



# expertise

Carbone Lorraine's expertise was founded on its proficiency in advanced technology materials and its research into pioneering industrial solutions. The Group now excels in implementing these solutions in highly demanding industrial environments and for critical electrical functions.

worldwide in graphite anticorrosion equipment

worldwide in high-temperature applications of isostatic graphite

worldwide in brushes for

electric motors

worldwide in fuses for power semiconductors

2006 sales by business segment

Advanced Materials and **Technologies** 

Electrical Protection

Electrical Applications

use electrical power collection systems supplied by Carbone Lorraine.

industry benefits from numerous items of equipment produced by Carbone Lorraine, including brushes and brushholders, alternators, fuses, brakes and slip-ring assemblies.

3 -By increasing the length of its graphite exchangers' tubes to six meters, Carbone Lorraine has pushed back the technological barriers of its equipments.

produced by Carbone Lorraine is one of the few materials suitable for the production of components such as LEDs and the silicon wafers required to manufacture semiconductors and solar panels.

### Cutting-edge skills for a wide range of applications



Leadership in Advanced Materials and Technologies...

Carbone Lorraine is a world leader in graphite equipment and other high-performance materials intended for extreme industrial environments, such as high temperatures and corrosive environments. Among others, the Group supplies the fine chemicals, pharmaceuticals, semiconductors, solar energy, aerospace, plastics, ceramics, glass industries, etc.

...and in Electrical Components

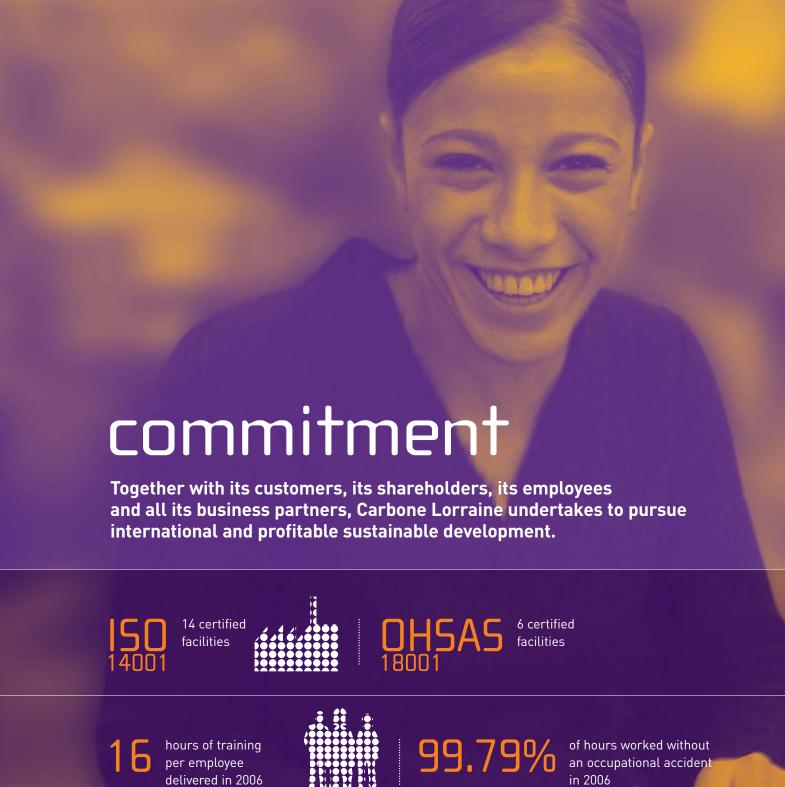
Carbone Lorraine has established itself as the world leader in Electrical Applications of graphite - brushes and brushholders for motors and in Electrical Protection, with a very extensive range of industrial fuses and related products and a customer-oriented organisation.

An expert in industrial solutions

Carbone Lorraine forges technological partnerships with its customers and gets to know their needs, processes and technical constraints as precisely as possible. By drawing on this expertise and on close relationships with industry operators that use its products, Carbone Lorraine designs genuinely innovative solutions for them.







of return on capital employed in 2006

during 2006 increase in the share price

### Carbone Lorraine's Chairman, spearheads the Group's commitment to good corporate governance, sustainable development and corporate social responsibility.

the Group's major plants have embarked on the processes necessary to obtain ISO 14001 environmental certification and OHSAS 18001 safety accreditation.

