



fives



Designing today the plants of the future

## PROFILE

As an industrial engineering group, Fives designs and supplies process equipment, production lines and turnkey plants for the world's largest industrial groups in the aluminium, steel, glass, automotive & logistics, cement, energy and sugar sectors.

Located in nearly thirty countries and with more than 6,100 employees across six continents, the Group is known for its technological expertise and competence in executing large-scale international projects.

The Group's know-how and solid field experience allow it to manage projects as a whole while respecting deadlines and fulfilling performance commitments. The effectiveness of its R&D programs enables Fives to design forward-thinking industrial solutions that anticipate client needs in terms of profitability, safety and compliance with environmental standards.

This strategy is also supported by a human resources policy putting people first, which promotes initiative-taking, technical excellence and team spirit.

▶ €1,268 million  
of sales

€1,674 million  
of order intake  
of which close to 56%  
in emerging countries

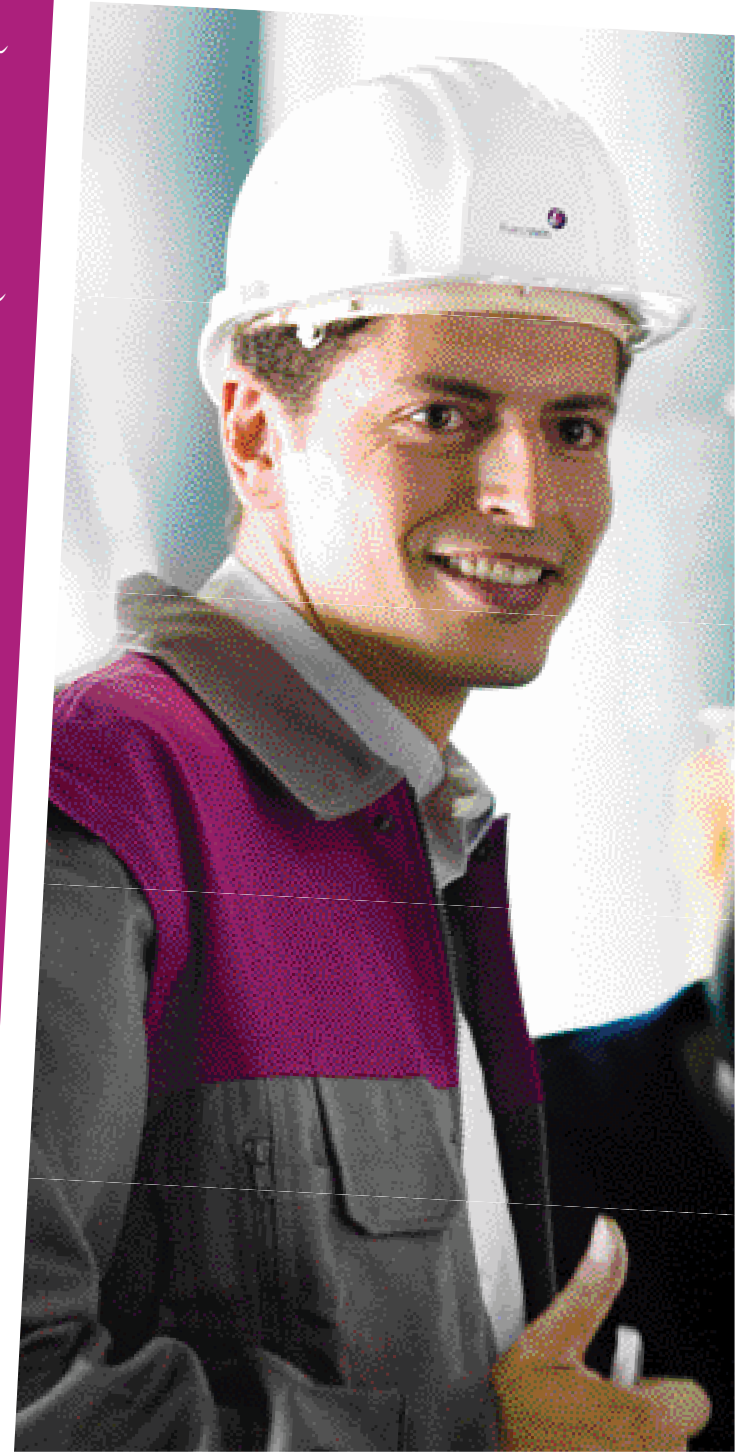
€245 million  
of shareholders' equity

6,108  
employees\*

More than 1,200  
people recruited in 2011

\*consolidation scope at Dec. 31, 2011

FIVES IN 2011



## MESSAGE FROM THE CHAIRMAN

# Fives, a growing Group that faces the future with confidence

The Group achieved many commercial successes during 2011 in all its business sectors, on every continent, resulting in an impressive rise in order intake for a new record level of nearly €1.7 billion, representing approximately a 40% growth over 2010. These successes are also the reason for the significant increase seen in our sales (nearly €1.3 billion, reflecting more than a 20% growth over 2010), marking a return to pre-crisis levels. Ultimately, the growth is a result of the dynamic markets in which Fives operates and the ability of our Group to embrace that dynamic, particularly being able to establish a strong presence in booming markets, such as Brazil, China and India.

The quality of our operational performance is another source of satisfaction. Fives achieved a new record of growth in 2011 with gross operating profits approaching €100 million for the first time in its history. For the first time since Fives began publishing consolidated financial statements, we have reached the point where all of our business sectors have achieved the same level of excellence, and have reported performances near record levels.

These outstanding results give our Group the resources it needs to tackle the uncertainties created by a global economic climate that consistently declined throughout the year, and to strengthen its focus on capital expenditures as it prepares for the future:

- **Investing in our people, who together form the core strength of Fives**

We will actively continue career management, training of our staff, grow and expand the extension of our teams (we hired more than 1,200 people worldwide in 2011, and

plan to recruit nearly 1,000 more in 2012) and the process of improving diversity are the absolute priorities for the Group.

- **Investing in Research and Development**

Our R&D budget continued to grow to more than €21 million in 2011 compared to 2010, with plans to increase it up to 25% in 2012 bringing the total budget to €26 million. The R&D growth is accompanied by two main objectives to offer our customers the plants of the future, one, to increase our technological lead and two, strengthen the competitive advantage of our solutions.

This is achieved by combining responsible development with industrial profit. We will accelerate our growth rate by designing solutions that deliver high levels of environmental added value by reducing energy costs and greenhouse gas emissions. We believe that the Fives Innovation Award introduced in 2011 has encouraged the emergence of truly innovative ideas from the grassroots level.

- **Investing in our commercial structure**

Fives has been actively expanding on an international basis for some years, including the plan to open new regional offices in the Persian Gulf and North Africa during 2012. Growth in emerging countries, which contributed nearly 60% of our sales in 2011, will continue to be one of our priorities.

- **Investing in our production facilities**

Our total capital expenditure rose by 70% between 2010 and 2011 (to €19.5 million), and is expected to double to €39 million in 2012, not only to increase capacity, but also to boost the productivity and competitiveness of our production facilities.

2012  
Fives Bicentennial

*"Fives should continue on its well-defined path to profitable growth in 2012; a worthy celebration of its bicentennial"*

*Frédéric Sanchez, Chairman of the Executive Board*

- **Investing in the Group's commitment to social responsibility**

We continue to work with our subsidiaries to promote the need to involve all our stakeholders and adopt the long-term vision inherent in our commitment to corporate social responsibility. In addition to the management and strategic impacts of this policy, this means improving workplace safety, minimizing our environmental footprint and paying close attention to business ethics at all times. It is precisely with these goals in mind that Fives joined the UN Global Compact in 2011. This first edition of our Annual and CSR report is designed to raise the profile of our initiatives and inform stakeholders of how they are progressing.

- **Investing in external growth**

Our goal is to expand and strengthen our product range, both technically and geographically. The 2011 integration of Fives Bronx as part of the Group's newly-formed Steel Division was part of achieving that objective, as were the acquisitions made at the beginning of 2012: Fives Combustion India Pvt. Ltd. in India, Solios Chemical in France and Solios Al-A'ali in Bahrain.

- **Investing in the proactive construction of the Fives brand**

The Fives brand is still young, its modern visual identity and 'driving progress' brand signature will be relayed by an active sales and marketing campaign. The key mission embodied by the creation of a Group-level Marketing Department is to improve the customer and market focus of all activities in order to accelerate this momentum.

With a record order backlog of over €1.5 billion at the end of the year (up to nearly 40% on 2010, and more than 85% higher than 2009), we now have excellent forward visibility, despite today's difficult and uncertain economic environment. As a result, Fives should continue on its well-defined path to profitable growth in 2012, which will be a worthy celebration of its bicentennial. At the same time, the Group will continue to evolve and adapt as successfully as it has done in recent years, remaining absolutely faithful to its values and corporate DNA.



# THE ESSENCE OF FIVES

HISTORY | HIGHLIGHTS | SUMMARY OF FINANCIAL INFORMATION | CORPORATE GOVERNANCE BODIES



01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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[Essence  
The basics, features  
or nature of a thing.]

# Fives, 200 years

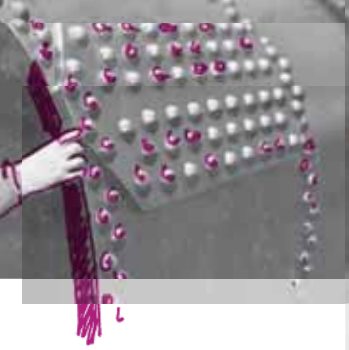
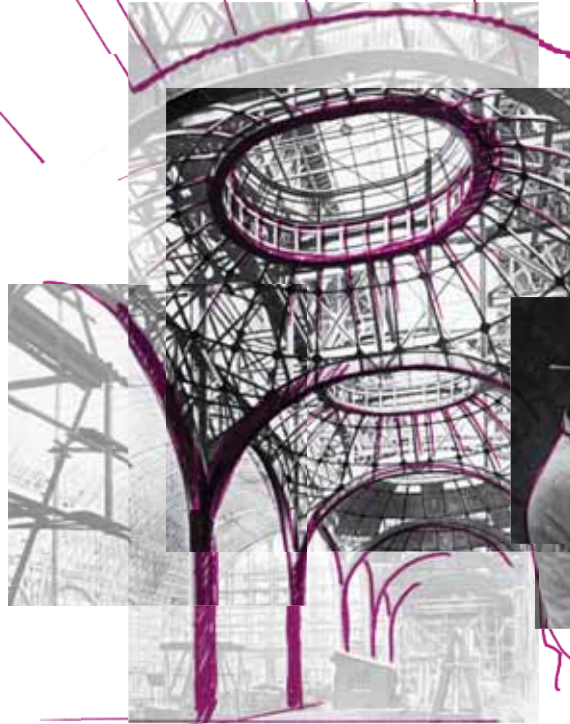
1812

1890

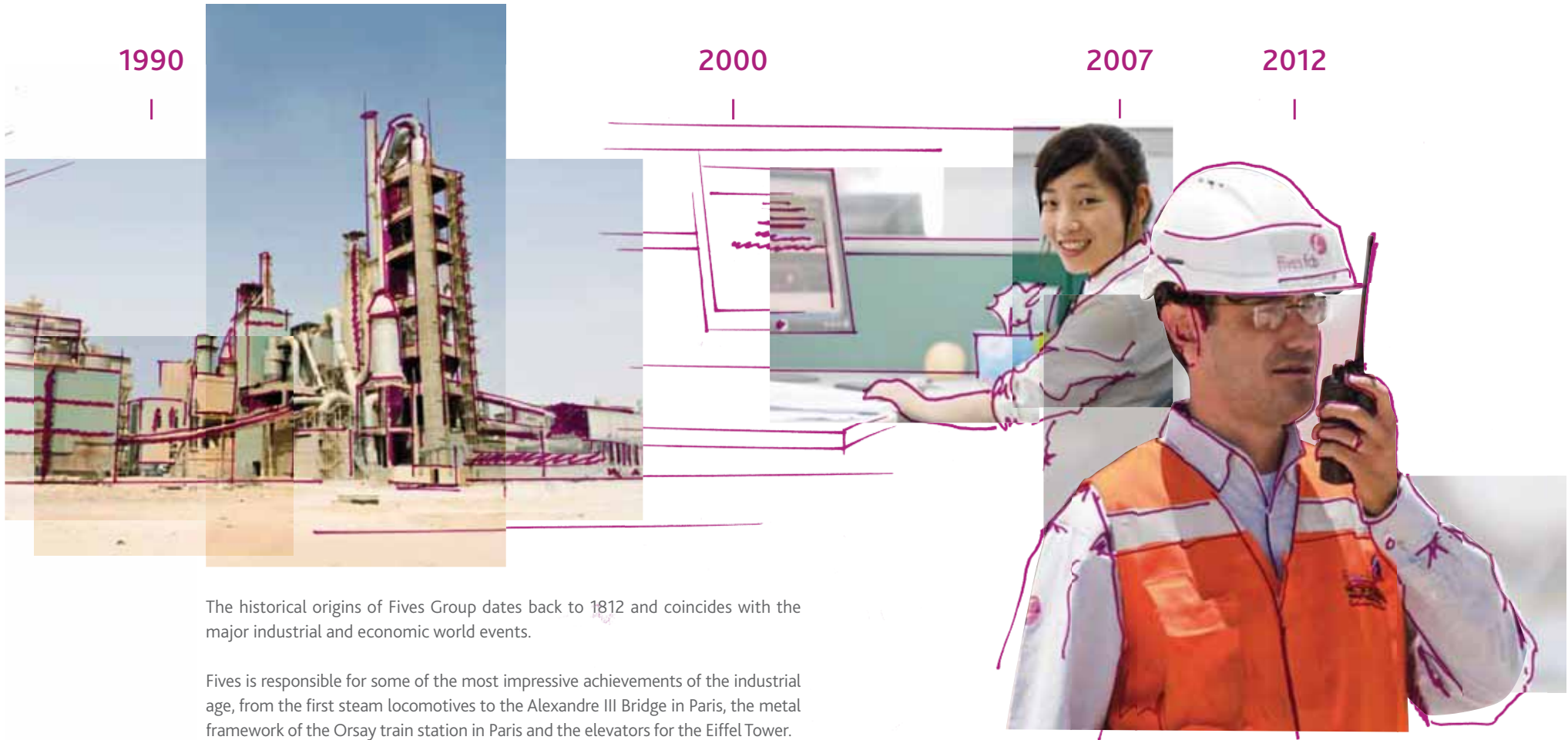
1900

1953

1980



# of industrial progress...



The historical origins of Fives Group dates back to 1812 and coincides with the major industrial and economic world events.

Fives is responsible for some of the most impressive achievements of the industrial age, from the first steam locomotives to the Alexandre III Bridge in Paris, the metal framework of the Orsay train station in Paris and the elevators for the Eiffel Tower.

Having become the Compagnie de Fives-Lille when Cail and Fives-Lille (two companies dating from the 19<sup>th</sup> century) merged in 1958, the company later changed its name to Fives-Lille-Cail and Fives-Cail-Babcock following mergers and acquisitions, finally becoming Fives in 2007.

## ... and personal journeys



## HIGHLIGHTS

# One year of commercial success around the world

## Canada

### January

Rio Tinto Alcan placed an order with Fives Solios for the supply of turnkey pot gas treatment centers for its new Jonquière pilot plant: the first aluminium production plant in the world to use 600 kA electrolysis pots.

### October - December

As part of an ongoing program to automate its main sorting centers, Canada Post Corporation selected Fives Cinetic twice. The solution for the Vancouver site will include the latest-generation high-capacity cross belt sorters capable of handling more than 20,000 packages per hour. The second order referred to the automation of the Calgary sorting center.

## Brazil

### July

In July, Fives Stein received an order from CBVP, a subsidiary of Cornélio Brennan, for a float glass plant with a production capacity of 800 metric tons per day. The glass melting furnace will use the very latest L.E.M® (Low Energy Melter) technology developed by Fives Stein, which reduces energy consumption by around 20% compared with the current market standards.

### October

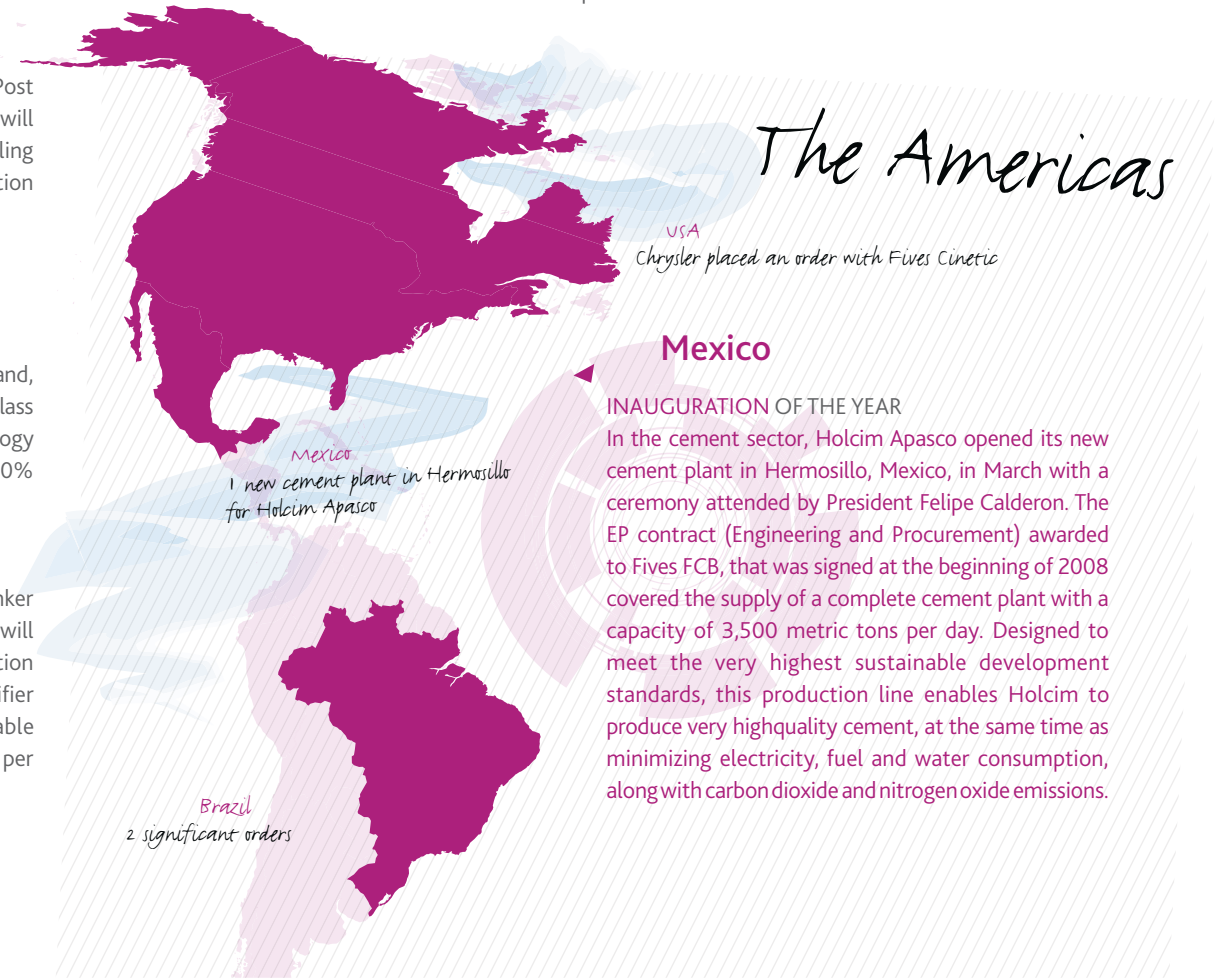
Holcim awarded Fives FCB an order for a new 4,500 metric tons per day clinker production line for its Barroso cement plant in Minas Gerais state. The new line will be equipped with Fives FCB water, energy and nitrogen oxide emissions reduction technologies, including an Horomill® 4400 and a TSV™ 3<sup>rd</sup> generation classifier for raw grinding and a Zero-NOx precalciner. These technologies will enable Holcim to increase cement production at this site by 2.6 million metric tons per year under optimum environmental conditions.

