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€1,283 million of sales

Close to **60%** of sales in emerging countries

€181 million of shareholders' equity

5,514 employees*

Our vision: only innovative solutions will allow future industrial growth that is both sustainable and profitable. Fives provides new industrial solutions to address these challenges.

METALS

Aluminium

Fives Solios

Steel

Fives Stein

Fives DMS

Fives Celes

Fives Industries

CEMENT

Fives FCB

Fives Pillard

AUTOMOTIVE & LOGISTICS

Fives Cinetic

ENERGY

Fives Pillard

Fives North American

Fives Nordon

Fives Cryogenic

Fives Cail



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. This **international and multi-sector expertise** gives the Group a complete vision of industry and makes it a leading player.

Located in nearly thirty countries and with more than 5,500 employees on 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 clients' needs in terms of profitability, safety and compliance with environmental standards.

This strategy is backed by a human resources policy that is focused on the individual, encourages initiative-taking, technical excellence and team spirit.



Frédéric Sanchez
Chairman of the Executive Board

2010 looks to be a transition year for Fives

Within the highly disturbed industrial environment of 2009, during which the global production in the steel, aluminium, cement, glass and automotive sectors plummeted everywhere but China and our historic clients drastically reduced or simply put off their capital expenditures, the Fives group saw its orders slip to €727 million, down 44% from the €1,290 million booked in 2008.

Nonetheless, the Group's overall volume of business for the year held up fairly well thanks to a solid order book of €1,359 million at the start of 2009, though the backlog did vary greatly by sector, with automotive at a historic low.

Sales held up fairly well at €1,283 million, falling off only 5% from 2008, despite dropping sharply in the second semester. The measures taken by all of the Group's subsidiaries to cut costs, capital expenditures and working capital requirements while putting more money into their commercial and Research and Development efforts,



Despite an economy that is still recovering, I am convinced that Fives has the strengths and qualities needed to bounce back and continue its growth.”

succeeded in offsetting, at least to some degree, the downward pressure on consolidated operating profit from lower sales and order intake. At €56.1 million, consolidated operating profit fell 25% from 2008.

Despite signs of economic recovery in China, India, the Middle East and, to a lesser extent, Brazil, Fives has yet to see a definite improvement in the pace or the size of new orders.

Under these circumstances, the current year looks to be a transition year, with lower sales due to a smaller order book at the start of the year (€834 million vs. €1,359 million a year earlier) but a higher expected order intake than in 2009. Operating profit, whose twelve years of continuous growth was interrupted in 2009, should get back on track as well thanks to the Group's firm control of overhead expenses and to gross margins that have held up well.

Despite an economy that is still recovering, I am convinced that Fives has the strengths and qualities needed to bounce back and continue its growth:

- an innovative and distinctive offer in equipment, which is geared to improving our clients' environmental performance;

- a strong competitive position on diverse and global markets, foremost among which are the large and still growing emerging countries. Though some Fives sectors continue to suffer from overcapacity - be it cyclical as in steel and cement or structural as in automotive - other markets are trending solidly upward, such as energy and aluminium. Over the medium and long term, the urbanization, infrastructure needs and demographics of the emerging countries, where Fives already draws almost 60% of its sales, will carry the Group's different markets;

- clear strategic priorities:

- to be a global player, making innovation the key to our success (with Research and Development budgets 20% higher in 2009 than in 2008) and effective operations our constant goal;
- to be a competitive player, by controlling costs and containing risks, to take up tomorrow's challenges;
- to be a responsible player, both socially and economically, by never losing sight of the main tenets of our CSR policy, above all safety, and by enlisting the support of everyone in the Group.

- values, managerial principles and management model - all of which foster initiative and individual responsibility and help every employee realize his or her potential;

- significant financial resources, including €230 million of cash at year end and a strong balance sheet.

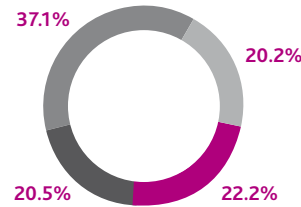
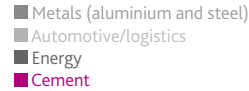
If Fives stays the course we have set and if our teams keep demonstrating the combativeness, commitment and creativity they showed in 2009 for capturing new markets and developing new products, then the Group can be confident about its future.

I don't have the slightest doubt that Fives, with the support and involvement of all its employees, has the ability to meet these challenges and prove its resilience.

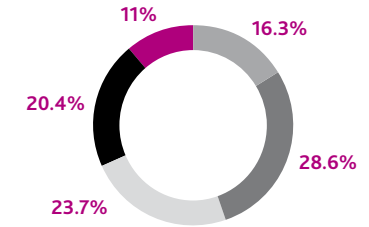
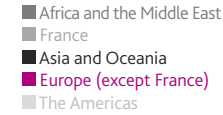
Breakdown of sales by end markets and geographical area: a balanced business portfolio with a global reach.