### 3 -An innovative concept

that has won market share for the Group while generating new benefits for customers: this is what Carbone
Lorraine's Growth + Award rewards. In 2006, the "Fitted skids offering" was the prizewinner. It aims to offer a full set of components comprising a complete heat exchanger-based system pre-assembled in the workshop to simplify equipment installation.

### 4 - A nickel-free braking

Carbone Lorraine recently developed this human-friendly technology.

Continuous improvement mindful of individuals

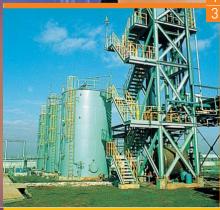
Energy efficiency for the sake of the environment

A confidencebased relationship with its shareholders

# A sustainability-based view of development









Sustainable development is based on a set of standards firmly anchored in the Group's culture. Carbone Lorraine boasts a responsible social policy fostering support among all its employees for the Group's corporate goals. Issues related to training, competency development, mobility and safety are addressed thoroughly, responsibly and with determination.

An active contributor to the development of renewable energies – solar, wind and hydroelectric energy and hybrid motors, etc. – Carbone Lorraine also maximises the environmental quality of its products. For instance, the Group manufactures nickel-free braking products and lead-free brushes and developed the eco-design concept with its Modulostar® fuseholder.

Carbone Lorraine has a solid base of individual shareholders, who account for almost one-third of its share capital. Transparency, rigor and high-quality information form the basis of its commitment to all its shareholders. For the third year in a row, Carbone Lorraine's Shareholders department was a prizewinner at the 2006 Fils d'Or awards.





## Chairman's message

# Growth takes shape in 2006

Last year, I emphasised our goal of turning Carbone Lorraine into a growth company. Our stronger sales performance in 2006 indicates that this transformation is now well underway. This strong growth is flowing from both our Advanced Materials and Technologies and Electrical Components segments. Our traditional markets enjoyed fairly firm trends in Europe and North America, but aside from a supportive economic environment, Carbone Lorraine's expansion was primarily driven by the benefits of our bold strategy of strong and profitable sustainable growth. This strategy is underpinned by vigorous expansion in Asia. In 2006, the speed of our development there outpaced growth in the region for the third year in a row.

Our expansion stemmed from the reinforcement of our manufacturing presence, which continued last year, with several new facilities opening up in China and India. This trend is set to gain further momentum in 2007 with the start-up of our new graphite block production plant in Chongging (China). This represents a major investment for Carbone Lorraine, which aims to satisfy growing demand from user industries, notably the electronics and solar power sectors. Our expertise and the quality of the graphite solutions we offer the booming semiconductor and LED sectors have made Carbone Lorraine a leading player in these areas. Our expansion strategy is also based on our contribution to the development of renewable energies. Strong demand for graphite from the solar power industry and the development of wind energy were major features of our performance in 2006 and are set to continue in 2007 and beyond.



Numerous new products and systems were launched this year across all our business activities, demonstrating the vitality of the Group's innovation, another mainstay of our expansion strategy.

As forecast, in 2006 we started up production of CL Clad® equipment for the chemicals and pharmaceuticals industries. The initial orders received show our customers' strong interest in this new material and back up the ambitious targets we have set for it. Likewise, in Electrical Protection, the successful start-up

of the Modulostar® project marked the first stage in the complete revamping of our product ranges. In addition, three acquisitions set to contribute to future growth were made during 2006. Each satisfied our demanding value creation criteria and, following rapid integration, is set to deliver the benefit of its own synergies and make an organic growth contribution from 2007 onwards.

The growth in our sales and the pursuit of our efficiency plans paved the way for an over 14% increase in our operating income and a net income of €35,3 million.