## United States

### February

Fives Cinetic received an order from Chrysler to supply its Kokomo (USA) plant with nine assembly and testing lines for key components used in the 8-speed ZF transmissions fitted to its rear-wheel drive vehicles. This new generation of gearboxes will be fitted to Chrysler vehicles from now on to deliver significant reductions in fuel consumption.

Canada  
3 new orders



The Americas

USA  
Chrysler placed an order with Fives Cinetic

## Mexico

### INAUGURATION OF THE YEAR

In the cement sector, Holcim Apasco opened its new cement plant in Hermosillo, Mexico, in March with a ceremony attended by President Felipe Calderon. The EP contract (Engineering and Procurement) awarded to Fives FCB, that was signed at the beginning of 2008 covered the supply of a complete cement plant with a capacity of 3,500 metric tons per day. Designed to meet the very highest sustainable development standards, this production line enables Holcim to produce very high quality cement, at the same time as minimizing electricity, fuel and water consumption, along with carbon dioxide and nitrogen oxide emissions.

Brazil  
2 significant orders



## CORPORATE SOCIAL RESPONSIBILITY AT THE HEART OF FIVES' ACTION

In April 2011, Fives subscribed to the UN Global Compact Program and confirmed its commitment to respect, to promote and to incorporate in its governance the ten Global Compact principles relating to human rights, labor standards, environment and the fight against corruption.

## Saudi Arabia

### February

Coming into force of the contract awarded by Saudi White Cement Company to Fives FCB to revamp the Muzahmiah plant's white cement production line and increase its capacity from 700 to 1,000 metric tons per day.

### February, May and June

Ma'aden Alcoa Aluminium, a joint venture formed by the state-owned Saudi Arabian Mining Co. and Alcoa, awarded a number of turnkey contracts to Fives Solios as part of its project to construct an industrial complex. This facility, which will produce 740,000 metric tons of aluminium per year using 720 electrolysis pots, will be the world's largest integrated aluminium production plant. This major success consolidates the leading position of Fives Solios in the three key sectors of the primary aluminium industry: carbon, electrolysis and foundry.

## UNITED ARAB EMIRATES

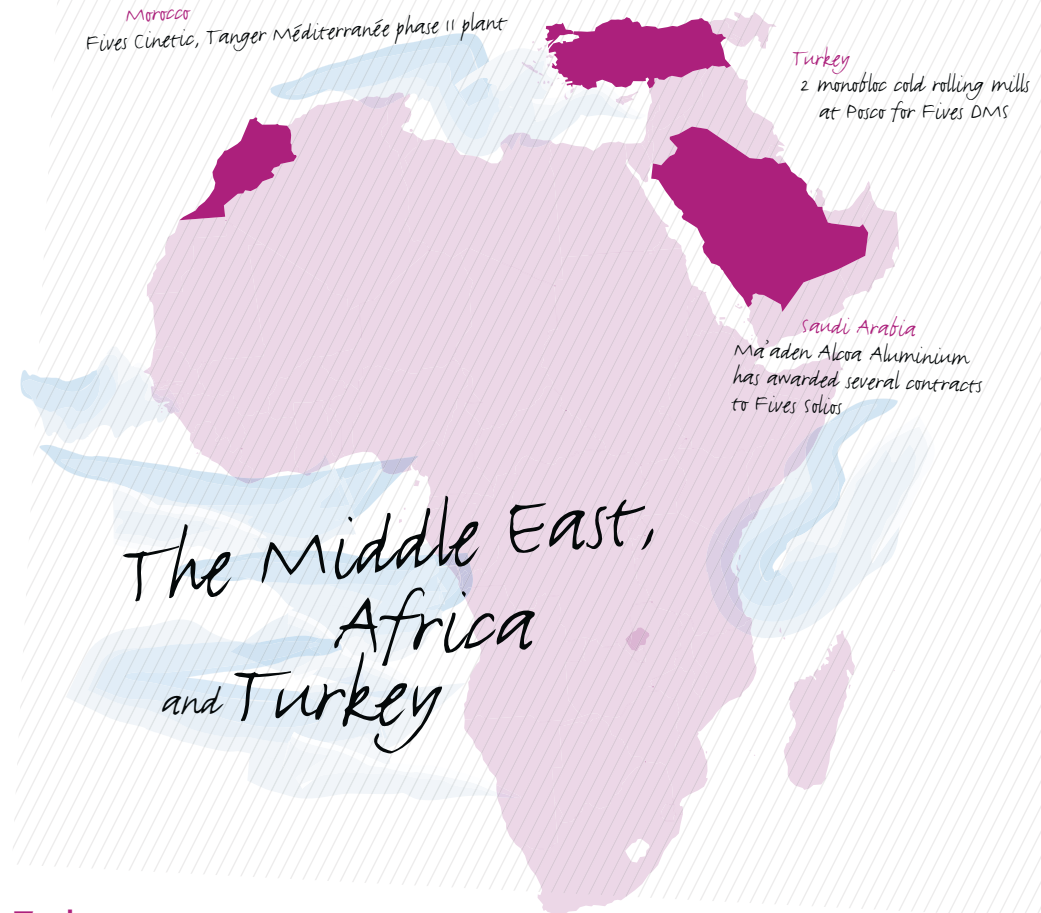
### April

Fives Cryogenie received an order from Saipem to supply 6 cold boxes for a gas unit at the Shah Gaz site in Abu Dhabi.

## Morocco

### November

After the commissioning of the new Dacia Lodgy production line, Renault confirm its trust and awarded new contracts to Fives Cinetic for the Phase II of its Tanger Méditerranée plant project. Those orders will cover all the handling systems for the metalworking, assembly shops and the fluid filling equipment for use at the end of the assembly line. By 2013, this site will be producing 400,000 vehicles per year, compared with the current 170,000.



## Turkey

### August

Fives DMS signed a contract for the supply of two monobloc cold rolling mills for the country's first stainless steel production facility now under construction by Posco in collaboration with Daewoo and the Turkish steel producer Kibar.

# HIGHLIGHTS

## France

### February

The stainless steels branch of ArcelorMittal, Aperam, has appointed Fives DMS for the supply of a stainless steel hot annealing and pickling line for its Gueugnon facility. The award of this order has highlighted the strengths of the Fives DMS-developed pivoting double-reel unwinding technology in terms of space saving and civil engineering.

### June and December

Awarded with two major orders, Fives Nordon has confirmed its position in the gas infrastructure market with TIGF (Total Group), the natural gas transportation and storage company. Those contracts apply to "Artère du Béarn" and "Girland" pipeline projects.

### December

Safran, leading group in aeronautics, defense and security awarded Fives Cinetic two contracts for the preventive maintenance and machine after market services for a three year period. The first contract applies to Corbeil and Gennevilliers sites where aircraft engines are manufactured, while the second one applies to Vernon site where Ariane rocket engines are manufactured. As included in those contracts, Fives Cinetic will also supply the sites with spare parts.

## Belgium

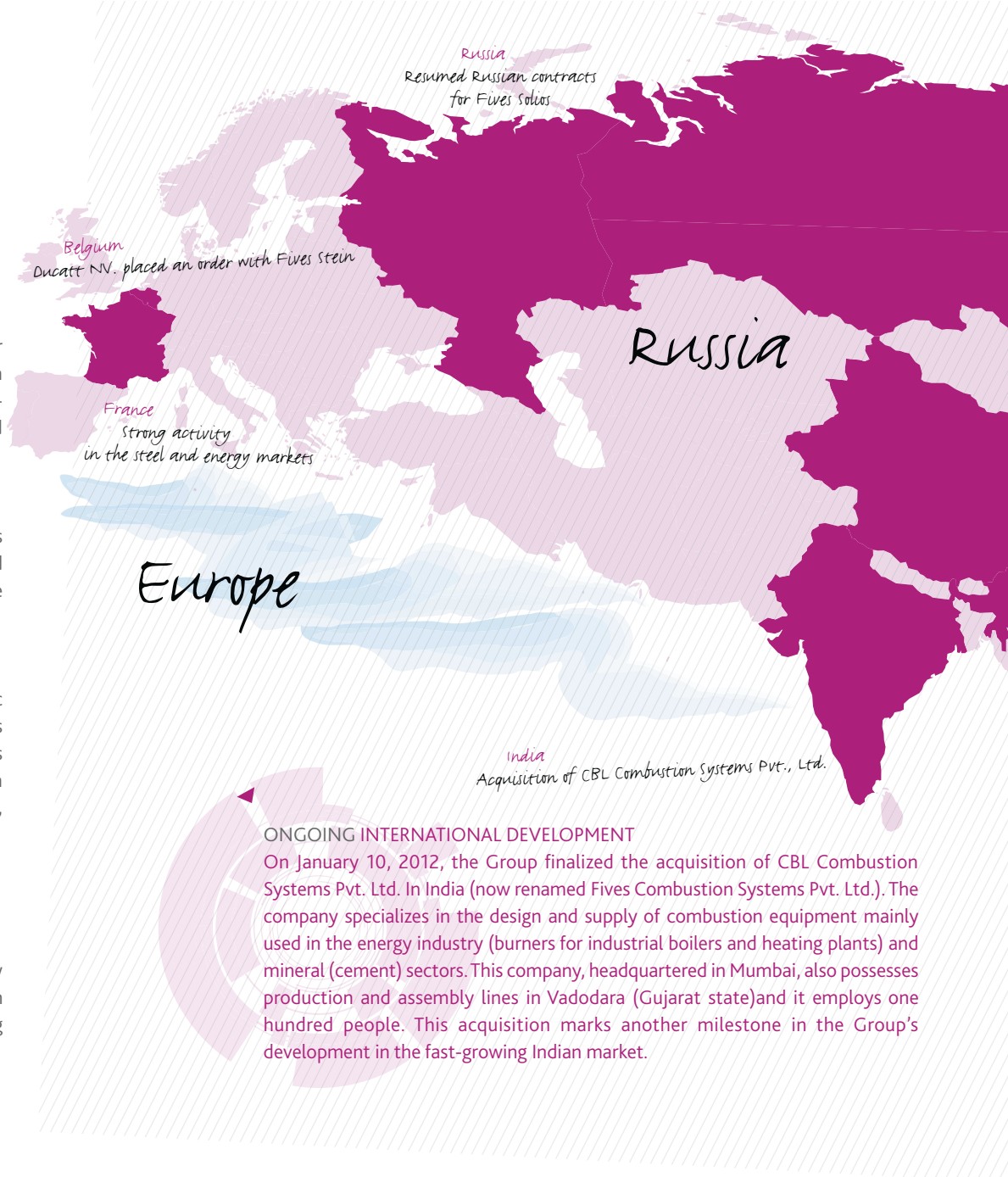
### March

Fives Stein received an order for a photovoltaic glass melting furnace for the new Belgian glassmaker Ducatt NV. This melting furnace uses oxy-combustion technology and has the very latest Group developments in terms of reducing polluting emissions and energy consumption.

## Russia

### July

Rusal, the world's largest aluminium producer, signed an endorsement with Fives Solios to resume contracts that were suspended in 2008, for the construction of gas treatment centers in its two new plants at Taishet and Boguchany in Siberia.



### ONGOING INTERNATIONAL DEVELOPMENT

On January 10, 2012, the Group finalized the acquisition of CBL Combustion Systems Pvt. Ltd. in India (now renamed Fives Combustion Systems Pvt. Ltd.). The company specializes in the design and supply of combustion equipment mainly used in the energy industry (burners for industrial boilers and heating plants) and mineral (cement) sectors. This company, headquartered in Mumbai, also possesses production and assembly lines in Vadodra (Gujarat state) and it employs one hundred people. This acquisition marks another milestone in the Group's development in the fast-growing Indian market.

## Asia and Oceania

*Japan*  
Yamato Transport awarded  
2 contracts to Fives Cinetic

### Japan

#### September - October

Having contracted Fives Cinetic to automate its sorting center near Tokyo's Haneda international airport in 2010, Yamato Transport awarded the company two new contracts to automate Atsugi and Hyogo terminals. The system proposed for both terminals includes cross belt and slide sorters technologies.

### Vietnam

#### February

Fives DMS began work on a contract to supply a ZR21 cold rolling mill to Posco, the world's third-largest steel producer. This order confirms the status of Fives DMS as the preferred supplier for the cold rolling mill market.

### India

#### February and November

SAIL (Steel Authority of India Limited) is one of India's leading steelmakers and a longstanding customer of Fives Stein. During the year, they placed an order for two Digit@l Furnace® reheating furnaces. The first one with a 200 metric tons per hour capacity for the new long products rolling mill in the Bhilai plant, the second one with a 300 metric tons per hour capacity for the strip rolling mill at Bokaro.

*China*  
A number of  
contracts awarded  
in the steel,  
automotive and  
nuclear markets

*Vietnam*  
Posco chose Fives DMS  
for the cold rolling mill

## China

### January

Fives DMS signed a contract with Wisco, the world's leading producer of silicon steel, for the supply of two ZR22 monobloc cold rolling mills. These two new rolling mills will join two previously commissioned for the company in 2006. They will produce a total of 186,000 metric tons of grain-oriented (GO) silicon steel, whose excellent magnetic properties are achieved using a rolling process made particularly complex by the high silicon content of the metal.

### February

Fives Stein now sets the benchmark for the global market in tinplate production following the successful commissioning of China's fastest continuous tinplate annealing lines. The company received a new order to supply Shougang Jingtang with a very high-speed (750 meters per minute) vertical annealing furnace with an annual capacity of 440,000 metric tons.

Fives Cinetic received an order for nine Landis LT2 machines from FAW 1st Engine Plant in China, where they will be used for grinding main bearings and crank pins on two truck engine crankshaft production lines. This order highlights the quality of Fives Cinetic orbital grinding technology and its enviable market position in emerging countries with fast-growing automotive market.

### August

Chinese steelmaker SWSS (South West Stainless Steel) contracted Fives to supply the company with its second stainless steel hot annealing and pickling line. Fives DMS will manage the contract, design and supply all the mechanical equipment for the line, assemble and commission the annealing furnace and stripping section. Fives Stein will then manufacture the furnace in partnership with its local company. This project is the first order for a stainless steel production line to be fulfilled entirely by the Group.

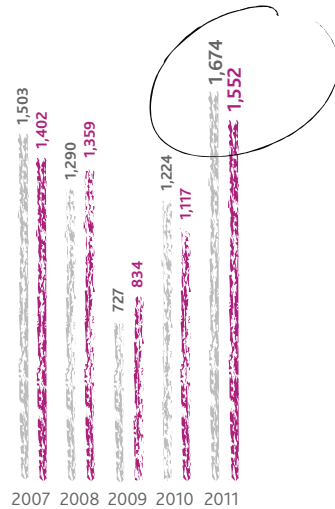
### September

Fives Nordon continued its involvement in the Chinese nuclear power program with the receipt of two orders for pressurizer expansion lines in the second half of the year. The first order, for two lines, was placed by CNEIC (China Nuclear Energy Industry Corporation) for the Fuqing 3&4 plants, and the second, for four lines originated with CNPEC (China Nuclear Power Engineering Company Ltd) for the Yangjiang and Fangchenggang plants.

SUMMARY OF FINANCIAL INFORMATION

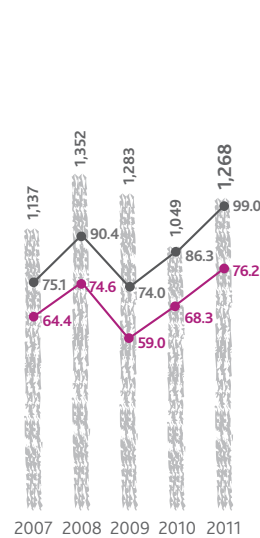
# 2011: a record-breaking year

Order intake and closing order book



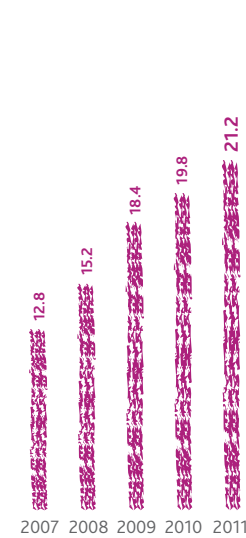
€ millions  
 ■ Order intake  
 ■ Closing order book

Sales, EBIT and EBITDA



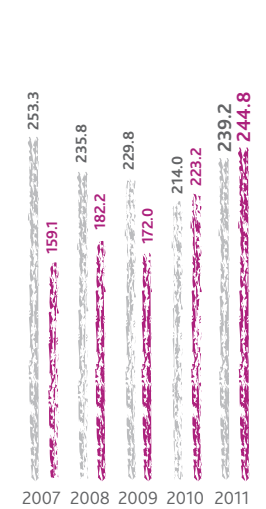
€ millions  
 ■ Sales  
 ● EBIT\*  
 ● EBITDA\*

Research & Development



€ millions  
 ■ R & D budget

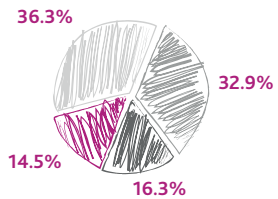
Closing net cash position and shareholders' equity



€ millions  
 ■ Closing net cash position  
 ■ Shareholders' equity\*

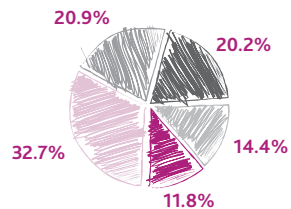
\* 2007 - 2008: french GAAP  
 2009 - 2011: IFRS

**Breakdown of order intake by end market and geographical area**



2011 Figures

- Automotive/logistics
- Metals
- Energy
- Cement



2011 Figures

- The Americas
- Africa and the Middle East
- Asia and Oceania
- France
- Europe (excluding France)

*“After a sharp rebound in 2010, the global economic recovery continued in 2011. As was the case in the previous year, the world’s emerging countries drove growth, driven by their substantial infrastructure needs and rising domestic demand. The developed countries, still at a recovery stage (lower capacity production, still-depressed real-estate markets and deterioration of public finance), however continued to make modest growth progress. Although the dynamic start to the year was later impacted by the summer financial crisis, the recovery in industrial capital expenditure projects, which was particularly strong in the first half of the year, resulted in a wider improvement of the Group’s business environment.*

*Within this generally favorable but still volatile and uncertain background, Fives delivered its best-ever performance in 2011, demonstrating the strength of its growth model and the relevance of its strategic positioning. As a result, Group order intake rose to the historically high level of €1,674 million, reflecting a 37% increase over 2010 (€1,224 million) and exceeding the previous record (€1,503 million set in 2007) by 11%. All business lines contributed to this success.*

*Business levels were particularly strong in the emerging countries (which accounted for 56% of the year’s order intake), where the commercial dynamic and local presence of Fives continued to support high order intake, especially in the Middle East, Brazil and China.*

*The Group also recorded a very good year of operational performance, reporting a record EBITDA of €99.0 million (up 15% compared with 2010). During which it continued to implement its Research and Development policy and strengthening its commercial and operational structures in emerging countries.*

*Lastly, the commercial performance achieved in 2011 allowed Fives to end the year with an historically high order backlog of €1,552 million, up sharply compared to 2010 (+39%) and 2009 (+86%), which provides the Group with excellent forward visibility of its activity levels in 2012.”*

*Lucile Ribot, Group Chief Financial Officer*



## CORPORATE GOVERNANCE BODIES

# Fives adapts its governance and organizational structure to its challenges

The Group has grown significantly over the last ten years, with the result that our labor force increased by 70% between 2003 and 2011. The spectacular growth of Fives has inevitably raised questions about the need to adapt its organizational structure and governance accordingly. In addressing those questions, the Executive Board has appointed a series of Heads of Country, an International Steering Committee and a Head Office Coordination Committee. Fives corporate governance is provided by several bodies detailed below.