The Group's business portfolio is evenly balanced, as each of the four major segments represents over 20% of consolidated sales. Sales are also evenly spread geographically, with a stronger contribution from emerging countries. New order intake, however, mostly originates from Asia thanks to the contracts won in China and India.

2009 Figures



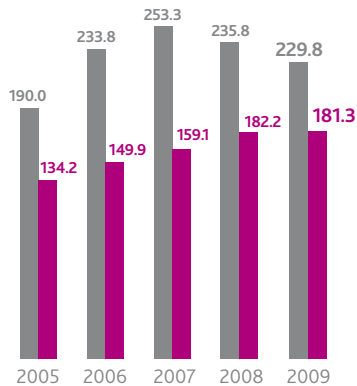
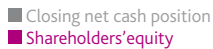
2009 Figures



Closing net cash position and shareholders' equity: a remarkably strong and healthy financial structure.

Consolidated cash and cash equivalents remained at a very high level (€229.8 million), thus giving the Group, with €181.3 million in shareholders' equity, a remarkably strong and healthy financial structure.

In euros millions

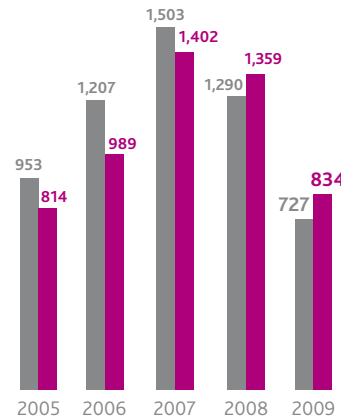
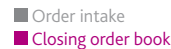


Order intake and order book: the Group was affected by the global downturn but continued to find great success in the emerging countries.

In terms of commercial activity, the Group was affected by the historic, worldwide drop in capital expenditures. However, Fives continued to book large volumes of business in the emerging markets, accounting for more than half of all order intake for the period, thanks to its strong local presence in these areas.

Although significantly down from the records set over the past two years, the order book at December 31, 2009, remained strong overall and foretold good volume for most business lines in 2010.

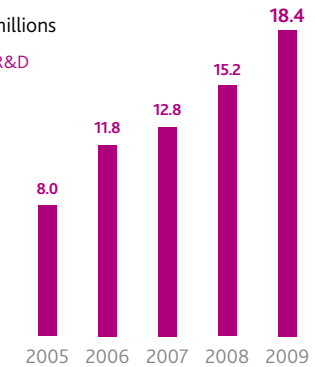
In euros millions



Research and Development efforts: innovation at the heart of Fives' strategy.

In 2009, the Group boosted its R&D effort once more, with a record budget of €18.4 million. This represented an increase of over 20% compared with 2008 and almost 45% compared with 2007. Current programs focus on eco-design, process optimization and improved energy efficiency. Fives' innovation policy demonstrates its ambition to increase the Group's technological lead.

In euros millions





In 2009, Fives was awarded several **major orders** despite an unsettled industrial environment

In February

Fives Stein received a major order from a leading Chinese steelmaker, Shougang Jingtang, to supply two vertical furnaces for galvanizing lines and one vertical furnace equipped with a Flash Cooling® system for a steel strip annealing line - in fact one of the largest in the world with a capacity exceeding one million tonnes per year.

In April

The Chinese glassmaker, Zhuzhou Kibin, chose Fives Stein to produce the annealing Lehr for its new line producing glass with a low-emissive coating. The coated glass makes it possible to manufacture windows that reduce a building's energy footprint.

In May

The Xinyu Steel Group, the leading steelmaker in China's Jiangxi Province, chose Fives Stein to produce a vertical Digital furnace for a new annealing line.

In June

Fives Stein received an order to supply five new annealing Lehrs to the Xinyi glass making group, the top Chinese flat glass manufacturer, for their new Jiangmen and Wuhu plants.

In February

The Canada Post Corporation selected Fives Cinetic to supply two high-speed sorting systems for postal parcels at facilities in Winnipeg and Toronto. Equipped with the cross belt technology developed by Fives Cinetic, the Toronto facility is designed to handle 14,000 parcels per hour.

In July

- Richard Toll in Senegal entrusted Fives Cail with the complete order for a new sugar cane milling unit, including five MillMax® 84". This technology reduces a plant's energy consumption by 40%, providing potential surplus electrical energy for export to the grid.
- ArcelorMittal contracted Fives Stein and Fives Celes to supply an induction painting section for its plant in Lesaka, Spain. This project consists in adding an organic coating section to a galvanizing line, using Fives-patented processes for baking on coatings by induction and a system for re-injecting warm air into the drier, ensuring safe and smooth plant operation.
- Air Liquide Hangzhou chose Fives Cryogenie to supply the Chinese company, Yuntianhua, with the exchangers for an air separation unit that will provide 2,700 tonnes of oxygen per day. This unit will supply a plant that converts coal into methanol, with an annual capacity of 600,000 tonnes.