These earnings made 2006 a very good year for the Group, while our major projects, including the Chongqing plant, CL Clad® and Modulostar®, have yet to yield their benefits. These are set to start appearing in 2007 and peak from 2008 onwards. Our choice of a strategy to transform Carbone Lorraine into a company resolutely oriented towards strong, sustainable and profitable growth makes me confident in our ability to pursue our rapid expansion and to create further wealth for our customers, shareholders and employees in 2007 and the coming years.

### Claude Cocozza

Chairman and Chief Executive Officer



Executive Committee

Claude
Cocozza
Chairman
and Chief
Executive Officer

Jean-Claude Suquet Group Vice President, Finance and Administration

Renart Group Vice President, Electrical Protection Bernard Leduc Group Vice President, Human Resources and Quality and Continuous Improvement

Ernest Totino Group Vice President, Anticorrosion Equipment

Luc Themelin Group Vice President, Hightemperature Applications and Braking

# Key figures

# Growth plans off to a good start

The top-line increase achieved during 2006 shows that Carbone Lorraine's goal of turning itself into a growth company has gotten off to a good start. This growth is the result of major efforts in pursuit of the Group's four strategic priorities: expansion in Asia, energy efficiency, innovation and acquisitions.

- ••• The drive to expand the Group's manufacturing facilities and sales positions in Asia paved the way for market share gains in 2006, with sales moving up 15%. Over the full year, Carbone Lorraine posted strong growth in its sales to €640 million, representing an increase of 7% on a like-for-like basis.
- ••• The Group's operating income, which advanced by 14% compared with 2005, came to €61 million in 2006, with the operating margin reaching 9.5%. This increase was driven by higher sales volumes and the Group's improved operating efficiency. Net income from continuing operations moved up 14% compared with last year to €40.3 million.

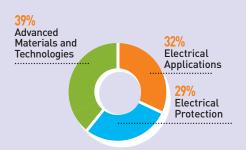
### Review of operations

••• The Advanced Materials and Technologies division posted 2006 sales of €247 million, up 6% on a like-for-like basis. This growth stemmed from the success achieved by graphite equipment in the electronics, fine chemicals and pharmaceuticals markets and in renewable energies, from brisk demand in Europe and North America and from the Group's continued expansion in Asia. The segment recorded an operating margin of 18.5% in 2006.

- ••• With sales of €204 million, up 14% like-for-like, in 2006 the Electrical Protection division reaped the full benefit of the restructuring measures implemented in previous years and the extension of its innovative and high-performance range of products and services. So-called related products (excluding fuses) enjoyed strong commercial success across all the Group's regions and now account for 20% of divisional sales. As a result, the division's operating margin moved up two points to 9% in 2006.
- ••• The Electrical Applications division recorded sales of €189 million, up 1% on a like-for-like basis. Sales of brushes for industrial motors and slip-ring assemblies posted a steep increase, especially in the wind energy, mining and oil extraction markets. Sales in Asia (China and India) rose significantly in 2006. The division's operating margin was 6.1%.

### 2006 sales

business segment analysis



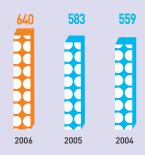
### 2006 sales

geographical analysis



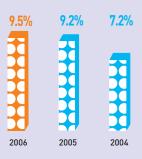
### Sales

in millions of euros IFRS (Continuing operations)



### Operating margin

IFRS (Continuing operations)



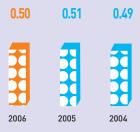
### Net income

per share (in euros) IFRS (Continuing operations)

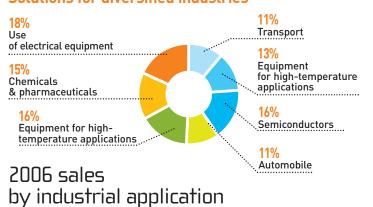


### Debt-to-equity ratio

**IFRS** 

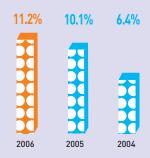


### **Solutions for diversified industries**



### ROCE

IFRS (Continuing operations)



# Advanced Materials and Technologies





# The Group is innovating and extending its leadership

Recognised expertise, an innovative offering and positions in extremely upbeat markets, such as solar power, electronics (semiconductors and LEDs), chemicals and pharmaceuticals, enabled Carbone Lorraine to extend its leadership in 2006. The commercial success achieved in Asia has now made the Group a force to be reckoned with in this region of the world.