## The Executive Board

Fives is headed by an Executive Board overseen by the Supervisory Board; the number of Executive Board members is established by the Supervisory Board, which has set a minimum of two members and a maximum of five.

The Executive Board currently has four members and is responsible for the management of the company. It has the most extensive powers to act on behalf of Fives under all circumstances, limited only by the company purpose and powers expressly vested by the Supervisory Board and shareholder meetings.

Every member of the Executive Board also have personal responsibility for supervising one or more of the Group's Operational Divisions and one or several functional Fives departments.

## The Executive Committee

To support it in its decision-making, the Executive Board has introduced an Executive Committee whose members include the Group's key operational and functional managers, as well as Executive Board members.

As the body responsible for consultation, recommendation and implementation, the Executive Committee meets to consider issues submitted to it, and to support the Executive Board in reaching those decisions that fall within its scope of competence. More specifically, the Executive Committee is tasked with making

recommendations regarding the direction of the Group's strategy, the development of its human capital and the issues raised by the need for coordination between its various entities. It assesses the risks to which the Group is exposed and the actions implemented to control those risks. It also examines and prioritizes the proposals for improvement put forward by the Steering Committee and Coordination Committee. Its tasks include coordinating and monitoring the implementation of Group policies.

The Executive Committee meets at least four times per year in larger or smaller session, depending on the issues to be addressed.

### THE SUPERVISORY BOARD

With six members at December 31, 2011, the Supervisory Board exercises permanent control over the management of the company by the Executive Board. It meets at least four times per year to consider the quarterly report submitted by the Executive Board. It inspects and verifies the documents associated with the corporate and consolidated financial statements submitted to it by the Executive Board within three months of the financial year end.

Throughout the year, it performs the checks and controls it considers appropriate and may request any documents it deems useful in the accomplishment of its role. The Supervisory Board members are: Jacques Lefèvre (Chairman), Guillaume Jacqureau (Vice-Chairman), James Arnell, Stéphane Etroy, Fabrice Georget and Vincent Pautet.

## The Executive Board



*Lucile Ribot*  
Member of the Executive Board  
Group Chief Financial Officer

*Jean-Camille Uring*  
Member of the Executive Board

### The Head of Country

All Group Companies operating in the same country (or region) report to a Head of Country, who acts simultaneously as a leader, coordinator and representative for Group initiatives at the national level. The Head of Country also manages Fives' relationships with local stakeholders, and coordinates the relationship between these stakeholders and national Group subsidiaries.

### The Steering Committees

As part of its commitment to give a say to those on the front line of the business, the Executive Board is forming a series of regional Steering Committees whose prime purpose is to act as the melting pot of creativity for the Group. In each major region, their membership includes subsidiary company CEOs and functional departmental heads from within Fives and/or the region concerned. They promote regional cross-disciplinarity and ensure that the Group's management bodies are fully in touch with operational needs. The Steering Committees meet three or four times per year, with members appointed for one-year terms by the Chairman of the Executive Board at the beginning of each year on the basis of current strategic challenges and priorities. Introduced this year in France, North America and China, similar committees will be formed at a future date in other countries.

### The Coordination Committee

The Executive Board is forming the Coordination Committee with the intention of boosting cross-functional interaction. This new body is being formed specifically to:

- provide overall development support and assistance to Group subsidiaries,
- act as a channel for informal communication,
- ensure consistency between the policies and the recommended measures.

The Coordination Committee meets two or three times per year.



*Martin Duverne*  
Member of the Executive Board  
In charge of the Energy and Logistics  
operational divisions

*Frédéric Sanchez*  
Chairman of the Executive Board



## CORPORATE GOVERNANCE BODIES

# The Fives' Executive committee

*Daniel Brunelli-Brondex*  
Head of the Operational  
Aluminium Division



*Benoît Caratgé*  
Head of the Operational Steel/Glass Division



*Jean-Marie Caroff*  
Head of International Development



*Alain Cordonnier*  
Head of the Operational Cement Division



*Michel Dancette*  
Head of Corporate Social Responsibility

The Executive committee is composed of the Executive Board members, the Heads of Countries and the Group's operational and functional heads

Sylvain Dulude  
Head of the North American Region



Jean-Paul Sauteraud  
Head of Legal Department



Paule Viallon  
Head of Human Resources



Michelle XY Shan  
Head of the Chinese Region



Denis Hugelmann  
Head of the Operational Automotive Division



# DESIGNING TODAY THE PLANTS OF THE FUTURE

INDUSTRIAL EXPERTISE AND INTERNATIONAL STRUCTURE | INNOVATION | ENERGY EFFICIENCY AND ENVIRONMENTAL IMPACT





## [Design

The process of imagining a design, arranging the various elements, to produce it or arrange its production. ]

## INDUSTRIAL EXPERTISE AND INTERNATIONAL STRUCTURE

# An organizational structure that ensures high-quality delivery of every project

Globally recognized for its technological expertise, the Fives Group undertakes and delivers major industrial projects worldwide. This combination of expertise and experience in industrial operations ensures that lead times and performance are exceeded by the Group. The Group's international structure gives it the flexibility and responsiveness essential for effectively adapting to the specific features of each project.

*64% = purchases volume on sales*

*7 key points*

### ✦ **Global presence**

With 80 locations in nearly 30 countries, Fives covers the world. The commercial teams of its subsidiaries are complemented by a network of representative offices in Asia, Russia, Brazil, Mexico, Turkey, and the Middle East. This network brings Fives closer to its customers and gives the Group the ability to draw on the experience of all its companies in any region of the world.

### ✦ **Expertise in key equipment markets**

Its in-depth knowledge of production processes enables Fives to develop key items of high added-value equipment. These key items are enabled by drawing on a very broad range of innovative technologies. These provide the installations it supplies with a very high level of service capability in terms of productivity, reliability, longevity, energy and environmental performances.

### ✦ **A culture of major projects**

Throughout its history, Fives has provided its support to leading industrial companies worldwide. The Group's century of experience has been gained in sectors of heavy industry ranging from aluminium and steel to glass, cement, energy, and the automotive industry and logistics. These industries are located where capital expenditure is high and projects have long lifecycles. It is a tradition that has established Fives as a partner unique for its expertise in industrial engineering and its ability to provide total management of major projects.

### ✦ **Network of trusted partners**

The Fives group has reconciled this diversity of countries and industries with its commitment to building ongoing relationships with its suppliers and has established a

panel of strategic suppliers by utilizing the purchasing experience of all its Group subsidiaries. This approach has two goals: the first is to control project-related purchasing risks without compromising financial performance; the second is to develop purchasing synergies between Group companies.

### ✦ **Synergies in expertise**

Its international, multi-sector expertise gives Fives an enviable panoramic overview of industry around the world. Fives shares this with its customers as part of a continual process designed to identify new solutions that combine technology with safety and profitability.

For the same reasons, Fives can very easily bring a broad range of skills to any given project by extracting the same culture of innovation and pragmatism.

### ✦ **Case-by-case adaptation**

As a Group structured into small, extremely flexible and responsive entities, Fives is strongly adaptable, which means that it can respond to each request within its own specific context. They then deliver a fast tailor-made response built around concepts already proven in terms of their design, implementation and/or coordination.

### ✦ **Close relationships**

In addition to the close physical presence Fives has to its customers in their own countries, the organizational structure is one of short management reporting lines and hands-on philosophy. This result guarantees that every customer will have easy access to points of contact with high levels of responsibility; people who are fully informed of projects in progress and are personally involved in their delivery.



## FOCUS

### REPRESENTATIVE OFFICES: SERVING THE LOCAL INDUSTRY

As the Group secures regional bases, the Fives representative offices are the physical fulfillment of its commitment to operate as closely as possible to its customers around the world.

Each Fives representative office is a crucial bridgehead for gaining a clearer understanding of local conditions and carrying out the groundwork vital for project success. Fives has knowledge of the local industries, experience in the local markets, relationships with official bodies, regulatory monitoring and local commercial presence...

**Representative offices are located in: Brazil, China, Japan, Mexico, Russia, Thailand, Turkey and the Middle East, which was opened at the beginning of 2012.**



### WHERE IS THE FIVES MANUFACTURING BASE?

For many years, the Group has chosen to retain full control over the production and assembly of all the key components required by its product range, and to sub-contract the fabrication of complementary components.

The Fives organizational structure reflects a decision that is supported by an international network of highly-qualified machining and assembly workshops, whose expertise and experience are intrinsic guarantees of quality. Some years ago, the Group extended this European/American network to include China and India, which have become powerful industrial

platforms from which the Group can serve its local and export markets.

Historically, the Group has also developed supervisory and engineering entities close to its key sub-contractors.

75 locations

of which  
23 are  
manufacturing plants\*

23 are offices

29 are mixed sites\*,  
regional facilities  
and test centers

INDICATORS

For more information, please refer to the BENCHMARKS section on p. 58

# Expertise in processes and innovation: knowledge is innovations!

“The only way to be really innovative is to immerse yourself in the process you are working on.” As the driving force behind innovation at Fives, it is this principle that fuels every aspect of the Group Research and Development.

## Offering the most successful solutions

Although the production process is usually defined by the customer, the role of Fives engineers is to understand the required performance criteria and offer the best-possible technical solutions. More productive, less consumption, safer and more flexible, defines the proprietary technologies developed by Fives. They lie at the heart of all the equipment manufactured and installed by the Group.

They are also the focus of an active patent registration policy designed to protect the important asset base represented by technical innovations.

## Anticipating the future needs of customers

The industrial performance objectives of the Group's customers are significantly evolving from the previous year as a result of the pressures from environmental challenges and expectations of stronger and stronger finished products. In this context, Fives anticipated this challenge and has dedicated part of its research and development to create breakthrough solutions for the equipment in accordance with the production processes of its customers. Fives' ambition is to provide its customers with technologies that support their innovations.

*More than €21 million  
expenditures on R&D in 2011*

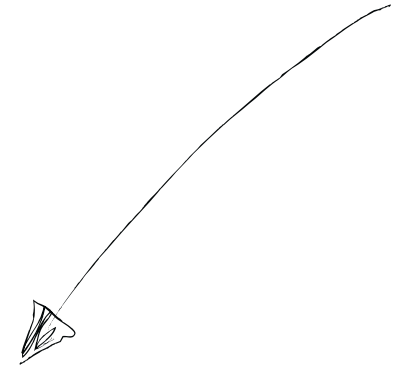
## Installation automation

In addition to innovations developed in the 'traditional' areas of heat transfer and mechanical engineering, Fives also pursues a major program of research in automation technologies. The aim of this focus is to enable the Group's customers to simplify the processes involved in managing their installations, and to maintain commissioning performance levels over time.

## Guaranteeing long-term performance

The process equipment and installations designed and manufactured by Fives have long life-cycles, with some extending to 50 years. Fives goes above and beyond the initial performance delivered by its equipment and recognizes the need to provide its customers with credible solutions and regular performance upgrades to support their long-term investment.

Combined with its expertise in process control, the Group's commitment to innovation is also focused on maintaining the installations it supplies. They also continually upgrade them by replacing modular components. This approach allows customers to receive the maximum benefit from technological developments without compromising their initial investment.



## FOCUS

### THE ERA OF AUTOMATION

Advanced automation has become a major focus for technological development. This field of innovation opens up many prospects for equipment development in terms of both production capacity and flexibility in use:

- **tracking** performance over time,
- **cost reduction**,
- **increased** flexibility,
- **simpler** maintenance operations,
- **optimum regulation** of installations in all circumstances.

On the basis of the success achieved by many of its key technologies; the real-time automation of orbital grinding operations designed by Cinetic Landis, the advances in steel production made possible by the development of the Digit@l Furnace® AT technology, and fabrication of green anode production with the proprietary Amelios Manufacturing Intelligence\* solution. Fives decided to apply these sophisticated automation systems to the cement plant firing lines (Optikiln from Fives FCB).

Ultimately, Fives will apply these advanced process control functions to the full range of its equipment.

\* Manufacturing Intelligence: turning large amounts of manufacturing & process data into real knowledge and driving business results based on that knowledge.

Key technological improvement areas

#### RESEARCH & DEVELOPMENT GOALS

- Reducing energy consumption
- Reducing the environmental footprint of equipment
- Maximizing installation flexibility
- Delivering maximum industrial and financial performance

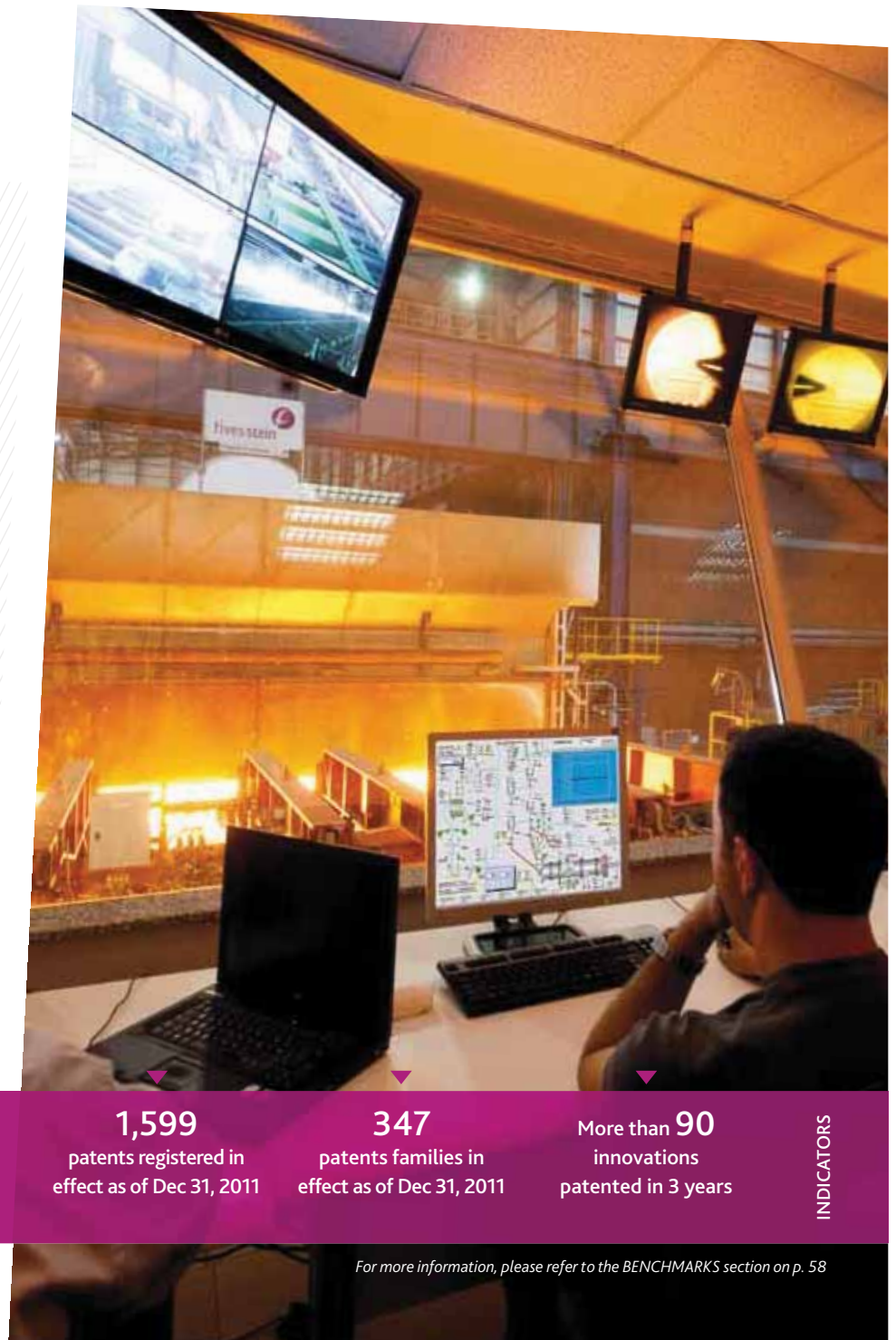
16  
test centers  
dedicated to R&D

1,599  
patents registered in  
effect as of Dec 31, 2011

347  
patents families in  
effect as of Dec 31, 2011

More than 90  
innovations  
patented in 3 years

INDICATORS



For more information, please refer to the BENCHMARKS section on p. 58



## INNOVATION

# Cultivating ideas using well-proven methods

Thierry Valot has been the Group Director of Innovation since 2005, and it is his job to ensure the implementation of the Fives Research & Development and industrial property policies. Interview with this driver of creativity within the Group.



## *How has Fives become so innovative in all its product sectors?*

For many years now, our proficiency in proprietary technologies and the development of specialty expertise in the processes operated by our customers has very powerfully set the Group apart from its competitors. Product lines by product lines, Group companies have developed a strategy that has made them distinctive within their markets, based on constant interaction with their customers. Our companies have also signed collaboration agreements with public and private research organizations in France and internationally: INSA\*. Fives Stein has worked together on a project focusing on rapid-cycle production techniques for high elastic limit steels, with the German Fraunhofer-ISE Institute and the Dutch research organization TNO. They have also collaborated with the Group on developing a breakthrough technology for the production of photovoltaic glass along with several other examples. This type of collaboration allows us to maintain a demanding level of scientific objectivity and benefit from the latest advances in fundamental research.

## *How do you drive innovation forward at the same time as guaranteeing installation performance?*

Before the innovation is launched into the market, it is tested under real-life industrial conditions and by a customer's interest in being the first to benefit from it. In our

business, this 'industrial preview' phase is crucial, and is usually achieved with the close collaboration of a particular customer. This gives us the opportunity to appreciate the vision and constraints of the operator, and to check that the level of performance calculated from digital models or extrapolated from scale models will be effectively achieved under real-life conditions. This final pre-marketing stage is one of real partnership that involves joint acceptance of the risks involved and the potential benefits.

## *How does Fives maintain its innovation capability?*

A cross-disciplinary structure was introduced in 2005 to coordinate the development programs of all Fives subsidiary companies. This 'Innovation Group' brings together all the R&D contact points and managers to promote cross-fertilization and technical synergies between companies. It also addresses issues of shared interest, including environmental performance, intellectual property management and automation.

Lastly, we have the Innovation Awards, which encourage the emergence of innovative ideas from a much broader base outside the R&D environment. After all, we shouldn't forget that we are essentially a Group of creative engineers! All our people are experts in their jobs, and if we can enable 4,000 employees with direct customer contact to express their own ideas, then some interesting possibilities can emerge!

\* INSA (France): the French National Institute of Applied Sciences

To stand out



### Demonstrator

#### Combustion systems

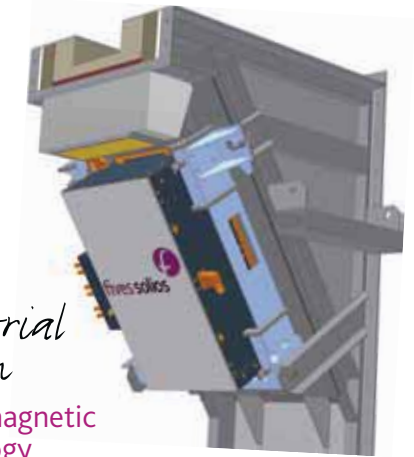
*In combustion systems for iron ore pelletization, Fives North American has designed and developed a 10 MW test facility (the largest in the world) installed at its Cleveland site which allowed it to perfect technology that reduces nitrogen oxide emissions by more than 95% compared with existing technologies. This development is now being marketed.*



### Partnership

#### THOR cryogenic piston pump

*In response to the market trend towards higher flow rates and pressures from cryogenic pumps, Fives Cryogenie has developed the most powerful cryogenic piston pump available, with a rated pressure of 25 metric tons. The exceptional performance delivered by THOR in terms of flow, efficiency and reliability opens up markets and applications previously available only to centrifugal pumps. The pilot application for this new pump, which is designed for use in LNG carriers, was conducted as part of a new process developed by Mitsubishi Heavy Industries.*



### First industrial installation

#### Genios electromagnetic stirring technology

*Installed during 2011 at VCM (Vedani Carlo Metalli), the Italian aluminium producer was under a development agreement with the Group. This latest-generation Genios electromagnetic stirring technology developed by Fives Solios, enables metal to be stirred and transferred by a single piece of equipment installed alongside of a static furnace. This new system has demonstrated its ability to achieve improved uniformity of temperature within the metal contained in the furnace after stirring. The system also cuts energy consumption and saves on maintenance costs.*

THE INNOVATION AWARDS: **CREATIVITY WITHOUT BOUNDARIES**  
Organized in many subsidiaries, these awards offer every employee the opportunity to contribute to the process of development. Employees can put forward ideas to improve what already exists or introduce a radical step change. This award also gives original ideas a very real opportunity of success by creating an environment that enables award-winning ideas.