In August

- Benxi Steel of China entrusted Fives DMS with an order for an annealing and pickling line and a Skin-Pass for stainless steel. (producing stainless steel coils is a first for Benxi, which has until now only produced for the carbon steel market).
- Saint-Gobain chose Fives Solios to equip the two bauxite furnaces of its Proppants (Arkansas, USA) plant with an SO₂ and HF treatment unit, including the latest enhanced all-dry treatment technologies developed by Fives Solios.

In September

Bunge Maroc Phosphore of Morocco chose Fives FCB to supply a dry-process phosphate grinding plant at its Jorf Lasfar site. The equipment to be supplied includes a ball mill and a TSV™ classifier.

In October

- Fives DMS received a new order from the Posco Group, the leading South Korean steelmaker, to supply two Sendzimir-type rolling mills for their ZPSS stainless steel plant in China.
- Jianhuan Technology & Trade Co. Ltd. (Jingye) chose Fives FCB to be part of its expansion plans (to recycle steel slag) by supplying two grinding plants, located at its Jiujiang and Xinyu sites in Jiangxi Province, each to be equipped with a Horomill® 3800 grinding mill and a TSV™ 4500 classifier.

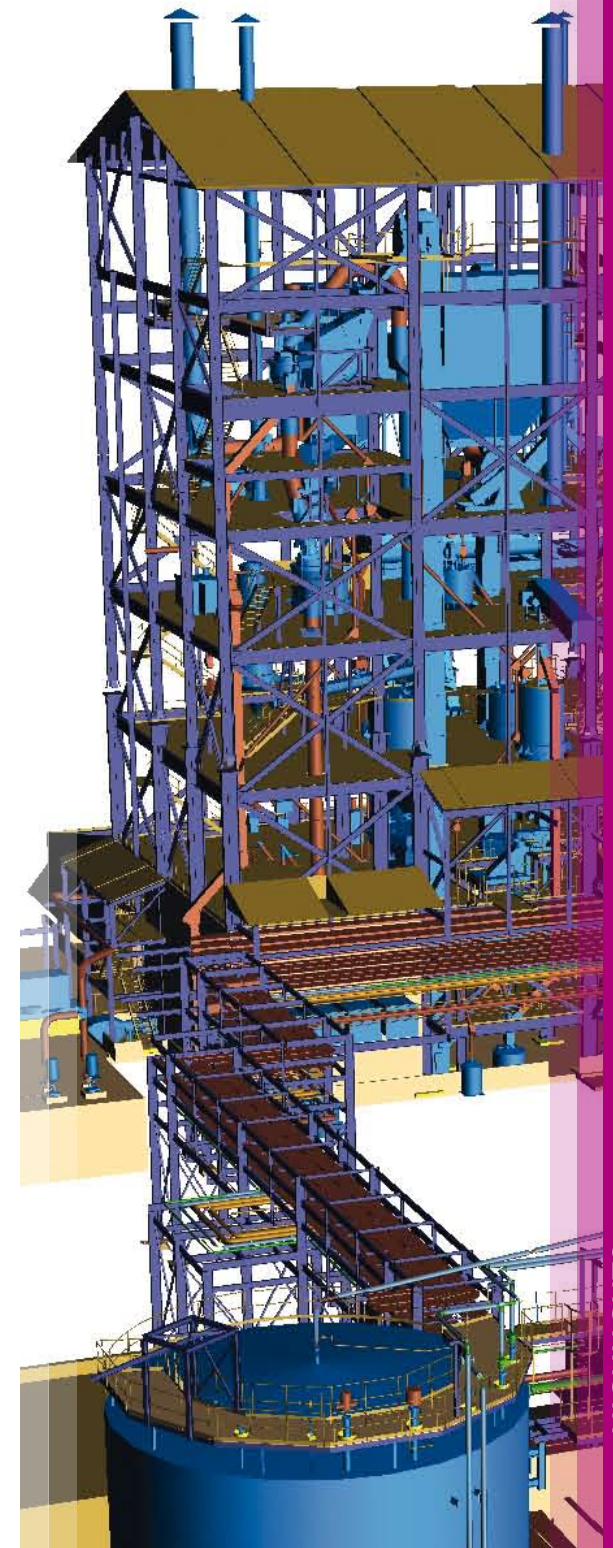
- Fives Solios was awarded the contract for two green anode plants for the two new primary aluminium smelters to be built by Hindalco at Mahan and Aditya in India. Fives India is closely involved with the fulfillment of this substantial order.
- The Indian mining group Vedanta entrusted Fives Solios with an order for the supply of four gas treatment centers for electrolysis for the expansion of the Balco plant in Korba, India. This order, whose local portion will be executed by Fives India, significantly strengthens and broadens the Fives Solios presence in the promising Indian market.
- Fives Cinetic was awarded a large order to supply a parcel sorting system for an air hub in China. The facility will include four cross belt sorters with a total speeds exceeding 44,000 parcels per hour.