### Growth and market dynamics

Capitalising on the dynamics of all its markets, particularly in the semiconductor industry. the Advanced Materials and Technologies business experienced strong growth this vear.

In China, work on the construction of the new graphite block manufacturing facility are coming to an end with the gradual start-up of production in 2007. This fresh increase in production capacity will help meet the strong demand for isostatic graphite among user industries and particularly the silicon industry in the semiconductor and solar power sectors. In 2006, Carbone Lorraine also heavily invested to strengthen its machining capacities close to its customers.

The electronics markets made a strong contribution to sales

growth. Significant growth was also recorded in refractory applications for kiln equipment and the manufacturing of ceramic body armour, as well as in the plastics and aerospace markets.

In anticorrosion equipment for the chemicals and pharmaceuticals industries. the year was marked by growing demand for turnkey installations (hydrochloric acid synthesis units, exchange and distillation groups, etc.), which are designed, engineered, built and brought into service by Carbone Lorraine.

Following several years of development, Carbone Lorraine was able to launch production of CL Clad®, a patented new material, in October 2006. Encouraging initial orders confirmed the appeal of this alternative offered by the Group to its customers, which can replace standard equipment. Lastly, 6 m graphite tubes,



makes it possible to equipment, especially distillation columns and pharmaceuticals industries.

is the speciality of GES, a North American company acquired by Carbone Lorraine in 2006. This acquisition posted very strong growth and has opened up potential new markets for in the ceramics, oil aluminium industries.

as early as 2007 at the new facility built by Carbone Lorraine in Chongqing, a metropolis in central

acquisition of which was finalised in early September 2006. technology which, together with the Group's new CL Clad® material, harbours substantial potential

### producing high-quality graphite on optimum economic terms.

highlights

In 2006, Carbone Lorraine

reaped the benefit of the previous year's capacity

increase at the St Mary's

isostatic graphite block manufacturing facility (US).

The plant ran at full tilt,

A new workshop producing noble metal anticorrosion equipment was inaugurated in Shanghai in 2006.

### CL Clad® is a new anticorrosion material developed and patented by Carbone Lorraine and produced in Pagny-sur-Moselle (France) Comprising steel coated with a thin layer of noble metal (titanium, tantalum, etc.), the CL Clad® represents a superior alternative to the equipment used previously in the chemicals and pharmaceuticals

industries.



a speciality that has consolidated Carbone Lorraine's technological edge, scored further commercial success, which speaks volumes about the Group's ability to anticipate the needs of its customers. Sales of brake linings for highspeed trains continued to head higher. In this area, most European high-speed trains use Carbone Lorraine's products.

### Solar power gaining momentum

Carbone Lorraine manufactures isostatic graphite dedicated to the manufacturing of solar cells and notably silicon wafers. The very firm position established by the Group in the US market, which accounts for a large proportion of worldwide silicon manufacturing capacity, as well as its future graphite production capacity in China represent valuable trumps that will enable it to capitalise on

the strong growth prospects for solar power.

### **Expansion** opportunities

Carbone Lorraine's growth strategy has prompted the Group to actively establish positions in expanding or advanced technology markets. The LED market, the market for diesel engine particle filters, one component of which (silicon carbide foam) requires large amounts of graphite, and the plastics market, with mould producers progressively switching from copper to graphite electrodes, represent segments in which Carbone Lorraine is now a highly prominent player.

# **Electrical Components**











# A bold policy that is paying off

A bold expansion policy in Asia and an unrelenting focus on innovation combined with systematic actions to tap into new markets helped the Electrical Components activities to deliver strong growth in 2006. The commercial successes enjoyed by brushes and Electrical Protection in wind energy, urban transport and Broadband over Power Line (BPL) installations reflect the vitality of these business activities.