From improving existing processes to radical innovations, and from the application of hands-on experience to purely conceptual ideas, the range of submissions is extremely broad. The 2011 winners included a design from South Africa for a consumable component that will facilitate the

maintenance of an existing piece of equipment, and a concept for a revolutionary furnace that will be the subject of a preliminary feasibility study prior to the creation of a prototype in India.

In 2012, a Fives Innovation Award Winners Award will go to one of the Group's 2011 Innovation Awards winners.



In 2011, **15** subsidiaries representing **21%** of the Group labor force competed for the Fives Innovation Awards

The subsidiaries Innovation Awards have been presented for the last **7** years to **87** winners of **8** nationalities

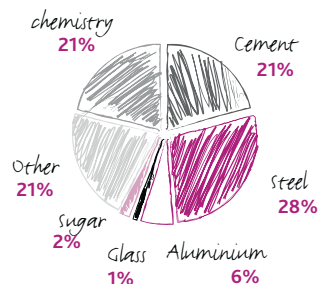
## ENERGY EFFICIENCY AND ENVIRONMENTAL IMPACT

# Eco-designed industrial equipment: giving our customers the competitive edge

Fives has committed to offer solutions that deliver the best-possible performance in terms of energy efficiency and environmental sustainability. This is a strategically important priority for the Group and a major decision-making criterion for its customers.

Total industry emissions:

10 billion metric tons  
of CO<sub>2</sub> equivalent per year



## Energy efficiency and environmental impact: major factors of market evolutions for Fives

The production of cement, aluminium, steel and glass consumes very high volumes of fossil fuels, and CO<sub>2</sub> emissions are the inevitable result of some of the processes involved. The industries that Fives is particularly active in account for more than 50% of all industrial greenhouse gas emissions. On the other hand, fighting climate change involves enormous capital expenditure programs that support demand for these materials: for instance high-performance cement to improve the building environmental performance, new steel grades for lighter vehicles and non-reflective glass for photovoltaic panels.

For these industries, improving process efficiency is a key response to this apparent contradiction.

## Energy efficiency and environmental impact: a differentiation opportunity

Reducing the energy consumption and environmental impact of the equipment it manufactures is a driving factor of innovation at Fives. To take full advantage of this opportunity to differentiate itself from the competition, the subsidiaries of Fives now work within a formalized eco-design framework when developing their equipment and solutions.

The Engineered Sustainability® program, initiated in 2010, is being progressively rolled out to all Group subsidiaries to provide them with the tools they need to incorporate eco-design into their development processes.

This program complies with ISO 14062 recommendations, and requires the commitment of individual subsidiary companies to:

- conduct environmental impact reviews of key products
- provide eco-design training for all technical and sales staff
- introduce a process of identifying areas for continual improvement

*Eco-design =  
a strategic route to innovation*

## FOCUS

### ENGINEERED SUSTAINABILITY®: A PROGRAM OF EXCELLENCE



Every item of equipment that is a candidate to carry the Engineered Sustainability® mark is now being analyzed in detail to identify its environmental impact during its life cycle.

This analysis focuses primarily on the following impacts imposed during its operating cycle:

- energy consumption
- greenhouse gases emission
- waste and pollutants
- discards and consumables
- water consumption

In addition, formalized risk analyses are conducted to guarantee the optimum safety of the users and environment.

Products carrying the Engineered Sustainability® mark are manufactured in accordance with precise specifications that deliver tangible customer benefits:

- Product performance data are clearly published and when possible compared with alternative solutions: previous versions of the product, best available technologies and competitor solutions.

- All possible technical and economical technical enhancements are incorporated into the product and offered as part of the sale.

Fives offers training for the equipment operators at the customer's location. This training ensures that optimal performance results are achieved based on the initial equipment design concept. This training enables the customer to maximize the equipment results and good management of advanced automation systems.

The equipment that carries the Engineered Sustainability® mark will help customers achieve their own objectives in terms of reducing the environmental footprint at both the production site and final product stage.

*"Our approach is to gradually introduce the principles of eco-design into the innovation processes so that they apply to all products developed by Fives. The Group Innovation Department coordinates the global implementation of the program, and ensures compliance with the Fives internal charter governing the rules of attribution and monitoring."*

*Pauline Plisson, Fives, Environmental Performance Projects Manager*



of **90** innovations patented  
in three years, **48** relate to energy  
and environmental performance

INDICATORS

For more information, please refer to the BENCHMARKS section on p. 58

# AT THE HEART OF FIVES

CORPORATE SOCIAL RESPONSIBILITY | ETHICS | HUMAN RESOURCES | HEALTH, SAFETY, ENVIRONMENT





[Heart

Center of activities,  
core focus.]

## CORPORATE SOCIAL RESPONSIBILITY

# A long-term commitment

Safety, environmental impact, cultural diversity, business ethics and the importance of sub-contracting, for Group Head of Corporate Social Responsibility Michel Dancette, the issues raised by corporate responsibility exist in every Fives activity. He explains what this means in practice.



### *What are the major challenges of Corporate Social Responsibility for Fives?*

Taking into consideration its business activities and its leading role in international industrial relations, Fives insists on operating as a responsible company with a standard of operational procedures and stakeholder relationships. In this context, our primary responsibility is to our employees whose expertise, motivation and commitment is ultimately the basis of our growth. Our international presence in nearly 30 countries raises a number of challenges surrounding the level of social welfare offered to our employees. The range of work we carry out in our own manufacturing plants and on our customers' sites presents a broad spectrum of important safety challenges. The many international missions undertaken by our people also make travel-related security an essential concern.

Then, there are the challenges posed by our markets. All Group subsidiaries have shared the same name and visual identity for five years. The result of our communal brand becoming more visible than before, has caused an increased need for more exacting risk prevention processes at the subsidiary level. At the same time, there is the need to promote the Group's technological excellence and its achievements in terms of energy efficiency, environmental performance and safety; all of which are essential factors in setting us apart from our competitors. We must not overlook the fact that Fives is a business that relies heavily on operations and equipment involving many sub-contractors. Their performance directly affects that of the Group itself, which is why the quality of

our contractual relationships, our mutual trust and the progressive commitment to Corporate Social Responsibility are all key goals for us.

Lastly, there is the environment. The need to minimize our environmental footprint affects us in two ways: on our own operating sites, of course, but also in terms of the equipment we manufacture, which is used in industries that consume very large amounts of energy and impose very significant environmental footprints, such as steelmaking, glassmaking, aluminium and cement.

### *What about governance?*

This is a key issue. Given the diversity of the Group's subsidiaries in terms of history, country and culture, the sharing of good risk management practices and the effective implementation of synergies are essential for an effective and efficient long-term operation.

### *How do you go about implementing the Group's commitment to Corporate Social Responsibility?*

In practical terms, CSR only becomes a reality when it is applied at the grassroots level by being incorporated into the operational structures of all Group companies. It is for this purpose that the CSR team has been supporting them ever since the Department was created in 2008. Our approach is structured into two phases: in the first phase, we presented the Fives CSR policy to each Group subsidiary

individually, explaining our challenges, how they relate to our performance and the action areas adopted by Fives. We are now in phase two, which is designed to get individual companies working on the practical implementation of these issues so that they can identify their own challenges and their own priority action areas. The individual companies will then incorporate the requirements of their customers, the constraints specific to their markets and their own corporate culture. Group subsidiaries have a lot of freedom in the way they define and implement their own Corporate Social Responsibility policies.

Our role is to act more as a catalyst on the basis of a program inspired by ISO 26000; a program that is both realistic and well suited to the international profile of Fives.

*“The primary objective of Fives’ approach to the Corporate Social Responsibility policy is to develop a forum for discussion for complex issues and to encourage open-minded discussions, to make the best solutions emerge in each Group subsidiary.”*

*Michel Dancette, Fives, Head of Corporate Social Responsibility*

At the Group level, our responsibility is to initiate or stimulate topics for consideration, which will then be developed by other head office departments. Lastly, we are also directly involved in the three key issues of ethics, health and safety and the environmental footprint of our business activities.

**How does the Corporate Social Responsibility policy benefit the Group?**

The equipment and installations we supply have lifecycles measured in decades, so the implications of the decisions we make now involve us in a long-term commitment to our customers. This long-term vision is therefore an integral part of the Group’s Corporate Social Responsibility commitment. It gives us the opportunity to improve the way we take into account of the views and opinions of our employees, partners and customers as the basis for building a new collaborative working model that extends beyond our purely contractual relationships.

Our Corporate Social Responsibility policy also gives us the chance to re-evaluate our organizational structures and challenge our practices on a regular basis. In this way, it is an important driver for change and continuous improvement for the Group and its subsidiaries.

Lastly, it is also a factor that promotes cohesion between Group companies, because it allows us to ‘lock in’ new companies by contributing to the process of building a shared culture. In the same way, it develops strong feelings of belonging and pride in being part of a Group that ‘does things properly’.

It also increases the expectations our stakeholders have of us, so we have no choice but to improve!

THE 3 KEY COMMITMENTS OF THE FIVES GROUP



<p><b>2009</b> The first non-financial reporting of the Group</p>	<p><b>2011</b> 84% of Group companies fully informed of the CSR challenges</p>	<p><b>2011</b> 12% of Group companies (representing 25% of employees) began their own CSR policies</p>
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INDICATORS

For more information, please refer to the BENCHMARKS section on p. 58



# Behaving responsibly and fairly

As the basis for responsible behavior in its relationships with third parties and strong belief in an international environment where corruption risks persist, Ethics have been a fundamental focus for Fives throughout its history. Three Group managers talk about what Ethics mean to them.



## High-quality internal relationships

*"I see Fives' Business Ethics as being primarily embodied by the men and women who work in the Group, and I see it particularly clearly in the quality of interpersonal relationships, which are built on trust and transparency. It is an attitude that people notice when they join the Group."*

*Michel Dancette, Fives,  
Head of Corporate Social Responsibility*



## A leverage for performance

*"When I think of Ethics, I think primarily in terms of the risk of corruption. Working fairly and responsibly is the only way of staying ahead in the long term. I am absolutely convinced that good business ethics are an important factor in long-term corporate success. Winning our markets on the basis of the performance delivered by our equipment, the expertise of our people and our project management skills, rather than on some unsustainable basis or other, requires Fives to maintain its leadership in terms of capacity and technologies. It is our required standards that will allow us to retain true competency over the long term."*

*Frédéric Sanchez, Fives, Chairman of the Executive Board*

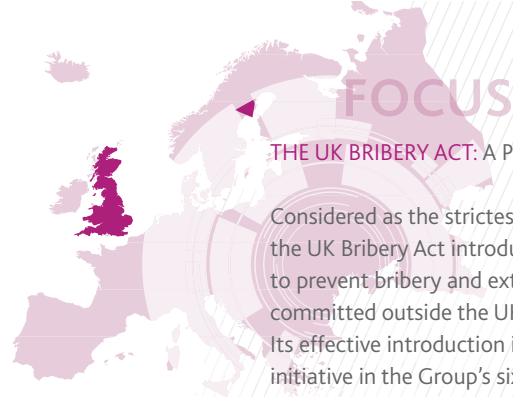


## Project benefits from transparency

*"We do a difficult job in delivering major projects in a demanding environment with the involvement of many sub-contractors. Close relationships built on mutual trust and supportiveness are imperative for project success. From providing honest information and disclosing important facts to suppliers, to treating partners fairly and operating on the basis of fair contract terms. It is all about customer safety and security. Above and beyond technological performance, ethical behavior is one of the prerequisites for successful project outcomes."*

*Raymond Chalifoux, Fives solias,  
Director of Operations*

Great Britain  
UK Bribery Act



### THE UK BRIBERY ACT: A PILOT INITIATIVE

Considered as the strictest corporate anti-corruption legislation in the world, the UK Bribery Act introduced two new concepts: criminal liability for failing to prevent bribery and extra-territorial jurisdiction to deal with bribery committed outside the UK.

Its effective introduction in July 2011 triggered the deployment of a targeted initiative in the Group's six UK companies:

- potential risk analysis
- the introduction of a corruption prevention policy
- a training seminar for each entity

This pilot initiative will be extended to all Group companies in 2012.

## Ethics in practice

First implemented more than 10 years ago, the corruption prevention measures applied by Fives have been strengthened as the Group has developed through strong external growth, substantial recruitment of new employees, the increasing share of international activities, as well as recent regulatory changes relating to Business Ethics (the UK Bribery Act of 2011).

### A multilevel structure

To ensure that the same rules of ethics are shared by all its companies and all its people, Fives implemented a corruption prevention policy, and provides information about the fight against corruption and anticompetitive practices:

- raising awareness in each subsidiary through local meetings and open conversations with local managers
- the implementation of a risk analysis procedure and risk prevention plan
- two levels of information:
  - **the Directives Manual** is prepared on the basis of an internal consultation, defines all the Group management rules: business ethics, purchasing procedures, how to conduct relationships with suppliers and sub-contractors, managing agents, etc. It is intended to be used by management committees and company managers as well as incorporated into their own internal procedures.
  - **the Code of Conduct**, which is published in 12 languages and issued to every Group employee.
- every employee has a duty to alert his or her supervisor, senior management team or the Group senior management team of any infringement, and is guaranteed complete confidentiality while the issues concerned are investigated.



*The same ethical rules are shared*



The Fives Code of Conduct is available in **12** languages

By the end of 2011, the Code of Conduct had been issued to **93%** of employees

INDICATORS

For more information, please refer to the BENCHMARKS section on p. 58

## HUMAN RESOURCES

# Bringing people together

International growth, rejuvenating employees, team loyalty... Fives brings employees together from three generations, represent more than 46 nationalities. So how do we surpass the differences, provide everyone with the personal attention they deserve and ensure that the expertise is passed on? We asked Paule Viallon, Head of Group Human Resources.



*How does the Fives Human Resources policy contribute to Group strategy?*

No matter how relevant strategies are, they still fail if we don't have the organizational structures and people to implement them. The essential capital of the Group is our people: by that, I mean all the skills, experience, expertise and diversity that are contributed by the people of 46 nationalities who form Fives today. Preserving this wealth and maintaining the trust-based relationship between the Group and its employees is a priority.

However, simply having those skills within the company is not enough, it is also essential to have clear, understandable processes in order to optimize the expertise within the organization. It is with this in mind that human resources supports each branch to ensure the durability, stability and forward developments of their organizations.

Lastly, the Group Human Resources Department is here to serve the subsidiaries: our goal is to provide our affiliates, which range in size from a dozen to several hundred employees, with human resource expertise to challenge their managers and to improve their practices in the field.

*In what ways do you respond to these challenges?*

The particular organizational structure of the Group, which is composed of more than 80 subsidiaries and representative offices, requires us to focus our attention on the essentials. We must adopt simple, transposable systems and implement universal processes.

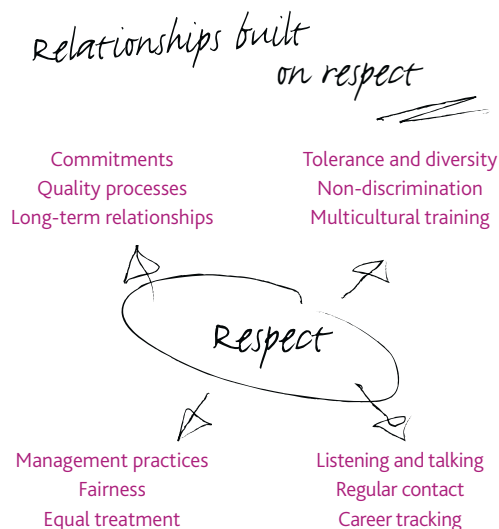
With this in mind, our main goals are:

- to use harmonious management systems to create a common management culture that is respectful of local cultures
- to build high-quality relationships with our employees by encouraging and supporting their individual career developments, addressing their personal aspirations and delivering on all our commitments
- to anticipate and evaluate changes in the organizational and professional structure of the company as the basis for developing the skills of our people in ways that link the needs of these future developments.

*So would you say that 'anticipation' is a key word?*

We see anticipation as an essential factor in the Group's long-term future and its ability to adapt to a continually changing world. It is an effective way to ensure job security for our people and help them develop with us.

It is also crucial for preventing any loss of skills, retaining our expertise and ensuring that knowledge is passed on from one generation of employees to the next.



## FOCUS

### PASSING ON KNOWLEDGE

The expertise of Fives is a strategically-important asset of the Group, and one that must be retained and passed on from one generation to the next. Each time a person is identified as having particular knowledge and/or expertise that should be passed on, a system is put into place. To ensure that this sharing process is effective, design manuals have been prepared in a number of subsidiaries. When a person is identified as having a specific skill, the process of transferring this knowledge takes the form of highly practical initiatives, including internal product and technology training and the daily sharing of experience with colleagues. To achieve this mission the process is sometimes arranged as a formal mentoring. In this case, it is officially communicated and incorporated into personal targets and objectives.

### SKILLS MANAGEMENT: TO MANAGE IS TO FORESEE!

The proactive career advancement and skills management approach is designed to utilize the business strategies and technological and economic advancements to develop the skills of employees. This ensures they are adapted as the organization evolves and are in line with future business strategies. The policy introduced under a Group-wide agreement that was signed in France is due to be introduced in other countries, this policy has now been introduced in 80% of Fives subsidiaries based in France, and covers nearly 75% of the country. As a powerful tool for long-term thinking, the career advancement and skills management policy is managed independently by each steering committee within framework that is set by the Group.

One key element is the 'Cèdre' career management committee, which operates in each subsidiary, joining company managers and the Group Human Resources Department together to conduct annual employee reviews. These reviews enable the company to identify high-potential individuals with the initiatives required to respond effectively to the future operational needs of the company such as job training and coaching, along with the career development wishes expressed by individual employees.