In November

- Usiminas, one of the largest Brazilian steelmakers, chose Fives Stein, in association with its Chinese subsidiary Fives Stein Shanghai and its Brazilian licensee Combustol, to supply a new Digit@l Furnace® walking beam furnace to expand the capacity of the slab rolling machine at its plant in Ipatinga, Brazil. This contract also calls for the installation of a process-line optimization system for the new furnace and for two older furnaces at the same site, enabling Usiminas to synchronize and optimize production and realize energy savings on all three furnaces.
- Fives Stein also won the order to supply a complete 650 tonne per day tin bath for the new Sangalli Vetroitalia plant near Venice, Italy, part of the only new float glass production line project in Europe, in 2009.

In December

- China Nuclear Energy Industry Corp. entrusted Fives Nordon with large orders to supply pressurizer surge lines for the Changjiang, Fangjiashang and Fuqing nuclear power plants.
- The Group acquired Decker Corporation, a Japanese company which designs and supplies fluid filling systems and sealing equipment.



→ AT THE HEART OF FIVES .

AT THE HEART OF FIVES .

AT THE HEART OF FIVES .

AT THE HEART OF FIVES





- Corporate governance
- Human resources
- Innovation

Fives is managed by an **Executive Board** working closely
with the **Executive committee**



The Executive Board

- **Frédéric Sanchez** / Chairman of the Executive Board
- **Lucile Ribot** / Member of the Executive Board - Group Chief Financial Officer
- **Martin Duverne** / Member of the Executive Board - In charge of the Energy and Logistics divisions



The Executive committee

Background, from left to right:

- **Jean-Claude Pillard**
Chairman and CEO of Fives Pillard
- **Jean-Marie Caroff**
Head of the Group International Development Department
- **Paule Viallon**
Head of the Group Human Resources Department
- **Alain Cordonnier**
CEO of Fives FCB
- **Michel Dancette**
Head of the Corporate Social Responsibility Department
- **Jean-Claude Salas**
CEO of Solios Environnement and Chairman and CEO of Solios Carbone
- **Jean-Paul Sauteraud**
Head of the Group Legal Department
- **Michelle XY Shan**
Vice-President Business Development China
- **Jean-Camille Uring**
Deputy CEO of Fives Cinetic

Fives is managed by an Executive Board

Composed of three members, **Frédéric Sanchez** (Chairman), **Martin Duverne** and **Lucile Ribot**, the **Executive Board** is responsible for Fives' management and implements the Group's strategy. It meets as often as required.

The Supervisory Board

Composed of seven members, **Jacques Lefèvre** (Chairman), **Guillaume Jacquau** (Vice-Chairman), **James Arnell**, **Stéphane Etroy**, **Fabrice Georget**, **Arnaud Leenhardt**, **Vincent Pautet**, the **Supervisory Board** meets at least four times a year to review the quarterly report presented to it by the Executive Board.

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 Accounts committee and the Appointments and Remuneration committee are each composed of certain members of the Supervisory Board and provide insights for its decisions.

An operational Executive committee

The **Executive committee** meets at least bi-monthly under the chairmanship of Frédéric Sanchez. As a body for reviewing and exchanging information, the Executive committee, made up of the members of the Executive Board and the Group's main operating managers, meets to examine specific issues and to assist the Executive Board in reaching decisions concerning matters falling within its domain. In particular, the Executive committee deliberates on matters of common interest and on questions of coordination between the Group's various entities.

Cross-divisional committees provide a support network for the Executive committee

Over the years, various cross-divisional committees and groups have been put in place to provide a network supporting the deployment of the Group's strategies and the coordination of its operations.

The Innovation group, composed of various Research and Development managers from Fives' subsidiaries in France and abroad, meets regularly to discuss common issues related to the Group's policies, such as eco-design, intellectual property, automation, etc. These meetings also help identify and advance possible technical coordination between the subsidiaries.

The Purchasing committee, which includes the purchasing directors and operational officers from subsidiaries in France and abroad, meets every two months. This committee is responsible for identifying and advancing corporate synergies as well as defining a certain number of shared management tools such as the supplier management portal.

The Human Resources committee, comprised of human resources managers from Fives' French subsidiaries, meets at least three times a year. This is an organized opportunity to take stock of the evolutions in work related legislation and their impact on management of human resources in the Group's French subsidiaries.

A comparable action is conducted in China and in the United States.

A strengthened CSR department, at the heart of sustainability issues

As an industrial engineering group, Fives is at the heart of many sustainable development challenges affecting industry and concerning technological developments leading to more sustainable production as well as other social and community matters. These issues address the values of Responsibility and Ethics, and are deeply rooted in the Group's culture, as evidenced by the diffusion of a Code of Conduct in 2001. Since the establishment of this code, Fives and its subsidiaries have taken numerous steps to promote their corporate social responsibility.