### Strong growth markets

Electrical Protection activities posted strong growth in 2006. Market share gains were attributable to an active innovation policy and also reflected the efficiency of the division's strategy of costcutting and geographical restructuring pursued in Europe and North America over the past few years. The initiatives implemented to bolster the division's positioning in Asia, which was already very significant, also made a strong growth contribution. In 2006, action plans also focused on supply chain optimisation, with an organisational change aiming to deliver maximum service

Several fundamental trends reinforced the major potential for expansion in our markets: deregulation of the energy sector, giving rise to more and more demand for systems that can safeguard the quality of the current supplied to end users, the development of urban/interurban hubs - and thus the development of mass transit and hybrid vehicles and growing demand for electrical protection equipment for industrial installations. In Electrical Applications, sales of brushes for industrial motors made considerable headway in 2006, owing in particular to the mining and renewable energies markets. Carbone Lorraine's highperformance offering of brushes and power or signal transmission slip-ring assemblies enabled the Group to capitalise on the strong demand from the wind energy sector.



1 -Rail protection equipment with high quality standards will be manufactured in Shanghai (China) in 2007.

2 -The arc flash phenomenon is currently being examined in the US by a research group encompassing various industrial players in the electricity sector, including Carbone Lorraine, in order to design the effective protection solutions for both people and assets.

a French company that specialises in high-power contactors and the manufacturing of electrical equipment in control boxes and cabinets is now part

of the Group.

4 - Carbone
Lorraine's systems
for the wind turbine
market handle
the transmission
of signals that may,
for instance, control
the orientation
of rotor blades
according to wind
speed.

# highlights

Previous commercial development efforts in Eastern Europe enabled the Electrical Protection businesses to achieve strong penetration in the region this year.

The division also displayed impressive strength in Asia, with 30% growth driven by a renewed upswing in investment spending in Japan and by strong sales volumes in the Chinese market.



Sales of brushholders and metal slip-ring assemblies in the wind energy sector contributed to a booming growth in industrial Electrical Applications.



situation prompted the Group to halt manufacturing in this region and transfer its production lines from the US to India and France. This streamlining will yield its benefits from 2008 onwards. In 2006, Carbone Lorraine also completed the disposal of the

Magnets division, which helped

significantly reduce the exposure of the Group's sales to the automobile market.

A streamlining policy

••• Meanwhile, sales of
brushes and brushholders for
small electric motors business
decreased again because
of the drop in North American
automotive production. This

# Management and corporate responsibility



# A strong commitment

With ambitious performance, growth and international development objectives, human resources and competency management is critically important for Carbone Lorraine. By enabling the Group's men and women to play a full part and realise their potential, Carbone Lorraine continued to deliver sustainable growth in 2006 and made progress along the path to operational excellence.

### Recruitment

••• In 2006, Carbone Lorraine continued the development of its teams in Asia through recruitment in the region, primarily in China and India. At the end of the year, the Group's headcount across all its divisions stood at 240 people in China.

In addition, numerous salespeople and R&D engineers joined the Group to support its growth.

# **Competency** development

••• A unified process – annual objectives, individual annual reviews, management reviews, individual development plans – applies to all Carbone Lorraine's managers around the world.

# Human resource planning

••• In 2006, Carbone Lorraine initiated a fundamental review of how to adapt its human resources to meet its growth targets. The objective is to identify the types of positions that the Group will need to fill over the next five years in view of its development and technical progress.

# Continuous improvement

ooo The Group has implemented a program of continuous improvement – 5S methodology, annual challenge, etc. – since 2000. In 2006, a highly ambitious project management program was launched with the deployment of the Group Project Standard (GPS) method. By year-end 2007, all Carbone Lorraine managers participating in a significant project will be trained in this highly effective method.



# Compensation and benefits policy

••• At all the Group's companies, the variable portion of compensation and benefits is related to growth, EVA and cash generation. Attainment of growth objectives is incorporated in the calculation of managers' compensation using mechanisms tailored to each country.