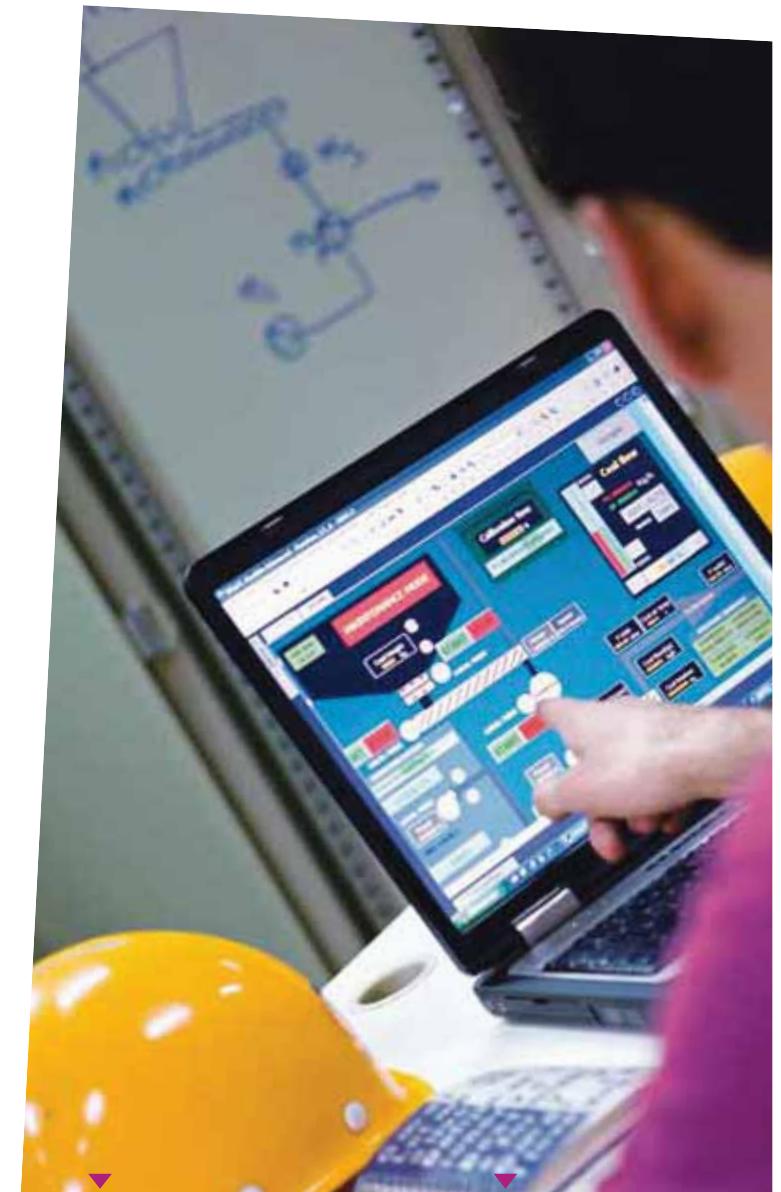


**6,108**  
employees in  
December 31, 2011

**1,231**  
people recruited worldwide in 2011

Nearly **1,000**  
recruits expected  
in 2012

INDICATORS



# Addressing personal aspirations

“How can the Fives Group contribute to my professional development?” As a Group that cares about the needs of its people, Fives has developed a comprehensive range of resources to answer this perfectly reasonable question.

## The Annual appraisal interview

The annual appraisal interview conducted between the employee and supervisor gives everyone the opportunity to understand their targets, receive feedback on their contribution, and take an active role in their own professional development. The appraisal meeting also provides employees with the opportunity to express their personal ambitions in terms of training.

## The Starter meeting

After six to eighteen months with the company, every new recruit receives a preliminary appraisal as part of a confidential meeting with a human resources specialist from a Group company other than their own. This meeting is designed to evaluate the quality of the induction processes, measure the level of satisfaction felt by the new employee, and consider what actions may be required to correct any incompatibility with the job concerned.

## The "career booster" interview

Initiated either by the Group Human Resources Department or by individual employees themselves, these interviews may be held at any time during the year to allow individuals to express their ambitions for career progression, whether within their existing company or in another Group company, directly to the Group Human Resources Department. The "career booster" interviews provide the opportunity to focus specifically on the issues of mobility and professional development.

*“The starter meeting is like the after-sales service of the recruitment process. It is there to verify that we have met our commitments and to ensure that there is no discrepancy between what was promised and what has actually happened.”*

*Paule Viallon, Fives, Head of Human Resources*

## Training course

Professional training remains one of the best ways for employees to progress in their jobs. Training course is delivered in a number of different forms throughout the Group. In France, group training sessions allow employees from different Group companies to meet and develop a shared culture around issues such as management, negotiation, sales and purchasing. Many other training programs, usually identified in annual appraisals, are organized directly by subsidiary companies themselves via external providers or by involving their own experienced employees. In addition, full training schools were created in certain subsidiaries to share knowledge within the business.

## International mobility

Based on its size and number of global locations, Fives encourages employees who wish to advance part of their international career. This program allows employees to benefit from the experience with the operational support from the Group, which prepares them for their departure and arrival back to their home country.

*244 interviews  
conducted since 2009*



*Benjamin Le Mout*

*Design Engineer, Cinetic Sorting Spa, Italy*  
 Benjamin joined the Group in May 2011, received his first **starter meeting** in December 2011 and his first **annual appraisal interview** in May 2012.



*Matt Shockey*

*Operations Director, Cinetic Landis, UK*  
 Matthew has been with the Group for 15 years, during which time he notably led the manufacturing shop at Cinetic Landis Corp. in the USA, and has benefited from both the **"career booster" interview and international mobility opportunities**. In 2011, he joined Cinetic Landis UK as the company's Operations Director.



*Sandrine Ngo Hagbe*

*Junior Treasurer, Fives, France*  
 Sandrine joined Fives Stein as a **secretary** in 2004, in which she had a **"career booster" interview** in 2008 prior to joining Fives as a management assistant. She completed an **executive training and graduated** in 2010. She has been working as a Junior Treasurer since May, 2011.

*Professional path* →

Fives combines all the benefits of a major corporation with the flexibility and comradery of a small business. Every employee receives career-long personal supervision as part of a process that involves regular meetings designed to ensure that every individual gets the professional development support needed to reach his or her full potential and talent.

## FOCUS

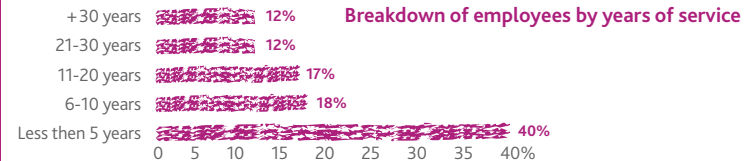
### VOLUNTEER LEAVE

In partnership with Planète Urgence and Project Abroad, Fives allows its employees to become actively involved in humanitarian projects that contribute to reducing North/South inequalities and protecting the environment. Based on the principle of joint commitment, employees offer their skills and time in the form of volunteer leave to help with humanitarian projects funded by the Group. Since the program was introduced in 2007, 33 employees have participated in vocational training, academic support and environmental protection missions.



Fives has conducted **244** "career booster" interviews since 2009

**60%** of employees attended at least one training course in 2011



INDICATORS

# Managing diversity: guidelines

As part of its commitment to consolidate management practices across all subsidiaries, Fives has prepared a set of HR policy guidelines. The Group is committed to compliance with these benchmarks, which have been developed out of a fundamental principle and the consideration of the cultural characteristics within each area of activity.

*Equity*

**[Equal treatment •** Regardless of the country they work in, their nationality or their culture, every individual is first and foremost an employee of the Group. The Human Resources Department ensures that he or she benefits from the same entitlements in terms of evaluation, skills development and career progression.]

**[Objective assessments •** Defined in the Group agreement, assessment methods are based on objective criteria: the professional behavior, recognized skills and contribution to results made by each individual through the work they do.]

**[Discrimination prevention •** Following a signature by the Group in France, 2007, preventing discrimination and ensuring equal treatment are a focus of ongoing training programs for all senior managers, human resources teams, employee representatives and management staff.]

**[Social welfare •** Given the diversity of its operating locations, the Group takes active steps to ensure that there are no inequalities in terms of the social welfare. Additionally, as part of converging these policies, the Group Human Resources Department is preparing a benchmark standard setting out a level of social welfare for each region, which will be consistent and compatible with specific local conditions and requirements.]

**[Compensation package •** The Group Human Resources Department defines compensation levels on a regional basis to ensure compatibility between Group companies and with regional standards.]

**[Recruitment •** Fives is committed to putting in place the best-possible procedures for identifying talented candidates at local levels, regardless of gender and/or nationality.]

*Non-discrimination*

**[Gender equality •** Fives has identified the need to bring more women into its business structure, and has made that need a priority. This is one of the first areas of gender diversity addressed by the Group, because of the small number of women in certain organizations. Today, despite increasing awareness and the dispelling of preconceptions regarding this issue, women are still under-represented throughout the Group. Every year, a number of individual recruitments are audited at random to identify any persistent discriminatory practices and remind everyone involved of the need to introduce more women into our teams. At the Group level - five out of every thirteen functional managers are women.]

**[Seniors •** Despite the high number of new recruits now joining our teams, seniors are still very well represented throughout the Group. This fact is the outcome of a policy that aims to recruit and retain seniors in accordance with our commitment to valuing and promoting experience in our business structure.]



## FOCUS

### [DISABILITY]

As part of strengthening its diversity promotion policy first introduced in 2006, Fives has accelerated its active commitment to recruiting and retaining disabled employees in 2011.

At the start of the year, the Human Resources Department conducted an audit of all the Group's French companies with the aim of establishing a clear overview of the current disability employment situation at Fives and developing appropriate action plans going forward.]

This audit revealed:

- a lack of knowledge about the issues involved, and concerns regarding the integration of disabled employees;
- prejudices in relation to disabled employees and their ability to carry out any job within the Group;
- a genuine willingness amongst stakeholders to move current practices forward.

It is against this background that Fives plans to roll out a communication campaign that will take in all subsidiaries and offices. This communication campaign will be accompanied by initiatives implemented during 2012. The first implementation will begin in France, and the individual initiatives will focus on:

- training to raise awareness primarily amongst managers and HR departments of the issues surrounding the integration and support of disabled employees;

- strengthening the practice of subcontracting with companies employing disabled people;
- creating a more systematic integration of trainees and employees with disabilities;
- social partner training.

Fives has high hopes that this awareness initiative will change views and attitudes regarding disability, and intends to ensure that embracing difference becomes a factor for success throughout the company.



In 2011, Fives group was composed of more than **50** nationalities

**84%** are men

**16%** are women

**30%** of women are engineers and/or managers

INDICATORS



## HEALTH, SAFETY, ENVIRONMENT

# Safety without boundaries

Pascal Mercier has been the Group's Health, Safety and Environment Coordinator since 2009. To coordinate the network, conduct internal audits and lead training programs, he continuously travels throughout the world for Fives on his mission to maximize the Group's performance.



## “Adapting the method

The situation I discovered when I joined the Fives Group was something of a paradox: health and safety were clearly very important issues for all senior managers, but concretely, some practices and attitudes were less than rigorous, and principles weren't implemented systematically. The results of that in terms of accident statistics told their own story.

Naturally, the diversity of work carried out by Fives teams, the variety of countries involved and differing levels of customer requirement made it impossible to take a one-size-fits-all approach.

I therefore built my method around a local presence, with audits conducted in workshops and on installation sites, by which I mean actually being there alongside the teams as internal audits are conducted, which gives us a clearer understanding of the context of the work involved, and the ability to open improvement leads that are 100% adapted to the work involved.

This also gave me the opportunity to capitalize on best practices around the Group, whether in England, the USA, Italy, China or France

## Teamwork

In practice, audits are always conducted by a team of two: one person from the headquarter and one of the ten experts of the internal HSE audit team, also directly involved in subsidiaries. This creates a perfect opportunity to share experience, upskill our people and - more importantly - create bounding.

## A network of 45 representatives

One of my first missions was to expand and coordinate the network of HSE representatives in order to share issues and good practices between subsidiaries. This very active HSE community now has 45 members, 25 of whom are full-time HSE managers. Since 2010, they have come together regularly at regional meetings, and in 2012 all attended a worldwide meeting.

## HSE, a strategic device

Employee health, cost control, lead-time reduction, quality improvement and consolidation of commercial relationships, etc. Together, the issues covered by HSE provide a powerful tool for improving Group performance and organizational change. This is a subject that concerns everyone, from the CEO who has to demonstrate his commitment to safety, to the site worker who doesn't wear his safety helmet. Once you have been confronted by these issues face-to-face, you no longer see things the same way!

Our next major project will focus on our sub-contractors. It is essential that we support them so that they too can improve their health and safety cultures.”

« Globally speaking, “Best-in-class” companies regarding safety are also the “Best-in-class” companies regarding operational excellence. »

Pascal Mercier, Fives, HSE Coordinator

2011 frequency rate  
7.57

## The green anode workshop at the Ma'aden aluminium plant: a model to follow

The policy 'integrated safety', driven by Bechtel, the prime contractor of the Ma'aden aluminium production complex, and implemented on that site, has paved the way moving forward for all Group companies involved with on-site work.

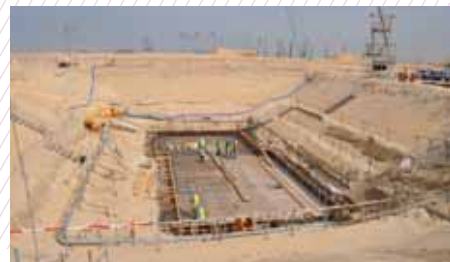
On this site, every operation is the subject of a dedicated advance job safety analysis, which is then used as the basis for developing a method statement for the operation. That assessment and method are then validated at three levels: by the sub-contractor, by Fives and by the project owner. Operations with a particularly high level of risk are also subject to the issue of a work permit by Bechtel. The workers involved in each operation are then trained, not only in general safety measures, but also specifically on that operation. Only then do they begin working.

This organizational structure is complemented every day by a non-negotiable regime followed by every worker on arrival at the site: body warm-up exercises to sharpen reflexes and vigilance, followed by a five-minute training session to deliver the safety message of the day and review the risks relating to the tasks for that day.

*"What struck me particularly about this site when we audited it in 2011," emphasizes Pascal Mercier, "was the commitment of everyone involved and the feeling that people were working hand-in-hand to achieve the shared goal of ensuring safety for everyone. The personal involvement of each worker, their training, their supervision and their respect for the rules was the same, regardless of their qualification level. Lastly, there was the general appearance of the site: impeccable! Not only in terms of its organization, but also its tidiness and cleanliness. Safety is a genuine priority here. It is also a determining factor in on-site project progress."*

### THE MA'ADEN PROJECT SITE (as on March 30, 2012)

CUSTOMER Ma'aden Alcoa Aluminium  
 LOCATION Ma'aden, Saudi Arabia  
 PROJECT Integrated aluminium production complex  
 SIZE OF SITE 12,500 people  
 NUMBER OF PEOPLE EMPLOYED BY FIVES SOLIOS OR FOR WHOM FIVES SOLIOS HAS RESPONSIBILITY 2,240



### Transparency and trust: the cornerstones of safety policy

The Group's safety performances have been improving significantly since 2009. However, setting too strict objectives might lead to the opposite behavior, while encouraging non-reporting even for minor accidents. The systematic analysis of all accidents is very important, because it is the only way of understanding what actually happens and adapting preventive procedures accordingly.

<p>23 industrial sites</p>	<p>An international network of 45 HSE representatives</p>	<p>32 HSE audits conducted throughout the Group since 2010</p>	<p>3 sites awarded triple ISO 14001 / ISO 9001 / OHSAS 18001 certification in 2011</p>	<p>Accident frequency and severity rates fell by 34% and 48% respectively between 2009 and 2011</p>
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INDICATORS

# MARKETS

ALUMINIUM | STEEL | GLASS | CEMENT | AUTOMOTIVE | LOGISTICS | ENERGY





[Market  
Any opportunity  
to sell a product  
or service.]

# ALUMINIUM



The end market recovery primarily began in 2010 for the Aluminium sector and continued in 2011. Supported by increased growth forecasts over the medium term, this upward trend led the world's major producers to accelerate capital expenditures in this sector during the first half of the year (excluding China). By securing major orders for key projects launched in the most active regions of the world (Saudi Arabia, Russia and Canada), the Group retained its excellent positioning in the aluminium industry during 2011.

### **Fives Solios: contributing to the world's largest integrated aluminium production facility**

Ma'aden Alcoa Aluminium, a joint venture formed by the state-owned Saudi Arabian Mining Co. and Alcoa, awarded a number of turnkey contracts to Fives Solios as part of its project to construct an industrial complex. The first phase which includes an aluminium smelter and rolling mill, will be followed by a second phase comprising a bauxite mine and an alumina refinery.

After receiving an order in 2010 to supply two 40-metric ton capacity green anode plants and a liquid pitch terminal, Fives Solios began work in 2011 on fulfilling orders for four pot gas treatment centers, fifteen melting and holding furnaces and a bath processing unit.

Fives Solios will also supply Samsung Engineering with two melting side well furnaces, each with 120 ton capacity, for a recycling unit at Ma'aden Alcoa Aluminium. Dedicated to production from re-melted aluminium scrap, this rolling mill will be one of the most technically advanced in the world, with a production capability of 380,000 metric tons per year. The mechanical construction work on the green anode plants began in June 2011, and had progressed to 30% at the end of the year. These plants incorporate a number of the Group's proprietary technologies, including the Rhodax® grinding technology and the latest-generation Xelios vibrocompactor, which together enable production of anodes with optimum density, at the same time as maximizing plant environmental performance.

By the end of 2011, the 18 filters for the first Gas Treatment Center were in place, with assembly of the second GTC which began in 2012.

In order to reduce the number of on-site assembly hours, Fives Solios offers the option to utilize pre-assembled modules and filters for its pot gas treatment centers as well as casthouse furnaces.

This facility, which will produce 740,000 metric tons of aluminium per year using two lines of 720 electrolysis pots, will be the world's largest integrated aluminium production complex. This major success consolidates the leading position of Fives Solios in the three key sectors of the primary aluminium industry: carbon, electrolysis and casthouse.

### **Aluminium industry customers worldwide continue to put their trust in Fives Solios**

In Quebec, Rio Tinto Alcan placed an order with Fives Solios for the supply of a turnkey pot gas treatment center fitted with five Ozeos filters for its new Jonquière pilot plant: the first aluminium production plant in the world to use 600 kA electrolysis pots. The Ozeos technology designed by Fives Solios also reduces the environmental footprint of the center at this stage of production.

In Russia, Rusal, the world's largest aluminium producer, signed an endorsement with Fives Solios in July for contract renewal, which was suspended in 2008, for the construction of two pot gas treatment centers; one to be installed in each of its two new plants at Taishet and Boguchany in Siberia.

In China, Shaanxi nonferrous holding Group Yulin New Material Co. Ltd., one of the country's leading aluminium producers, has awarded Fives Solios a contract to supply four Xelios vibrocompactors for its new Yulin plant in Shaanxi.

### Firing and control systems on anode baking furnaces:

#### Fives Solios technologies recognized for their energy performance

Fives Solios has successfully completed performance testing of the firing and control systems on the anode baking furnace supplied to Vitmeco for its ALRO plant in Romania. Under the terms of this contract, Fives Solios has revamped the exhaust and heating ramps, upgraded the Level 2 control system, and installed CO analyzers and Port Sealing Ramps. This marks the first operational use of furnaces using the patented blown inflatable sealing membrane PSR technology developed by Fives Solios, which delivers significant reductions in energy consumption.

#### KEY REFERENCES

• **Ma'aden Alcoa Aluminium (Saudi Arabia)**

**2010-2013:** turnkey supply of 2 green anode plants, each with a capacity of 40 tph, a liquid pitch terminal, 4 potline gas treatment centers, 15 melting and holding furnaces, 1 bath processing unit and 2 static side-well furnaces for the Ma'aden Alcoa Aluminium rolling mill recycling unit.

• **Hindalco (India)**

**2009-2010:** 2 green anode plants and a firing and control systems for anode baking furnaces.

• **Vedanta (India)**

**2009-2010:** 4 gas treatment centers and a firing and process control system for anode baking furnaces.

• **EMAL (U.A.E.) 2008-**

**2009:** turnkey supply of a hot bath processing unit.

• **Qatalum (Qatar)**

**2007-2010:** turnkey supply of a green anode plant with a capacity of 60 tph, 4 pot gas treatment centers, a fume treatment center for the anode baking furnaces, the holding and melting furnaces for the casthouse with a water cooling systems, the firing equipment and process control systems for the anode baking furnaces and the liquid pitch marine terminal.