The Corporate Social Responsibility Department structures, coordinates and standardizes Fives' CSR approach, in line with the United Nations Global Compact guidelines. This department works in close cooperation with the other Fives' departments as well as the Group's subsidiaries.



Eco-design and environmental performance on the one hand and Health, Safety and the Environment (HSE) on the other were Fives' twin CSR priorities for 2009. HSE at Fives is decentralized and makes use of operating personnel at the subsidiary level.

This structure was strengthened in 2009 with the creation of a Group coordinator.

This community of experts worked throughout the year to produce a Fives reference manual of shared HSE procedures and practices, with allowance for the diversity of our lines of business.

A Fives HSE reporting tool has now been added to these guidelines.

After spending 2009 on the subject of safety on large international construction sites, we will be focusing particular attention in 2010 on safety in our own production and assembly plants."

Michel Dancette • Head of the Corporate Social Responsibility Department



The Group's CSR policy's priorities • The Group's CSR policy's priorities



*Systematically **aim** for energy efficiency in the Group's developments and minimize the environmental footprint of the processes and technologies provided by Fives.*



Maintain a high level of ethical standards in internal and external relationships.



Implement a group-wide standardized and effective system to manage Health, Safety and the Environment.



Balance purchasing performance and sustainable supplier relationships.



Promote diversity and harmonize the level of social protection across geographical areas.



Incorporate planning into the management of jobs and skills.

The “starter meeting”

After his/her first six to eighteen months on the job, every new employee has a confidential interview with a representative of the human resources department of another company than his/her own. These meetings provide the Group insight as to the level of job satisfaction of the new recruit and allows to determine if there is anything which can be done to remedy any job dissatisfaction or unsuitability.

The annual appraisal review

The annual appraisal review is an essential meeting between the employee and his/her supervisor. This objectively-conducted interview enables each person to know the objectives set for him/her, to get some feedback on his/her performance and to have a say in his/her own professional development. It is also a chance to define what individual training the employee would like to have.

“Career booster” meetings

These meetings are set up at the behest of the human resources department or the employee and are an opportunity for employees to communicate to the Group human resources team about how they see themselves developing within their company or in another subsidiary. The “career booster” meetings are specifically set up to support professional mobility and growth.



In 2009, within the context of the economic crisis, we forged ahead with the implementation of our human resources policies, with the exception of hiring, where a general freeze was put into place, excluding certain sectors. If anything, it seemed to us more important than ever to focus on the needs of the Group’s employees. Stimulating and motivating employees, retaining talent and better career management were the year’s top priorities.

Besides current GPEC programs such as the annual appraisal reviews and CEDRE, the Group made use of the “career booster” program put in place in 2008. This new process allows us to identify the candidates for reassignment and offer them jobs in other Fives subsidiaries. The Group human resources department also began a new program intended to distribute the workload across the Group’s companies in France, by allowing an employee in a company experiencing a drop in activity, to work in another subsidiary that temporarily needs a certain set of skills.

In 2009, over a hundred such arrangements were made. And at companies where some restructuring was required, we made sure to recruit new employees who were placed into jobs that are strategically important to the company’s future growth. All this was done in a spirit of redeployment, rather than as a defensive stand in face of the economic crisis.”

Paule Viallon • Head of the Group Human Resources Department





Skills development

In a profession where performance largely depends on know-how, managing human capital is a top priority.

The Group human resources department has given its managers the tools they need not just to evaluate their employees but also to offer each employee a career path which will best express his or her potential and talent as a contributor to the company.

Among these tools, the CEDRE or career-management committee provides reviews of each company's workforce undertaken by the Group human resources department, the subsidiary's Management committee and department heads. These reviews indicate the actions required to meet the company's operating needs and the career objectives expressed by the employees. This approach guarantees each employee a genuine discussion of his/her professional growth within the company and the Group.

Two collective agreements signed by the Group support this policy. The first, signed in 2005, concerning the assessment of technical and managerial know-how identified a common framework for assessment methods. The second, signed in 2008, concerned the "forward-looking" management of careers and skills (a conventional feature of some French labor agreements, know as GPEC).

Breakdown of employees:

85% men and **15%** women

28% of women are engineers or managers

Diversity: prevent discrimination and promote equal opportunities

Under the leadership of the Group human resources department and its satellites in Asia and the United States, human resource policy at Fives is concerned with gender parity, cultural diversity and equal opportunity. Such policies enable the Group to broaden its spectrum of skills, identify local talent, regardless of gender or nationality, and also to be attractive to job-seekers from around the globe.

Two collective agreements signed by the Group in France, the first in 2007, concerning equal opportunity and the prevention of discrimination, and the other in 2009, regarding older employees, are examples of the Group's commitment to fighting discrimination in any form. A training program on the subject was also created by the Group human resources department and was followed in 2008 and 2009 by all executives, human resources staff, employee representatives and managers.