### **Mobility**

• • • Carbone Lorraine wants to boost the international mobility of its managers from and to each and every country. Ensuring future employee mobility is indeed a priority aspect of the Group's recruitment strategy. To encourage and facilitate it, a Charter was distributed within the Group in early 2007.

### **Social diversity**

• • • Equal opportunities at recruitment, integration of visible minorities, and gender parity and equality. In 2006, in France, Carbone Lorraine launched a Diversity charter that follows initiatives implemented in North America for several years.

# highlights

**Innovation Prize** Each year, the Innovation Prize, which combines the Growth + Award and the Creativity Award, encourages innovative and valuecreating initiatives for Carbone Lorraine and its customers while rewarding the best projects and best ideas contributing to the Group's advancement and its focus on customer needs. In 2006, the Growth + Award was given to the "Fitted skids offering" (Advanced Materials and Technology), while the Creativity Award went to a particularly innovative brushholder.

### Worldwide 5S Challenge

It is a competition rewarding the best initiatives implemented at the Group's facilities (workshops and offices) to enhance their performance. It encourages teams to pursue a joint project to help their organisation make progress towards excellence at the service of external as well as internal customer satisfaction. The 5S method is part of the QPC program (Quality and Continuous improvement), which Carbone Lorraine CHALLENGE has been implementing for six years now.

CARBONE LORRAINE

### Shareholders and financial review



# A confidencebased relationship underpinned by transparency

Carbone Lorraine is devoted to answering its shareholders' value creation objectives. It relentlessly endeavours to allow a better understanding of the Group thanks to clear, regular and transparent information.

### 2006 in figures

••• In 2006, the 10% growth in sales drove a 14% increase in operating income and a rise of 14% in net income. Net income came to €35.3 million. which represented 5.5% of sales. Thanks to healthy cash generation, the net debt-toequity ratio remained stable at 0.50, in spite of very substantial investments made to support the Group's expansion. Carbone Lorraine thus has the requisite financial strength to pursue organic growth and growth by acquisition.

Carbone Lorraine's share price rose by 10.5% in 2006.

During 2007, Carbone Lorraine is set to pay out a dividend of €0.85, representing a yield of 2% based on the share price at year-end 2006. This dividend payment represents an increase of 10.5% on 2006 to enable the Group's shareholders to benefit from its earnings growth. This increase can be compared to the 12% growth of recurring results.

# A confidence-based relationship with its shareholders

••• Carbone Lorraine maintains a confidence-based relationship with its shareholders that is underpinned by transparency and it communicates through various channels to give them better insight into the Group, its strategy, business lines and fundamentals.



The Group's investor relations strategy is based on a regular program of informational meetings and presentations, including:

- presentations in Europe and North America to institutional investors;
- meetings and seminars on specific themes for investment analysts and business and financial journalists;
- informational and questionand-answer sessions with individual shareholders in France, backed up by a halfyearly newsletter.

# Shareholder structure at December 31<sup>st</sup>, 2006



### www.carbonelorraine.com

••• The website provides a valuable source of in-depth information about the Group's business activities. In line with the European transparency guidelines, all the documents published and press releases issued by the Group are available online.

# Key dates in 2007

### Sales reports

Fourth
quarter 2006
First quarter 2007
Second quarter 2007
Third quarter 2007

April 25<sup>th</sup>
July 24<sup>th</sup>
October 24<sup>th</sup>

### **Earnings reports**

Full year 2006 March 20th Interim 2007 September 12th

### Meetings with institutional investors

In Europe and North

America Throughout the year

## Meetings for individual shareholders

Lyon April 19th
Bordeaux May 29th
Paris October 19th
Lille December 4th

## Annual General Meeting of Shareholders

Paris May 24<sup>th</sup>

## Seminar for investment analysts and journalists

Carbone Lorraine and renewable energies

June 26th

# For further information, please contact

Investor Relations Department Carbone Lorraine Immeuble La Fayette 2, place des Vosges 92400 Courbevoie La Défense 5 France dri@carbonelorraine.com

Tel: +33 (1) 46 91 54 49



Carbone Lorraine Immeuble La Fayette 2, place des Vosges 92400 Courbevoie La Défense 5