• **Sohar Aluminium (Sultanate of Oman)**

**2006-2008:** turnkey supply of a green anode plant with a capacity of 36 tph, 2 potline gas treatment centers, the fume treatment center for the anode baking furnace, holding and melting furnaces for the casthouse with a water cooling system and a liquid pitch marine terminal.

• **Alcoa Fjardeel (Iceland)**

**2005-2007:** supply of the bath processing unit, 2 gas treatment centers and 4 holding furnaces for the casthouse.



*“Our seawater desulfurization solution has allowed our customer Qatalum to cut its atmospheric SO<sup>2</sup> emissions by 12,000 metric tons per year.*

*This practical implementation of the technology demonstrates the ability of our Group to take successful solutions developed previously for smaller units and deploy them on a much larger scale to provide an effective response to increasingly stringent environmental constraints.”*

*André Pinoncelly, Fives Solios, Vice-President of Technologies*

• **Carbon**

Green anode plants, fume treatment centers, firing equipment and process control systems for anode baking furnaces and carbon butts recycling units

• **Electrolysis**

Gas treatment centers and bath processing units

• **Casthouse**

Holding and melting furnaces, heat treatment furnaces, and casthouse water cooling systems



In the steel segment, the majority of the production growth that continued through 2011 was achieved using existing capacity. Despite some opportunities seen in emerging countries at the start of the year, two factors cast a shadow over prospects for sales going forward: the slowdown in China and the stricter conditions imposed on access to funding, exacerbated by the summer financial crisis. Nevertheless, the quality of its technologies and its excellent reputation amongst leading prime contractors ensured that the Group was awarded a number of major orders in the steel segment with high value-added.

**The Fives offer sets the benchmark in the global market for the steel segment with high value-added**

Fives Stein, now sets the benchmark for the global market in tinplate production following the successful commissioning of China's fastest continuous tinplate annealing lines in two plants operated by Baosteel. The Group has received a new order to supply Shougang Jintang with a very high-speed (750 meters per minute) vertical annealing furnace with an annual capacity of 440,000 metric tons. Fives Stein furnaces are already installed in this customer's No. 1 and No. 2 continuous annealing lines and No. 3 and No. 4 galvanization lines, the three most recent of which were commissioned successfully during the year.

In stainless steels, Chinese steelmaker SWSS (South West Stainless Steel) has also contracted Fives to supply its second hot annealing and pickling line. This project is the first order for a stainless steel production line to be fulfilled entirely by the Group. Fives DMS will manage the contract, design and supply all the mechanical equipment for the line, assemble and commission the annealing furnace and stripping section, Fives Stein will then manufacture the furnace in partnership with its local subsidiary company.

The stainless steel branch of ArcelorMittal, Aperam has contracted Fives DMS to supply a stainless steel strip hot annealing and pickling line for its Gueugnon facility, as part of its first major capital expenditure program. In the context of this project, the pivoting double-reel unwinding technology offered by Fives DMS will allow Aperam to save on space and civil engineering works, because it enables the new line to be installed in an existing building.

**Rolling mill expertise recognized by customers all around the world**

In 2011, the Group completed a number of successful rolling mill operational start-ups, and won many supply contracts worldwide.

In China, the Group supplied a 64-inch monobloc ZR rolling mill to Posco for its ZPSS site, which produced its first coil of steel. In the USA, Fives DMS started up the first rolling mill ever produced by the company for ThyssenKrupp Steel Alabama. This mill is unique in its ability to roll steel coils up to 74 inches wide.

In Turkey, Fives DMS signed a contract for the supply of two monobloc cold rolling mills for the country's first stainless steel production facility now under construction by Posco in collaboration with Daewoo and the Turkish steel producer Kibar. This order further extends the cooperative relationship between Fives DMS and Posco, which has already resulted in projects being completed in China over the last two years and in Vietnam at the beginning of 2011.

In China, Fives DMS signed a new contract with Wisco, the world's leading producer of silicon steel, for the supply of two ZR22 monobloc cold rolling mills. These two new rolling mills will join two previously commissioned mills produced for the company in 2006. They will produce an annual total of 186,000 metric tons of grain-oriented (GO) silicon steel, whose excellent magnetic properties are achieved using a rolling process made particularly complex by the high silicon content of the metal.

### Fives Stein strengthens its position in the Indian market

SAIL (Steel Authority of India Limited) is one of India's leading steelmakers and a longstanding customer of Fives Stein. During the year, they placed an order for two Digit@l Furnace® reheating furnaces: the first with a capacity of 200 metric tons per hour for the new long products rolling mill in the Bhilai plant, and the second with a capacity of 300 metric tons per hour for the strip rolling mill at Bokaro. These two orders reinforce the Group's presence in the Indian market for reheating furnaces. Fives also confirmed its leading market position in this country with the successful commissioning of two furnaces for JSPL (Jindal Steel and Power Limited): a Digit@l Furnace® rated at 280 metric tons per hour in Orissa State and a reheating furnace of 200 metric tons per hour in Jharkhand.



### KEY REFERENCES

#### • Baosteel (China)

**2004- 2010:** supply of 3 galvanizing lines for automotive, 2 tinplate high-speed annealing lines (800m/min), 4 vertical furnaces for continuous annealing and galvanizing (automotive) lines for carbon steel, and 2 horizontal furnaces for silicon steel and one rolling mill for stainless steel.

#### • Posco (Korea) 2007-2011:

supply of a rapid wet Flash Cooling® system, 2 vertical furnaces for galvanizing (automotive) lines equipped with the Flash Cooling® technology, one slab reheating furnace and 4 rolling mills for the ZPSS and QPSS sites in China.

#### • Anshan Iron & Steel

**(Angang) 2010:** supply of 2 ZR type rolling mills for silicon steel.

#### • Shougang Jingtang

**(China) 2008-2010:** 4 vertical furnaces for galvanization and continuous annealing lines, including one continuous annealing with a capacity of 1,100,000 tpy, equipped with Flash Cooling®.

#### • ThyssenKrupp (USA)

**2007-2011:** supply of 3 rolling mills and one Skin-Pass for its new Alabama plant.

#### • Tisco (China) 1997-2012:

supply of the world's largest stainless steel annealing and pickling line with a capacity of 1,150,000 tpy, the "Jumbo Line", the largest stainless strip bright annealing line (150,000 tpy), and numerous ZR type rolling mills whom the world's fast.

#### • Allegheny Ludlum Corp. (USA), ArcelorMittal CST (Brazil), Celsa (Spain), Çolakoğlu (Turkey), Severstal (Russia), Usiminas (Brazil), Welspun and Jindal Steel & Power Ltd. (India), Steel Authority of Indian Limited SAIL (India)

**2007-2013:** supply of Digit@l Furnace®, selected for their heating quality and their unmatched energy and environmental performance.

#### • Boomerang Tube

**(USA) 2011:** ERW pipe mill.

#### • Shaoguan (China) 2011:

2 roll bar straightener.

#### • TMK 2001 (Russia

**and USA) 2011:** 2 pipe straightener and 7 inch hydrotester.

#### • Hyundai Steel (Korea)

**2011:** high speed round bar straightener.

#### Stainless steel

- Digit@l Furnace® AT, reheating furnaces
- Reversible cold rolling mills
- Skin-Pass rolling mills
- Annealing and pickling lines (hot and cold)
- Bright annealing lines
- I-BAL (bright annealing line with EcoTransFlux® inductive heating and Flash Cooling®)

#### • Silicon steel

- Digit@l Furnace® AT, reheating furnaces
- Reversible cold rolling mills
- Annealing and pickling lines
- Decarburizing and coating lines
- Annealing and coating lines

#### • Carbon steel

- Digit@l Furnace® AT, reheating furnaces (long and flat products)
- Tunnel furnaces and heat treatment furnaces
- Welded tube lines
- Continuous annealing lines (carbon sheet and tin-plate)
- Continuous galvanizing lines (horizontal and vertical)
- Organic coating lines (convection and induction)
- Combined and compact lines

#### • Steel and non-ferrous metals

- Finishing equipment and mechanical processing for bars, tubes and pipes





In 2011, the glass market was marked by the imbalance between supply and demand related to overcapacity in China, the slowdown in the construction industry, and the problems encountered by independent glassmakers to access financial funding in several emerging countries with healthy economies. Despite this less than favorable situation, the Group delivered a remarkable performance by capitalizing on its positioning in high-growth regions and its powerful technology solutions.

**Energy performance: Fives Stein technologies acclaimed from Brazil to Europe**

The Group received an order from CBVP, a subsidiary of Cornélio Brennan Group for a float glass production unit as part of the company's plan to construct a float glass plant with a production capacity of 800 metric tons per day in the north-eastern of Brazil. The glass melting furnace for this unit will use the very latest L.E.M® (Low Energy Melter) technology developed by Fives Stein, which reduces energy consumption by around 20% compared with current market standards. The new Belgian glassmaker Ducatt NV has placed an order with Fives Stein for a photovoltaic glass melting furnace using oxy-combustion technology which is equipped with the Group's very latest developments in terms of reducing polluting emissions and energy consumption.

**Research & Development: industrial testing of SunBath® technology**

In 2011, Fives Stein installed an industrial prototype of its SunBath® process with a major glass manufacturer. This process, which is covered by three families of patents, enables the application of transitioning precision films into a continuous ribbon of float glass during the production process to deliver the properties required for photovoltaic glass. This installation process rewards the Research & Development efforts made by the Group since 2009, and puts Fives Stein in a strong position in this fast-growing market.

**Globally recognized expertise in the hollow glass, fiber glass and special glasses markets**

The Group won many orders during the year, both in the traditional markets for domestic glass and glass tableware, as well as in the more upscale segments of pharmaceutical and technical glass products, such as electronic glass for touchscreen applications. In 2011, demand was particularly strong in Europe, China, Russia and the CIS.

*“The research and development commitment of Fives Stein over many years has enabled us to respond to the demands of a market that is as concerned about environmental performance as it is about improved product performance.”*

*François Pahmer, Fives Stein,  
Head of sales and Development, Glass*



#### KEY REFERENCES

- **LG Chem (Korea):**  
20 pairs of top rolls for the company's first float glass plant dedicated to the production of extra-thin glass.
- **Sangalli Vetroitalia (Italy) 2010-2011:**  
complete tin bath installation with a capacity of 650 tpd.
- **Obeikan Glass Co. (Saudi Arabia) 2008-2010:**  
complete\* float glass production line of 800 tpd.
- **Okan Cam (Turkey) 2008-2010:**  
float glass production line of 600 tpd.
- **YugRosProdukt (Russia) 2007-2009:**  
complete\* float glass production line, cutting line and nitrogen and hydrogen production stations.
- **China Southern Glass (Guangzhou, China) 2003-2005:**  
2 float glass lines of 550 tpd and 700 tpd.
- **Fuyao Group (China) 2003-2005:**  
float glass production line of 600 tpd.
- **Goa Glass Fibre Ltd. (India) 2009:**  
re-design and enlargement of the furnace system and supply of patented oxy-gas burners onto fiberglass lines.

\* i.e melting furnace, tin bath, lehr and air pollution control

Thermal equipment and production lines for **float glass** (melting furnaces, tin baths, annealing lehrs and air pollution control systems), for **flat glass** (melting furnaces, rollers and annealing lehrs), for **hollow glass** and **special glasses** (melting furnaces, conditioning equipment and ancillary equipment)

Penalized by the sluggish real estate sector and construction industry in Europe and the USA, but also by the slowdown in demand seen in India and North Africa, the market for new cement production capacity, outside China, grew very little relative to the previous two years. Confronted by this trend and further constrained by the need to manage their debt, the world's major cement manufacturers have limited their capital expenditure to very few projects critical to maintaining their market share and targeting the fastest-growing emerging regions of Brazil, India and Africa. Over there, local producers with lower levels of debt have established and consolidated their domestic market positions in South America, the former Soviet states and the Middle East. In the context of this unfavorable market, there is a strong demand for quality and performance delivered by the technologies offered and are, once again, the key criteria applied by those manufacturers contracting Fives to construct new plants and supply production equipment.

**From Mexico to Brazil, the Group's proprietary environmentally efficient technologies are preferred by Holcim**

The year 2011 marked both the official opening of the cement plant supplied by Fives FCB for the Holcim Hermosillo site in Mexico, and the contract awarded by the same leading cement producer for a new production line in Brazil.

The contract signed in 2008 and awarded to Fives FCB for the Mexican plant covered the engineering and supply of a complete cement plant with a capacity of 3,500 metric tons per day. Designed to meet very high sustainable development standards, this production line now enables Holcim to produce high-quality cement. This line also minimizes electricity, fuel and water consumption, along with carbon dioxide and nitrogen oxide emissions.

In October 2011, Holcim awarded Fives FCB a renewal contract to supply a new 4,500 metric tons per day clinker production line for its Barroso cement plant in Brazil's Minas Gerais state. The new line, which will be equipped with Fives FCB proprietary technologies, including the Horomill® 4400, the TSV™ 3<sup>rd</sup> generation classifier and the Zero-NOx precalciner (already installed in Mexico), will enable Holcim to increase cement production at this site by 2.6 million metric tons per year. These technologies will also achieve optimum environmental performance.

**The Group confirms its expertise in alternative fuel handling**

Since supplying Holcim's cement plants in Costa Rica and Mexico with alternative fuel handling systems designed to handle large quantities of waste tires, Fives FCB has been contracted by the Russian cement manufacturer JSC Mordovcement. This contract is to design and supply woodchip handling systems for its Alekseevskiy, Sengileevskiy and Staroalekseevskiy plants. The four Fives FCB systems will feed seven rotary kilns, four of which use the wet kiln process, and all of which are equipped with Fives Pillard Novaflam® burners designed for use with alternative fuels. These new facilities will enable JSC Mordovcement to cut its operating costs by replacing up to 40% of its fossil fuel usage with wood chips from the furniture industry, forestry trimmings, railroad ties and recycled pallets.

**Saudi White Cement, the producer of white cement, contracts Fives FCB on the basis of its revamping expertise**

Widely recognized for its expertise in the white cement industry, Fives FCB has been awarded a contract by Saudi White Cement Company. This contract will revamp the white cement production line at the company's Muzahmiyah plant, increasing its capacity from 700 to 1,000 metric tons per day. The contract covers installing a new kaolin and gypsum crushing plant, increasing the capacity of the raw and cement grinding plants, installing a new precalciner, upgrading the burning line equipment and constructing a 10,000 metric ton cement silo.



*"Its ability to burn alternative fuels and its unrivalled cement burning performance in terms of product quality and environmental efficiency, are the benefits that are attracting more and more customers to our Novaflam technology."*

*Luigi Russo, Fives Pillard, General Manager*



#### KEY REFERENCES

• **Qatar National Cement Company (Qatar)**

**1995-2010:** turnkey supply of Umm Bab 2 (2,000 tpd), 3 (4,000 tpd) and 4 (5,000 tpd) production lines.

• **Holcim Apasco (Mexico) 2007-2010 and Holcim (Costa Rica) 2002-2004:**

supply of two production lines of 3,500 tpd and 3,000 tpd, using Horomill® technology.

• **Titan / Beni Suef Cement Company (Egypt)**

**2007-2010:** turnkey supply of a cement plant with a capacity of 4,000 tpd, comprising a 170 tpd cement grinding unit.

• **Vinaincon (Vietnam)**

**2005-2010:** supply of a complete cement plant of 4,000 tpd using Horomill® technology.

• **Lafarge (Mexico)**

**2004-2006:** turnkey supply of a 1,500 tpd cement plant in Tula.

• **Cemex (Panama) 2006:** turnkey supply of a cement grinding plant equipped with a Horomill® 3800.

• **Cementos Moctezuma (Mexico):** 16 Horomill® grinding mills, of which the oldest were commissioned 14 years ago.

• **Holcim (Italy):**

conversion of the existing Rotaflam® burner into a Low NOx Rotaflam®.

• **Holcim (France and Belgium):** supply of Novaflam® burners.

• **TPI Polene (Thailand)**

**2010:** supply of 3 Novaflam® burners of 160 MW each.

• **Cemex (USA), Graymont (USA), Polysius (USA) and GCC Dacotah Cement (USA):** several TGT filters for clinker furnaces and lime kilns.

• **Complete turnkey cement plants**

• **Grinding plants and process equipment** for the cement industry and mineral grinding (kilns, ball mills, Horomill®, Rhodax®, Zero-NOx precalciner, TSV™ classifiers, etc.)

• **Clean combustion engineering and systems** for rotary kilns for calcination and drying (Novaflam®, Rotaflam®, etc)

• **Dust collection equipment** for kilns, coolers and grinders

## AUTOMOTIVE



In the automotive industry, the recovery in capital expenditure that began in the summer of 2010 gained pace in 2011, especially in the emerging countries of the world, which are continuing to construct new production facilities. This trend is especially true in China and, to a lesser degree, Russia and Brazil. In developed countries, the rationalization policies of production capacity and existing plant conversion projects introduced in previous years continued in 2011. At the same time, projects emerged to develop more environmentally friendly technologies, with the emphasis on engines (hybrid engines and new types of internal combustion engine), automatic gearboxes (double-clutch robotized transmissions) and the introduction of new air conditioning refrigerant (HFO) filling systems. Combined with its international presence, the technologies offered by the Group have enabled Fives to win a series of major orders throughout the world.

### **Machining systems: Fives Cinetic confirms its position as a market leader**

Bolstered by its recognized status as a leader in machining technologies, the Group has received a series of major orders for its grinding technology from Volkswagen, Ford and national manufacturers in China, from General Motors in the USA, and for BMW in England. More specifically, Fives Cinetic has received an order for nine Landis LT2 machines from FAW 1st Engine in China, where they will be used for grinding main bearings and crank pins on two truck engine crankshaft production lines. This order highlights the quality of the Fives Cinetic orbital grinding technology and its enviable market position in emerging countries with fast-growing automotive market.