In 2009,
more than **70** people were met in
a "career booster" meeting

During 2008 and 2009,
almost **400** people had a "starter meeting"

Resource pooling: a temporary assignment program with proven results

In November 2008, in the midst of the economic and financial crisis, the Group human resources department started up a new program meant to even out the workload across certain Group companies. The basic idea was to let an employee with little or no work in one company help out in another that temporarily needed a certain set of skills.

Though at first rather restricted geographically - to subsidiaries in the North and East of France - the program was extended throughout the country.

After a year of operation, today the program is highly effective. The companies' CEOs are convinced of its merits and are completely satisfied with the skill levels they have found in their "loaned" employees. From the employees' viewpoint, it is a good way to learn about the various businesses of the Group and its subsidiaries. The program has also illustrated that skills can be transferred not just within a sector but from one sector to another.

In France, in 2009, 102 such exchanges were made, lasting on average three months, and some have transitioned into permanent reassignments.





Innovation at the heart of Fives' strategy

Open-ended innovation

Applying advanced technologies and developing particular kinds of know-how represent a main strategic objective for Fives. This is why every year the Group puts one-fifth of its operating profit back into developing new solutions, for the purpose of meeting the specific needs of the industries it serves. Networking in-company skills, partnering research and working jointly with clients or suppliers - these are what drive innovation at Fives, making it creative, effective and geared toward the markets' actual needs.

Long-lasting innovation

At Fives, the concern is how the Group's solutions perform in the long run. The Research and Development policy is therefore aimed at making improvements to existing equipment, so that clients can make use of the latest technological advances with the lowest possible expenditure. By building tomorrow's environmental requirements into today's solutions and by maximizing their energy efficiency, Fives enables its clients to be better prepared for future environmental and energy constraints.



Eco-design and carbon-emission evaluations are two programs put into place in 2009 that have become standard procedure for us in the way we manage innovation.

One major benefit is that they ensure the financial profitability of the solutions we develop for our clients. We work hard to be sure our approach is thorough and takes all environmental impacts into account: energy efficiency, CO₂ emissions, pollution discharge and water consumption.”

Thierry Valot • Head of the Group Innovation Department

A budget of over **€18 million** for Research and Development in 2009

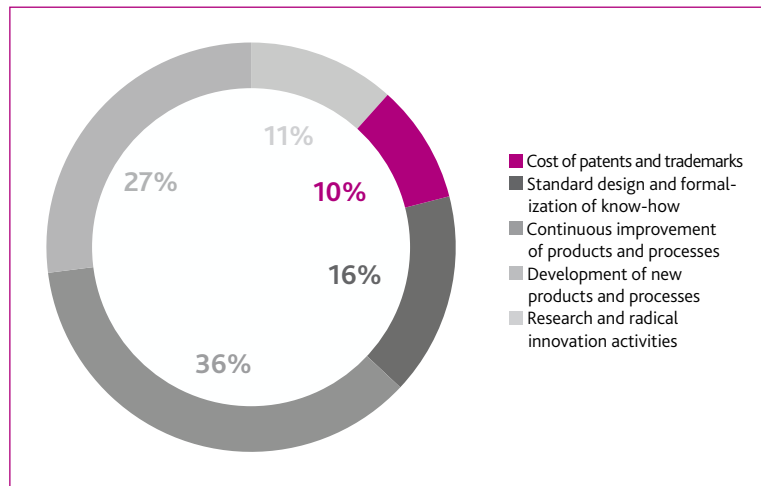
Eco-design and automation - the core of our R&D

For many years, Fives has focused its research and development efforts on the implementation of high performance environmental technologies. Its breakthrough technologies provide industrial clients with equipment designed for long-term performance, not only in terms of the process for which it was built but also its environmental impact - such as energy and water consumption and pollution and CO₂ emissions.

Recent developments in the field of automation technologies and algorithmics applied to statistical processing of operating data have opened up a new area of innovation for Fives, emulating our past success with Cinetic Landis grinding machines and Digit@l Furnace® reheating furnaces. A good example is the Optikiln control system, now routinely offered by Fives FCB, which regulates a kiln line under all conditions, including the start-up phases. Some noteworthy programs under way involve intelligent control systems for sugar plants and the development of a new generation of digital furnaces dedicated to the steel industry.

