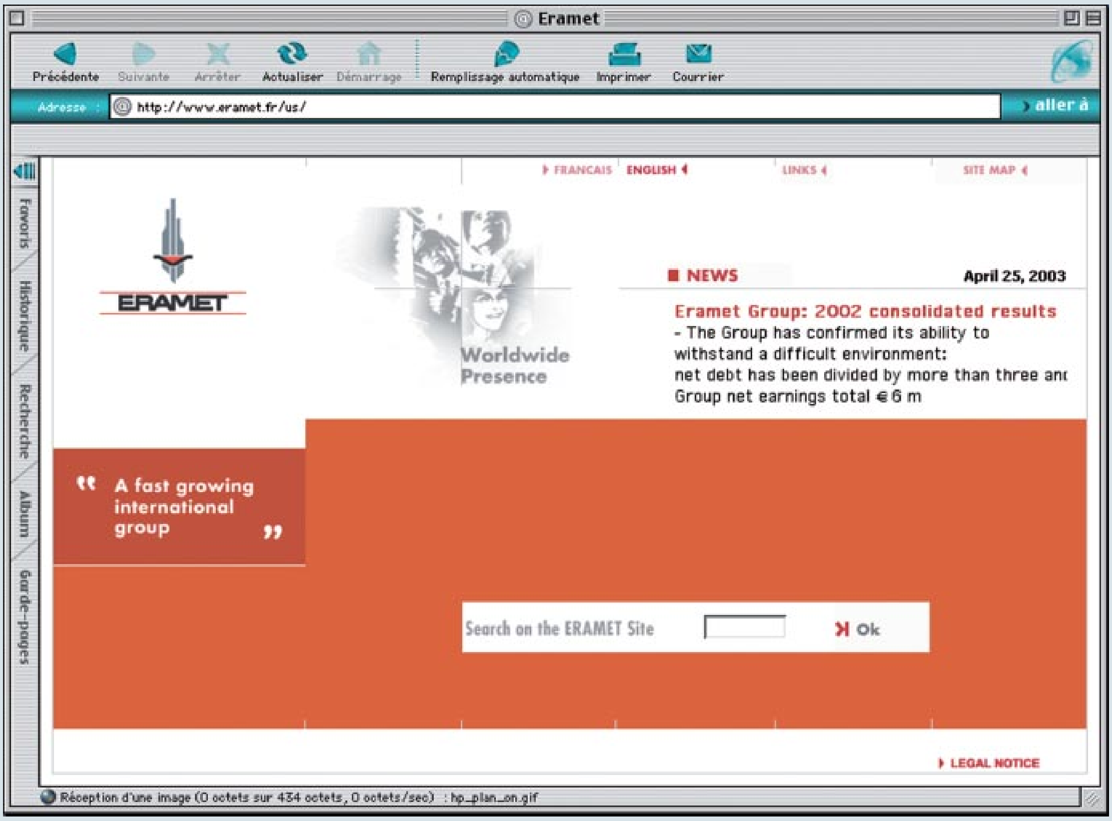
## Products:

### 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.

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**Internet://www.eramet.fr**

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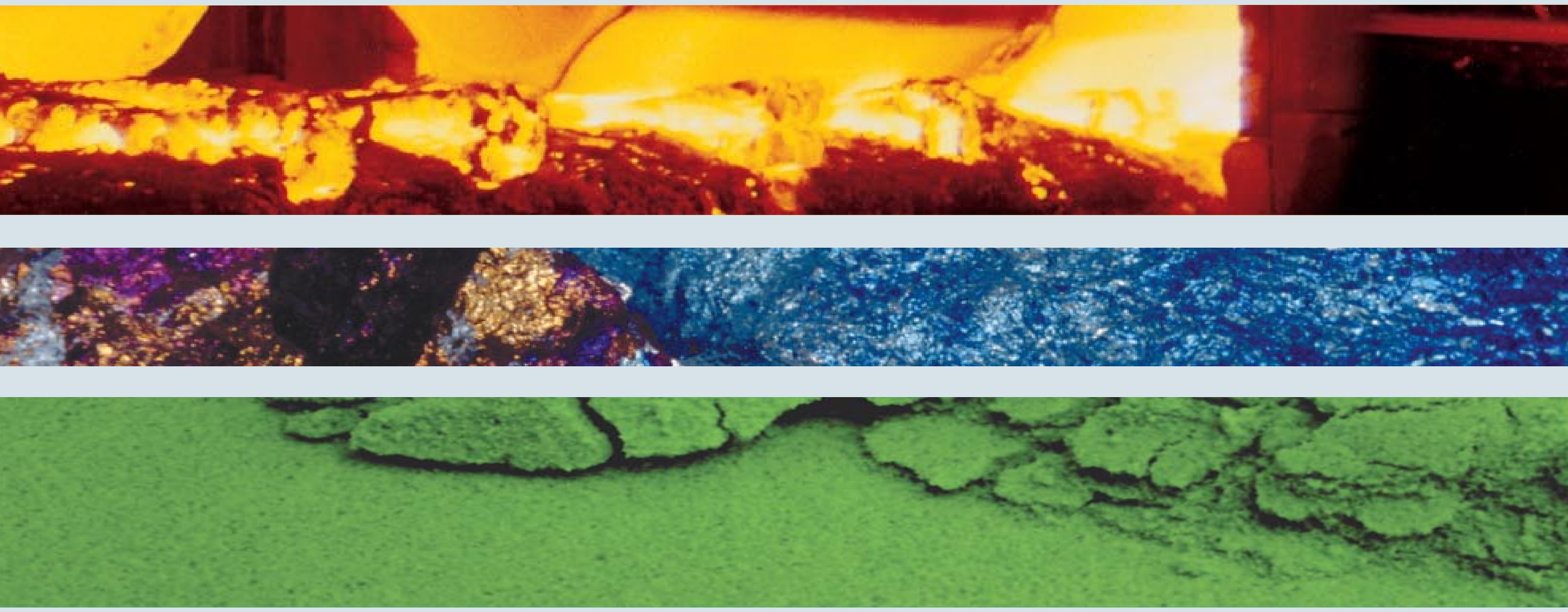

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