### **Automated production systems: Fives Cinetic builds on its longstanding partnerships with leading auto makers**

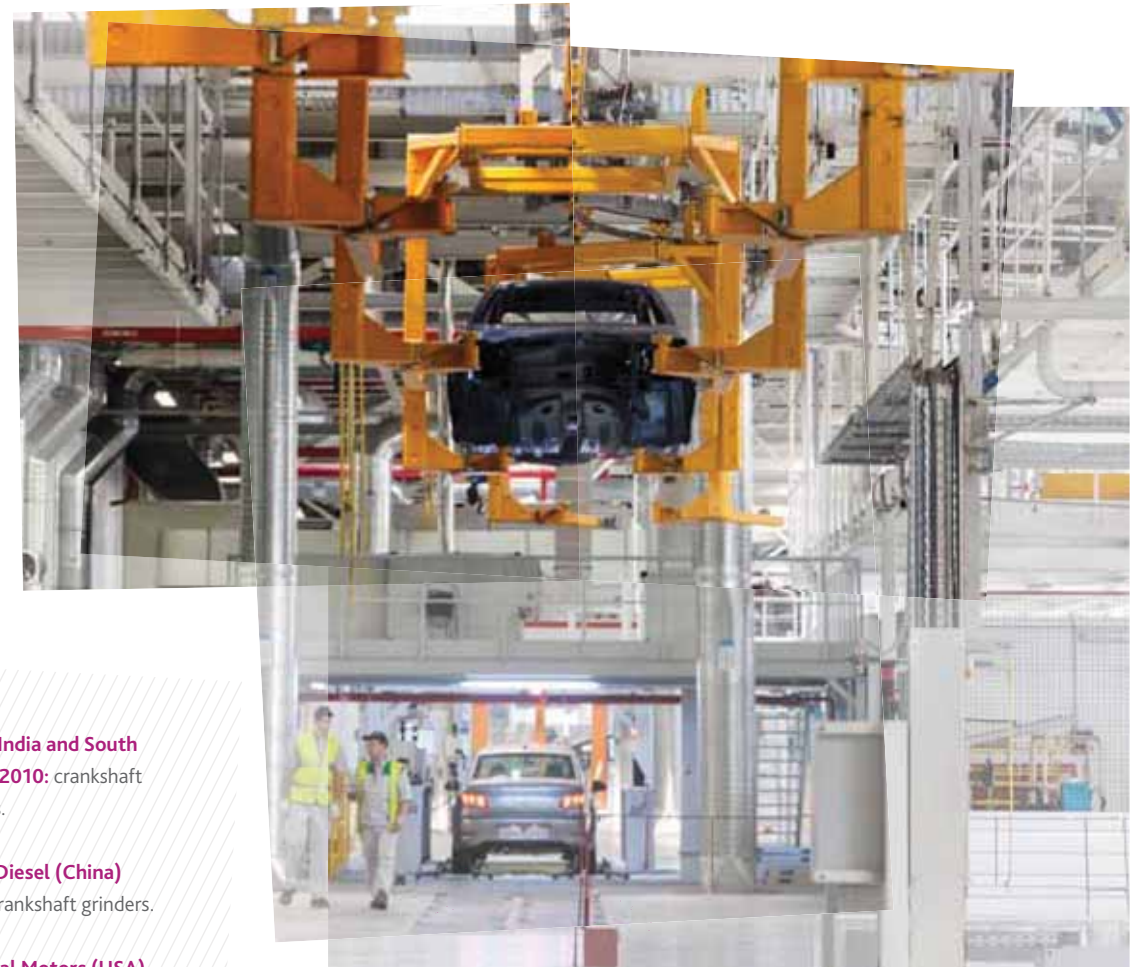
In automated production systems, Group subsidiaries saw business levels rise in the wake of capital expenditure projects initiated by their national customers. In the USA, the Group was involved in a number of on going powertrain replacement programs, when General Motors and Chrysler initiated the reorganization of

industrial projects in 2009. Additionally, Fives Cinetic received an order from Chrysler to supply its Kokomo (USA) plant with nine assembly and testing lines for key components used in the 8-speed ZF transmissions fitted to its rear-wheel drive vehicles. This new generation of gearboxes will be fitted to Chrysler vehicles from now on to deliver significant reductions in fuel consumption. The Chrysler decision also recognizes the Group's commitment to more environmental technologies. Automated handling systems benefited from the recovery in capital investment amongst auto and other vehicle manufacturers in France, and the favorable environment in those export markets accessible to France, such as Russia and Morocco. In Russia, Avtovaz - the Russian producer of Lada vehicles owned 25% by Renault, awarded Fives Cinetic a major contract to upgrade its Togliatti plant to a capacity of 700,000 vehicles per year. The order covers the comprehensive revamping of the final assembly line, and the design and installation of an engine preparation line. In Morocco, Renault placed a new order with Fives Cinetic for the design, supply and commissioning of all the handling systems for the metalworking and assembly shops involved in Phase II of its Tanger Méditerranée plant project. Fives Cinetic was also awarded the contract to supply fluid filling and testing

equipment for use at the end of the assembly line in the same plant. Designed to deliver multi-skilled production of 30 vehicles per hour, this new line will join installations previously supplied and commissioned by Fives Cinetic as part of Phase I. By 2013, this site will be producing 400,000 vehicles per year, compared with the current 170,000.

#### Fluid filling: efficient and sustainable technologies

The market for fluid filling and sealing systems was driven by commercial opportunities. These were created by new production capacities under construction in emerging countries, especially China and Brazil and by many projects to replace R134 refrigerant with HFO, which is an area of expertise that Fives Cinetic offers a very effective technology.



#### KEY REFERENCES

• **FAW 1<sup>st</sup> Engine Plant (China) 2011-2012:**

9 LT2 orbital grinders for use in truck engine crankshaft production.

• **Chrysler (USA)**

**2011-2012:** 9 assembly and testing lines for key components used in the 8-speed ZF transmissions fitted to rear-wheel drive vehicles.

• **Renault (Morocco)**

**2010-2012:** design, supply and commissioning of all the handling systems for the panel and final assembly shops involved in Phase I of the company's Tanger Méditerranée plant project, all the handling equipment required for the metalworking and assembly shops covered by Phase II of the project, and of fluid filling equipment.

• **Avtovaz (Russia) 2011:**

design, supply and commissioning of cradles and all the handling systems for the assembly shops.

• **PSA-Peugeot Citroën/ Mitsubishi Motors Company (Russia)**

**2010-2011:** supply of all the flow handling systems and provision of associated technical support during the production acceleration phase of the new Kaluga plant assembly shop.

• **Ford (India and South Africa) 2010:** crankshaft grinders.

• **Jinan Diesel (China) 2010:** crankshaft grinders.

• **General Motors (USA) 2010:** "Family 0" engine assembly line, camshaft grinders.  
/ **(India, Thailand, Uzbekistan) 2009-2010:** 10 crankshaft grinders.

• **Audi (Germany) 2010:** air conditioning refrigerant (HFO) filling system.

• **Automotive, aerospace and manufacturing industries**

Automated systems with high production rates for:

- machining
- foundry
- automation
- assembly
- integration of industrial processes

System maintenance



In the logistics sector, the underlying trend towards growth relates to the volume of goods transported in industrialized countries, generating a need for expansion and modernization of existing infrastructures. As a result, transportation and courier companies in North America, Japan and Europe have continued to automate their sorting centers. The Group also benefits from the opportunities offered by the development of distribution, industrial maintenance and airport industry.

#### **Worldwide customer acclaim for the cross belt sorter**

High-performance technology developed by Fives Cinetic, such as the high speed cross belt sorting system, has proven to be very successful, attracting orders from France, Spain, Sweden, Canada and Japan during 2011. This solution enables to sort a wide variety of items weighing up to 50 kg based on technology that can be implemented in several applications. This ranges from courier services to retail distribution, mail order and postal services.

As part of an ongoing program to automate its principal sorting centers, Canada Post Corporation has placed an order with Fives Cinetic for its new site in Vancouver, after the two contracts already awarded to the Group in 2010 for its centers in Winnipeg and Toronto. The proposed solution will include the latest generation of the high-capacity cross belt sorter capable of handling more than 20,000 packages per hour. Additionally, Canada Post Corporation awarded Fives Cinetic a second order for the sorting center of Calgary.

#### **An offer that extends to include e-commerce**

The Group strengthened its position in the booming airport markets with an order for the design and manufacture of a sorting system for the airfreight center at the Chicago O'Hare International airport. The Group also strengthened its position in the retail distribution market with automation of the high-flow dry foods sorting facility at Scachap (Societe Centrale d'Approvisionnement Charentes Poitou) and in the French maintenance outsourcing market, with customers such as the French Procurement Agency, SNCF and Safran.

The dramatic increase in online purchases has caused the retail distribution and e-commerce market to takeoff, driving significant demand for logistic network upgrades and enhancements. As a result, Fives Cinetic has signed a major contract with the 3 Suisses International (3SI) Group to equip its largest order preparation center, with a sorting system which serves all of its e-commerce companies. The complete solution developed by Fives Cinetic includes the design, supply, installation and commissioning of sorting systems and associated services.

#### **Accelerated growth of sales for Fives Cinetic in Japan**

Despite a tragic year for Japan in 2011, Fives Cinetic delivered on its commitments and commissioned the system installed in the new Fukuyama Transport sorting terminal near Tokyo (Fukuyama Transport is a major transportation operator in Japan).

Repeat customer Yamato Transport awarded Fives Cinetic two new contracts to automate its terminals at Atsugi and Hyogo. The system proposed for Atsugi involves two cross belt sorters and four slide sorters. This would provide the customer with a sorting capacity of 35,000 items per hour using a highly flexible operating mode to cope with peak flows and volumes in order to minimize item distribution times. It was in 2010 that Yamato contracted Fives Cinetic to automate its sorting center near Tokyo's Haneda international airport.

## KEY REFERENCES

- **MNG Kargo (Turkey)**  
2011: delivery of 4 of the 7 contracted sorting systems for the leading express courier companies.
- **Posten Meddelande (Sweden)** 2011: automated sorting system for the hub in Årsta (12,000 items/h).
- **System Logistics (Europe)** 2011: innovative automated sorting systems for drinks distributors in Oslo, Helsinki and Seville.
- **C-Log (France)** 2011: fourth automated sorting systems (10,000 items/h).
- **Fukuyama Transporting/ Fujisawa (Japan)** 2011: installation of the first system comprising 2 interconnected sorters for this express courier company.
- **Arata Sapporo (Japan)** 2011: engineering, design and installation of a complete system for the first distribution center in Sapporo.
- **Russian Post (Russia)** 2010: a sorting system for small parcels installed in Moscow in the Russian Post's first automated sorting center (28,000 pph).
- **Avenue des Jeux.com (France)** 2011: order preparation solution for the online toy retailer specialist (15,000 items-per-day).
- **Canada Post Corporation (Canada)** 2010: high-speed automated sorting systems at the parcel distribution center in Winnipeg (6,000 pph).
- **Yamato Transport (Japan)** 2010: high-speed automated sorting systems, one for Kanagawa (6,000 pph) and another one for Wakayama (10,000 pph).
- **DHL (Italy)** 2010: automated sorting system with a rate of 3,000 pph.
- **Pixmania (France)** 2010: extension of the picking solution of the leading online supplier of high-tech products.
- **Orium (France)** 2010: picking solution for the e-commerce specialized logistics provider.
- **Laboratoire Cerba (France)** 2010: automated processing system of biological tests.



*"Its innovative structure gives the new TRISORT SDX system a superior level of high-throughput sortation in a silent, flexible system capable of handling any object, regardless of size or shape. Launched in 2011, it has been very successful with airport, courier and postal service customers."*

*Fabrizio Mazzoni, Fives Cinetic, Chief Operating Officer*

- Design and installation of tailor-made logistics solutions (high-speed handling and automated sorting systems)
- Computerized order preparation and production line conveyor solutions
- Systems maintenance





In the energy sector, underlying trends remain as a result of growing energy needs in emerging countries and increased demand for energy efficiency. The Group's high-performance industrial piping business was increased, driven by ongoing nuclear construction programs in China, and capital projects in the gas market. The Group's cryogenic activities also benefited fully from rising demand for natural gas, a number of hydrocarbon processing projects in the Middle East and Europe, and increased consumption of industrial gases in Asia. The increase in capital expenditure to upgrade existing capacity in the industrial combustion equipment segment was due to the increased focus on energy efficient industrial installations and introduction of stricter environmental and technical standards.

In sugar and bioenergy, the slowdown in capital expenditure seen in traditional markets was offset by growth in production resources in Africa, Asia and Central America. These production resources won the Group a series of major contracts.

**High-performance industrial piping: Fives Nordon sets the benchmark in the nuclear power and gas infrastructure markets**

Fives Nordon continued its involvement in the Chinese nuclear power program with orders to supply two and four surge lines. The first order for two lines was placed by CNEIC (China Nuclear Energy Industry Corporation) for its Fuqing plant (units 3 & 4), and the second for four lines originated with CNPEC (China Nuclear Power Engineering Company Ltd) for the Yangjiang and Fangchenggang plants.

In the gas infrastructure market, Fives Nordon strengthened its relationship with natural gas transportation and storage company TIGF (Total Group), which is involved in exchanges of gas between France and Spain. Having been awarded an order as part of the 'Artère du Béarn' arterial gas pipeline project in the second quarter, Fives Nordon also won a major contract for the 'Girland' project in Aquitaine. They will undertake the interconnection work required for a 900 mm diameter pipeline at the Lussagnet gas storage facility.

**Fives Cryogenie: recognized for expertise in atmospheric gas separation and hydrocarbon processing**

In the hydrocarbons market, rising demand for natural gas assisted Fives Cryogenie to win a series of orders in the Middle East and Europe, from customers such as Total, Saipem and Petrofac. Indian producer GAIL also opted in favor of Fives Cryogenie

equipment for its Pata ethylene processing plant and its gas treatment center in Vijapur (these contracts became effective at the start of 2012). Fives Cryogenie also has an excellent international reputation in the air separation market. This was driven during the year by dynamic demand from Asia, and especially China, where Fives has its own production plant near Shanghai.

**High-performance combustion systems: Fives Pillard and Fives North American renowned for the high energy efficiency and environmental performance of their technologies**

In an expanding market, the high quality of the combustion system technologies it offers for a broad range of industrial applications won the Group many major orders from around the world. As part of its ongoing commitment to becoming a high-profile force in the 'acid gases' market, Fives Pillard has developed a new type of axial burner to add to its range of tangential heating solutions. Fives North American has designed and installed a test facility, the largest in the world, for the simulation of process conditions in an iron ore pelletizing plant. This facility was used to accelerate the application engineering and development associated with exceptionally Low NOx combustion solutions for iron ore processing. Essar Steel contracted with Fives North American for a study of their new pelletizing line conditions which permitted the qualification of the Group Low NOx offer for their greenfield plant in Minnesota.

### Fives Cail: internationally-recognized technologies for sugar refining and bioenergy

Well established in traditional markets, Fives Cail benefited from the growth in production resources seen in Africa, Asia and Central America. These capital projects focus primarily on increasing extraction capacities and/or reducing energy consumption. These are illustrated by the SOMDIAA order for equipment to be installed in its plants in Chad, Congo and Côte d'Ivoire. Also in 2011, Fives Cail commissioned a tandem of 5 MillMax® extraction mills for CSS (Compagnie Sucrière Sénégalaise) in Senegal. This revolutionary sugar cane milling equipment provides energy savings of nearly 40%.



### KEY REFERENCES

• **Air Liquide:** supply of exchangers and pumps everywhere in the world.

• **HangYang (China) 2011:** supply of an air separation unit for the Fang Cheng Gang site.

• **Saipem (U.A.E.) 2011:** supply of 6 cold boxes for a gas treatment unit at Shah Gaz in Abu Dhabi.

• **EPR Flamanville 3 (France) Alstom, 2007-2013:** prefabrication and erection of steam and feedwater piping in the turbine hall and **Areva NP, 2008-2013:** design, prefabrication and erection of secondary and NSSS auxiliary piping systems.

• **China Nuclear Energy Industry Corp. (China) 2009-2011:** supply of 6 pressurizer surge lines for the Changjiang, Fangjiashan and Fuging plants.

• **Total Infrastructures Gaz France (France) 2011:** upgrading works, supply and interconnection works for the 'Artère de Béarn' and 'Girland' projects.

• **KWB (Korea) and Brembana (Italy) 2011:** reaction furnace burner (Claus process).

• **Carrey (Mexico) 2011:** low-NOx mixed burners for the Al Jubail petrochemicals complex (Saudi Arabia). Now under construction by

a Dow Chemical – Aramco joint venture, this complex will be the largest of its kind in the world.

• **Total (France) 2009-2011:** revamping of two industrial boilers with Low NOx gas burners, supply of low-NOx equipment for a utility boiler (Lacq plant) and supply of mixed burners for atmospheric distillation boilers (Grand Puits plant).

• **Outotec GmbH (Germany) 2010-2012:** design and supply of a dual fuel combustion system for the Bhushan Steel Power and Light's plant.

• **Vale S/A (Brazil) 2009-2012:** design and

supply of 46 special self-inspiring high efficiency gas burners and their associated systems.

• **Mitr Phol (Thailand) 2011:** supply of key equipment for a sugar processing house that will increase plant capacity to 47,000 metric tpd.

• **In partnership with Sutech (Thailand) 2010:** supply of 30 centrifugals for Bangladesh, Cambodia and Thailand.

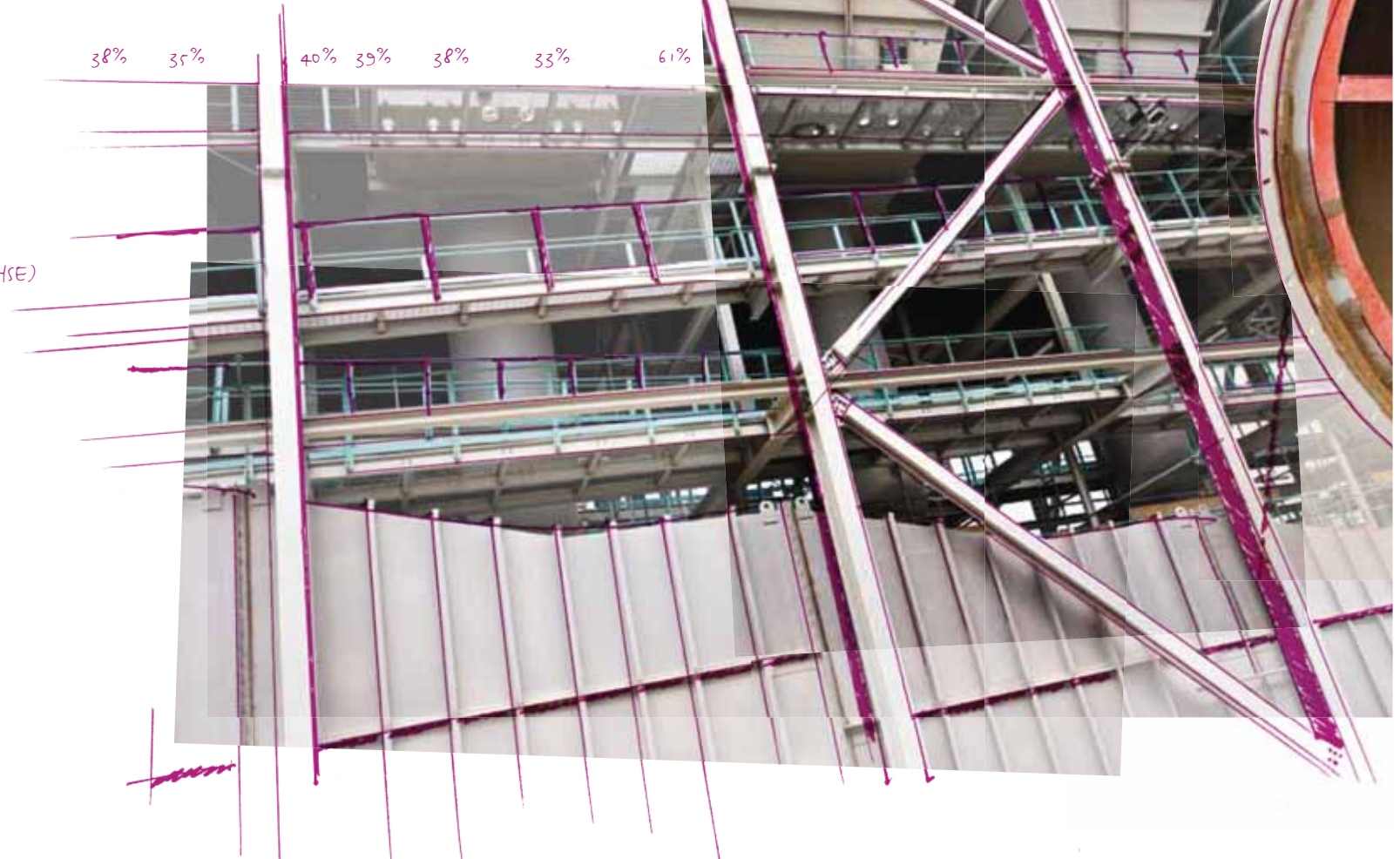
• **CSS (Senegal) 2009-2011:** supply of a tandem of five 84" MillMax® extraction mills for a complete new sugarcane milling line at the Richard Toll plant.

- **Industrial equipment primarily used in energy production:**
  - engineering, supply, manufacture and assembly of high pressure piping (new construction or refurbishing)
  - brazed aluminium: plate-fin heat exchangers (for air separation units, ethylene production or natural gas liquefaction)
  - cryogenic pumps
- **Combustion systems designed for electric and thermal energy production and for industrial processes**
- **Equipment and complete plants primarily used in sugar and bioethanol production**

# BENCHMARKS

FINANCIAL AND NON-FINANCIAL INDICATORS

Health, safety, Environment (HSE)





Energy consumption

Type of R&D expenditures

Workforce by social and professional categories

[Benchmark  
A measurement of  
achievements or excellence.]