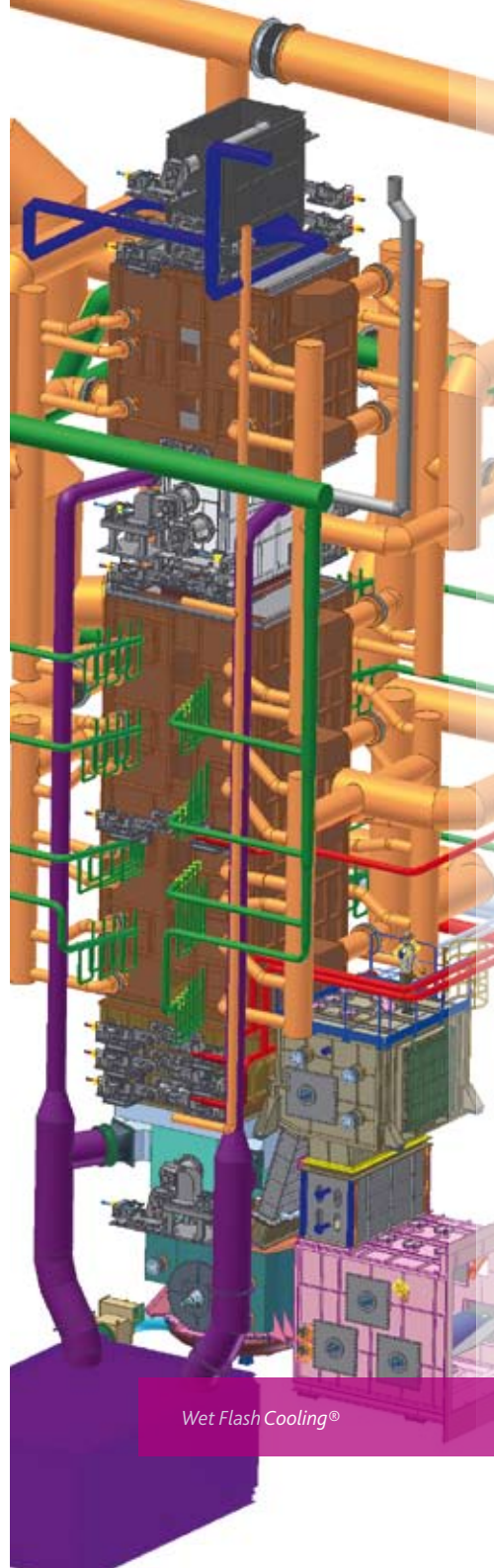
BREAKDOWN OF 2009 R&D EXPENDITURES BY TYPE

Fives strives to balance its portfolio of R&D projects, which concerns the improvement of its existing equipment as well as research focusing on long-term topics such as CO₂ storage.





Horomill® grinder



Wet Flash Cooling®

Innovation in motion: three examples

Any solution developed by Fives has to meet four basic requirements: mechanical safety, environmental friendliness, high-quality output and industrial versatility.

- **The Flash Cooling® technologies**, originally intended for the production of high-performing grades of steel, were recently extended by adding a wet process based on the thermal cycle for the treatment of steel with very high elasticity limits. The Wet Flash Cooling® developed in record time by Fives Stein and proven on a small-scale mock-up at its Barle-Duc testing center, France, cools the steel strip by spraying it with a water-nitrogen mist. It was first commissioned industrially on an annealing line at Posco in South Korea. This new process makes it possible to reach cooling rates of over 400°C per second, which is two to three times faster than the current controlled cooling processes, dry or wet (such as jet cooling, rapid cooling, roll quench or mist cooling). This technology also features a highly accurate and uniform cooling curve and is versatile enough to produce a wide range of steels. Wet Flash Cooling® opens new possibilities for producing martensite steels on an industrial scale. These steels, historically produced with an added quenching step, are much desired by the auto industry to manufacture lighter vehicles.

At Posco's Gwangyang site, Fives Stein kept to the tight deadlines the client required while minimizing downtime and production losses. Fives Stein offered an original solution consisting of pre-mounting the whole new tower equipped with Wet Flash Cooling® on rails beside the production line and then moving it into its final position in two days' time. The initial production was successfully run in early 2009 and the expected cooling performance was soon attained.



Fives, at the heart of tomorrow's industrial developments."

The flexibility of Wet Flash Cooling® makes it possible for Posco to continue producing its existing grades of steel while trying out the production of new steels and thus be the first to offer automobile manufacturers industrial quantities of new steels such as M-TRIP.

• **The CFCFrixline**, developed by Fives Cinetic (Cinetic Assembly), updates the friction conveyor concept. The idea of attaching connecting bars so that carriers can be set up in trains lowers the cost and energy consumption of the conveyor and guarantees operator safety on the shop floor. With its modular design, CFCFrixLine has the advantage of being totally flexible as a complete or partial component of a handling line. Its simplicity also provides high reliability and more rapid, less costly and easier maintenance.

CFCFrixLine is environmentally friendly because it reuses the existing guides of a chain-driven conveyor, requires no compressed air or grease and reduces noise pollution significantly.

• **The Horomill® grinder**, developed by Fives FCB, uses a novel, innovative bed compression grinding process that offers numerous technical advantages over conventional grinding mills such as ball mills, vertical grinding mills, etc. Allowing the user to choose the production material, either raw mix, slag or cement, and operating without water, the Horomill® achieves a 55% (for slag) energy savings when compared with ball mills and presents operational advantages which offer industrial cement manufacturers optimal production flexibility.

The Horomill® 4400 allows for a production capacity increase of 44% compared with the Horomill® 3800.