# FINANCIAL AND NON-FINANCIAL INDICATORS

## 1. FINANCIAL INDICATORS

### ORDER INTAKE BY END MARKET

€ Millions	2009	2010	2011
Automotive/Logistics	193.9	399.1	607.2
Metals (aluminium & steel)	216.5	468.8	550.7
Energy	229.1	286.4	272.7
Cement	87.6	69.7	243.7
<b>Total</b>	<b>727.1</b>	<b>1,224.0</b>	<b>1,674.3</b>

### BY GEOGRAPHICAL AREA

€ Millions	2009	2010	2011
The Americas	135.6	232.7	546.8
The Middle East & Africa	117.8	243.3	350.2
Asia & Oceania	213.4	392.4	338.9
France	162.3	234.8	241.2
Europe (excluding France)	98.0	120.8	197.2
<b>Total</b>	<b>727.1</b>	<b>1,224.0</b>	<b>1,674.3</b>
Contribution from mature economies	51%	49%	44%
Contribution from emerging countries	49%	51%	56%

### SALES BY END MARKET

€ Millions	2009	2010	2011
Automotive/Logistics	259.6	274.4	391.3
Metals (aluminium & steel)	475.3	365.3	474.9
Energy	263.5	284.5	290.2
Cement	284.2	125.1	111.9
<b>Total</b>	<b>1,282.6</b>	<b>1,049.3</b>	<b>1,268.3</b>

### BY GEOGRAPHICAL AREA

€ Millions	2009	2010	2011
The Americas	303.7	218.8	295.4
The Middle East & Africa	366.9	193.2	246.3
Asia & Oceania	262.2	306.3	331.8
France	208.8	205.4	223.3
Europe (excluding France)	141.0	125.6	171.5
<b>Total</b>	<b>1,282.6</b>	<b>1,049.3</b>	<b>1,268.3</b>
Contribution from mature economies	39%	46%	50%
Contribution from emerging countries	61%	54%	50%

### ORDER BOOK BY END MARKET

€ Millions	31.12.09	31.12.10	31.12.11
Automotive/Logistics	105.2	240.8	476.1
Metals (aluminium & steel)	381.0	571.6	656.5
Energy	228.4	234.8	217.4
Cement	119.7	69.4	201.8
<b>Total</b>	<b>834.3</b>	<b>1,116.6</b>	<b>1,551.8</b>

### BY GEOGRAPHICAL AREA

€ Millions	31.12.09	31.12.10	31.12.11
The Americas	135.0	186.4	448.7
The Middle East & Africa	170.5	236.4	350.4
Asia & Oceania	277.3	402.7	417.6
France	140.0	169.5	187.5
Europe (excluding France)	111.5	121.6	147.6
<b>Total</b>	<b>834.3</b>	<b>1,116.6</b>	<b>1,551.8</b>
Contribution from mature economies	34%	39%	37%
Contribution from emerging countries	66%	61%	63%

## SUMMARY OF CONSOLIDATED FIGURES

€ Millions	2009	2010	2011
Sales	1,282.6	1,049.3	1,268.3
Gross Margin	240.6	242.5	280.3
EBITDA (*)	74.0	86.3	99.0
EBITA (*)	60.4	71.7	83.5
Current operating profit (EBIT)	59.0	68.3	76.2
Operating profit	50.8	63.7	75.0
Net financial result	(6.4)	4.1	(0.6)
Profit before tax	44.4	67.8	74.4
Net profit of consolidated companies	25.9	43.0	41.0
Net profit (Group Share)	24.8	42.5	40.4
Shareholders' equity attributable to owners of the Group	172.0	223.2	244.8
Cash and cash equivalents at December 31	229.8	214.0	239.2

(\*) The Group defines EBITDA and EBITA as follows:

- EBITDA is defined as current operating profit before amortization and depreciation of property, plant and equipment and intangible assets, excluding any purchase price allocation effect on gross margin.
- EBITA is defined as current operating profit before amortization of intangible assets related to acquisitions, excluding any purchase price allocation effect on gross margin.

N.B.: purchase price allocation adjustments impacted negatively on gross margin by €2.3 million in 2011 and €1.3 million in 2010.

### Sales

Group sales totaled €1,268 million in 2011, reflecting an increase of €219 million (21%) over 2010. This increase included a €46 million scope effect (contribution from the Fives Bronx sub-group, which was consolidated for the full 12 months of 2011, compared with just 1 month in 2010). It also included a negative foreign exchange rate effect of -€11 million, mainly relating to the appreciation of the euro average exchange rate against the dollar from one financial year to the other. Like-for-like sales were therefore up by €184 million (18%).

This increase is directly resulting from the opening order book, which was 34% higher than that for the previous year (26% at constant scope). However, the higher level of opening order book is not entirely reflected in the increase in sales, since the proportion of major orders (spanning more than one financial year) was larger at the beginning of 2011 than was the case at the beginning of 2010.

### Gross margin

Gross margin was €280.3 million in 2011, representing an increase of €37.8 million on 2010 (€242.5 million). The gross margin rate for 2011 was therefore 22.1% (22.0% on a like-for-like basis), compared with 23.1% in 2010. This slight reduction is explained by the issues faced by Fives Nordon on new power plant construction projects in France (in common with the rest of the industry). In the rest of the Group, the fact that contract margins were maintained despite higher activity and increased downward pressure on prices from customers reflects the good operational performance achieved during the year.

### EBITA

Group EBITA rose by €11.8 million relative to 2010 to end the year 16% higher at €83.5 million. This increase includes a contribution of €11.2 million from Fives Bronx (compared with €2.2 million in 2010), as well as a negative exchange rate effect of -€1.3 million. Like-for-like EBITA was therefore up by €4.1 million (6%). The Group however benefited in 2010 from the favorable effect of withdrawing from a defined benefits pension scheme in the United Kingdom. After restatement of this effect, the actual growth in like-for-like EBITA was 26%.

Like-for-like EBITA margin rate improved by 0.4 point to 6.0% (compared with 5.6% in 2010 post-restatement), reflecting the good performance achieved in containing overheads against a background of growing business volumes.

### Net financial result

The Group held consolidated cash and cash equivalents of €239 million at December 31, 2011 - a figure €25 million higher than that for December 31, 2010 - as a result of significant progress payments received on aluminium, cement and logistics turnkey contracts, and despite the increase in working capital requirement generated by the sustained recovery in the automotive industry and the delays experienced by the nuclear power industry on new plant construction sites.

Net financial result includes the cost of net financial debt, the financial expenses relating to defined benefits pension schemes (discount effect on obligation net of expected return on fund assets), foreign exchange rate gains or losses, as well as changes in fair value and forward points of derivatives.

Net financial result for 2011 was €4.7 million lower than the figure for 2010, resulting in a loss of -€0.6 million. This reduction mainly came from the €4.2 million reduction in foreign exchange gains.

The change seen in the Group's foreign exchange rate gains relates principally to the way in which the North American and Bronx acquisitions were structured in 2008 and 2010 respectively. Since these acquisitions were financed by US dollar loans granted by Fives to its American subsidiaries, the Group's net financial result is automatically affected by the euro/dollar exchange rate over the full life of the loans concerned. Since the appreciation of the euro against the dollar was less significant between December 31, 2010 (€1 = \$1.34 dollars) and December 31, 2011 (€1 = \$1.29) than between December 31, 2009 (€1 = \$1.44) and December 31, 2010, the foreign exchange rate gain recognized for the 2011 financial year in respect of these transactions (€3.1 million) was €2.5 million lower than that recognized for the 2010 financial year (€5.6 million).

Furthermore, a foreign exchange rate gain of €1.6 million had been recognized in 2010 as a result of forward purchases and sales of dollars put in place prior to the Bronx acquisition.

The cumulative foreign exchange rate gain recognized on these operations from the initial transaction to the end of 2011 is €17.4 million (including an unrealized gain of €12.7 million and a realized gain of €4.7 million), to which should be added the gain of €1.6 million made on the transactions involved prior to the Bronx acquisition.

### Net profit

The total income tax expense (current and deferred) for the financial year was €33.4 million, €8.6 million higher than the figure for 2010 (€24.8 million). This figure includes €33.8 million of current tax due (of which €18.4 million relate to those companies within the French tax group, with the remaining €15.4 million attributable to those French and international companies not included in that group), and a deferred tax gain of €0.4 million.

The nominal tax rate was therefore 44.9% in 2011. This is explained, on the one hand, by recognition of CVAE (the French added-value-based corporate tax) as an income tax expense (which imposes a 3.9% effect on the tax rate) and, on the other hand, by the absence of recognition of a deferred tax asset in respect of tax losses incurred by some French subsidiaries during the financial year. For reference, the nominal tax rate in 2010 was 36.5%, including a 3.3% effect imposed by the CVAE.

Net profit of consolidated companies was therefore €41.0 million. This figure was €2.0 million lower than that for 2010 (€43.0 million), despite the increase seen in operating profit (+ €11.3 million), due to the increase in the income tax expense (- €8.6 million) and the reduction in net financial result (- €4.7 million).

## 2. NON-FINANCIAL INDICATORS

### 2.1. INNOVATION INDICATORS

	2009	2010	2011				
R&D expenditure in millions of euros	18.4	19.8	21.2				
<b>Breakdown of R&amp;D expenditure</b>							
Costs of patents and trademarks	10%	9%	7%				
Standard design and formalization of know-how	16%	14%	15%				
Continuous improvement of products and processes	36%	39%	41%				
Development of new products and processes	27%	27%	29%				
Research and radical innovation activities	11%	11%	8%				
<b>Patents and trade names</b>							
Number of patents in force	1,343	1,476	1,599				
Number of patent families in force	308	336	347				
Number of first patents registered	34	34	21				
Of which percentage of patents relating to energy and environmental performance	53%	53%	57%				
Number of 'product' trade names registered	70	86	97				
	2009	2010	2011	France	The Americas	Europe (excl. Fr)	Asia
Number of research and test centers	16	16	16	10	3	2	1

For companies included in the Group consolidation scope.

The increase in R&D spending continued in 2011 with an expenditure of €21 million. Continuous improvement of products and processes and new product development have significantly raised to reach 70% of the total expenditure in 2011 (against 66% in 2010).

In accordance with the Group R&D strategy, the percentage of patents relating to equipment energy and environmental performance is growing, and accounted for nearly 60% of the new patents registered in 2011.

## 2.2. SOCIAL INDICATORS

	2009	2010	2011	France	The Americas	Europe (excl. France)	Asia
<b>Employees</b>	5,514	5,639	6,108	3,519	1,078	912	599
Men	85%	84%	84%	84%	86%	85%	78%
Women	15%	16%	16%	16%	14%	15%	22%
Percentage of engineers among women	28%	28%	30%	43%	12%	12%	16%
<b>Employees by category</b>							
Engineers and managers	37%	38%	38%	42%	32%	27%	38%
Technicians, designers and supervisors	26%	26%	25%	27%	15%	28%	28%
Staff	15%	14%	14%	10%	18%	22%	18%
Operators	22%	22%	23%	21%	35%	23%	16%
<b>Employees by age range</b>							
Less than 30	15%	15%	16%	16%	11%	13%	28%
From 30 to 39	22%	23%	23%	26%	12%	18%	35%
From 40 to 49	28%	27%	26%	26%	25%	29%	24%
From 50 to 59	29%	29%	28%	28%	38%	33%	9%
60 and more	6%	6%	6%	4%	14%	7%	4%
<b>Employees by length of service</b>							
Less than 5	38%	35%	40%	39%	38%	33%	61%
From 5 to 10	16%	19%	18%	21%	12%	16%	18%
From 11 to 20	20%	19%	17%	17%	17%	22%	15%
From 21 to 30	13%	14%	12%	11%	15%	20%	4%
31 and more	13%	13%	12%	12%	19%	9%	3%

<b>Employees by region</b>	2009	2010	2011
The Americas	16%	17%	17%
France	62%	59%	58%
Europe (excluding France)	15%	15%	15%
Asia	7%	9%	10%
<b>Changes in employee numbers</b>			
Number of employees recruited (under all types of contract)	544	843	1,231
<b>Skills and mobility management</b>			
Percentage of employees receiving regular appraisal interview	50%	63%	59%
Number of people having attended "career booster" interviews *	72	88	84
Percentage of employees reviewed by the "Cèdre" career management committee	30%	40%	35%
Proportion of French subsidiaries where "GPEC" policy deployment is in progress	ND	ND	80%
Percentage of French employees for which the "GPEC" policy has been deployed	ND	ND	75%
Percentage of employees having attended at least one training course	57%	59%	60%

For companies included in the Group consolidation scope.

\* The "career booster" interview may be initiated either by the Group Human Resources Department or individual employees in order to explore their career potential within the Group.

\*\* "GPEC": jobs and skills forecast management.

The very good business performance delivered by Fives in 2011 was accompanied by an accelerated pace of recruitment in the Group, with 1,231 new employees recruited during the year. This influx has changed the profile of Group employees by length of service: 40% of employees have now been with the company for fewer than 5 years. This proportion rises to 61% in Asia, due to the 2009 creation of an industrial presence here, the growth of employee numbers in other subsidiaries, and the fact that China's highly-competitive labor market generates a high level of employee turnover.

In addressing this range of different contexts and enhancing the appeal of the Group as an employer, the Group Human Resources Department continues to deploy its cross-functional programs, such as the career booster and training initiatives, which aim to identify and retain high-potential individuals. With regard to the Group diversity policy, although the overall percentage of women in the labor force remained unchanged at 16%, the proportion of women engineers and managers grew to 30%. In France, 43% of women are engineers and managers.



## 2.3. CSR INDICATORS

	2009	2010	2011
Number of subsidiaries launching a local CSR action plan	ND	1	6
Percentage of employees accounted for by these companies	ND	2%	25%

Over and above the cross-functional actions initiated by the Group and the actions taken by individual subsidiary companies, an initiative specific to each Group company was rolled out to each management committee during 2011. The priority issues addressed by this initiative are incorporated into the continuous improvement plan of each subsidiary company.

## 2.4. BUSINESS ETHICS INDICATORS

	2009	2010	2011
Number of languages into which the Group Code of Conduct has been translated	2	2	12
Percentage of companies in which the Code of Conduct has been distributed	82%	75%	90%
Percentage of employees accounted for by these companies	82%	77%	93%

The Code of Conduct was revised and re-written at the end of 2010, and deployed internationally at the beginning of 2011. During 2011, Group compliance with changes in UK law (the introduction of the UK Bribery Act) provided an opportunity to test a training program designed to support the direct distribution of the Code by Group subsidiary companies.

## Introduction to site-specific data and safety/environment statistics

The Health, Safety and Environment report covers 99% of Group employees, and includes all those sites employing more than 10 people at the midpoint of 2011, as well as all industrial sites.

BREAKDOWN OF SITES BY TYPE	2009	2010	2011	France	The Americas	Europe (excl. Fr)	Asia
Number of subsidiaries within the CSR policy scope	44	44	50	19	7	14	10
Total number of sites	68	69	75	37	10	15	13
Industrial sites(*)	22	22	23	11	7	4	1
Offices	21	21	23	9	2	5	7
Combined sites(**), regional facilities and test centers	25	26	29	17	1	6	5

(\*) Sites with industrial operations as main activity.

(\*\*) Sites combining office activities and an industrial or test-oriented activity.

## 2.5. SAFETY INDICATORS

	2009	2010	2011
<b>Frequency rate</b> (Number of lost-time accidents (≥1 day) x 1,000,000 / Total number of hours worked)	11.54	8.61	7.57
<b>Severity rate</b> (Number of days lost following accidents (≥1 day) x 1,000 / Number of hours worked)	0.318	0.208	0.165

In 2011, the Group Health and Safety program focused on local-level initiatives through cross audits among sites and workshops and the systematic analysis of lost-time accidents in all subsidiary companies.

The downward trend in accident frequency and accident severity across the Group that began in 2010 continued in 2011, despite a slight downturn in performance during the second half of the year. These good results are the well-earned outcome of major efforts made by Group companies to improve HSE management at company level and deliver further improvements in terms of corporate culture, the provision of information, the way in which workshops and sites are organized and relationships with partners, customers and sub-contractors.

## 2.6. MANAGEMENT SYSTEM

	2009	2010	2011	France	The Americas	Europe (excl. France)	Asia
<b>Quality Certification (ISO 9001)</b>							
Number of certified sites	45	47	48	29	6	10	3
Number of sites engaged in certification	3	1	2	0	0	0	2
<b>Environmental Certification (ISO 14001)</b>							
Number of certified sites	12	14	15	7	3	3	2
Number of sites engaged in certification	4	5	4	1	2	0	1
Percentage of industrial sites certified	36%	41%	43%	45%	29%	75%	0%
<b>Safety Certification (compliance with a range of standards)</b>							
Number of certified sites	14	16	19	15	0	1	3
Number of sites engaged in certification	3	6	3	1	1	1	0
Percentage of industrial sites certified	0%	0%	13%	18%	0%	25%	0%
<b>Health, Safety and Environment (HSE) resources</b>							
Number of Health, Safety and Environment FTE* staff in the Group		ND	46.6	31.3	5.1	7.5	2.7
Number of HSE representatives in the Group		40	45				
Number of Group HSE auditors		8	10				
Number of Group HSE audits per year		15	17				

\* FTE: Full-Time Equivalent

2011 was the first year in which Group companies achieved triple Quality, Safety and Environment certification. Three companies attained this status: one in Italy and two in France. The trend seen in the number of sites awarded ISO 14001 certification reflects and confirms the Group's commitment to environmental performance. The goal of achieving ISO 14001 certification by 2014 has been set for all subsidiary companies operating industrial sites: the rate at which sites achieve certification will therefore accelerate in coming years. In overall terms, management systems continue to be strengthened, and the resources allocated to HSE are becoming increasingly dedicated and long-term. This consolidation of the HSE network has also boosted the exchange of good practices and feedback between business lines.

## 2.7. ENVIRONMENTAL INDICATORS

	2009	2010	2011	France	The Americas	Europe (excl. France)	Asia
<b>Energy consumption</b>							
Electricity in GWh	ND	46.2	50.6	21.9	17.9	6.3	4.4
Natural gas and heating oil in GWh	ND	63.0	58.5	23.2	29.9	5.0	0.5
Total energy in GWh	ND	109.2	109.1	45.1	47.8	11.2	4.9
<b>Energy costs</b>							
Electricity in €000	ND	3,328	3,820	1,901	845	655	419
Natural gas and heating oil in €000	ND	2,154	1,960	1,052	563	313	33
Total energy in €000	ND	5,482	5,780	2,953	1,408	968	452
<b>Water cost and consumption</b>							
Water consumption (industrial sites) in m <sup>3</sup>	ND	ND	94,756				
Cost of water consumed (industrial sites) in €000	ND	ND	141				

Despite the significant increase in production and sales achieved in 2011, the overall volume of energy consumed by the Group remained stable.

This fact reflects the efforts made by Group companies to improve the energy efficiency of their installations. The mild weather conditions experienced in Europe during 2011 also played their part. Nevertheless, the total energy bill for the Group was higher, due largely to increased electricity prices.

Following the first full year of monitoring industrial site water consumption in 2010, work was done on improving the reliability of these data during 2011, resulting in the ability to produce a consolidated figure for all the water consumed by the Group's industrial sites.





The development of the first Annual and CSR report gave Fives the opportunity to take into account the expectations, in terms of information, of the key stakeholders outside the Group:

- Customers and prospects: through a qualitative and quantitative consultation of all the sales teams of the Group;
- Candidates: through feedback received from the Group recruiters;
- Partners: through individual interviews (Coface, etc.);
- The principal shareholders of Fives: through individual interviews.

Each division of the Group and each functional department were also sought in the development of this document.

This report will be available on the Global Compact webpage, in accordance with the Group's commitments as a signatory.

## Fives

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