34 new patents in 2009

308 patent families
in effect as of Dec.31, 2009

1,343 patents registered
internationally, in effect as of Dec.31, 2009



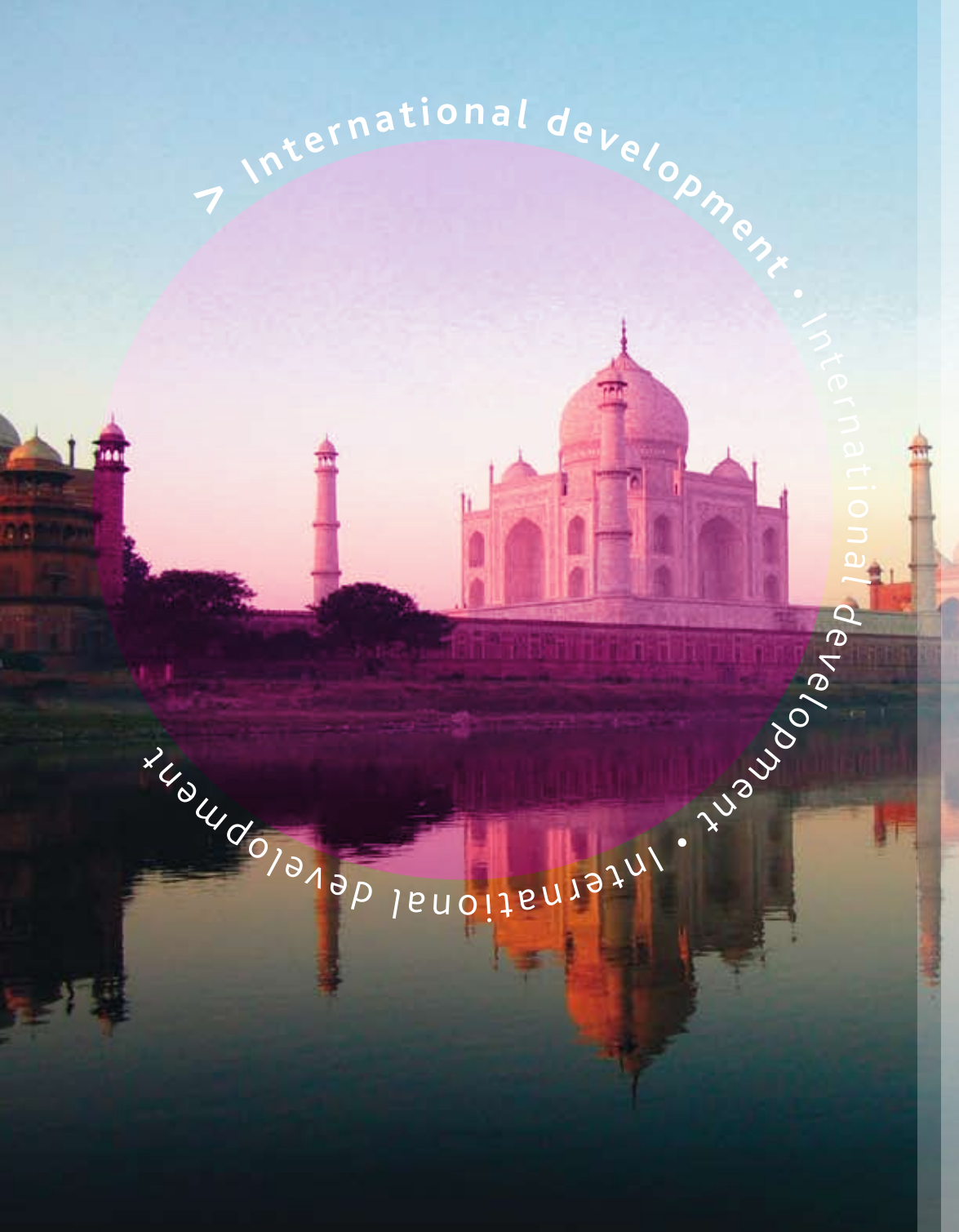
CFCFrixLine

程



fives





Fives, present and at work all over the world

With over 60 locations in nearly 30 countries, Fives truly has a global presence. Constantly seeking to reinforce its market positions internationally, as one of its keys to growth, the Group has made a special effort this year to increase its capabilities in strategic markets.

A global network of representative offices

A highly organized network of representative offices in Asia (China, Japan, Thailand and Vietnam) as well as in Russia, Brazil, Mexico and Turkey complement the sales operations of each subsidiary. This provides Fives with local sales expertise and allows the Group to pool the experience of each subsidiary in a given region.



In a sluggish global economy, China, India and Brazil were the busiest markets in 2009. Thanks to its recently increased presence in these regions, Fives has been able to meet clients' needs in terms of price, quality and delivery. Fives India has experienced particularly strong growth in 2009 and plays a role in the Group's expansion on an Indian market with strong potential."

An increased operating presence in China and India

For several years Fives has also added to its international network of representative offices by establishing major operating companies able to serve all of its business lines. Their purpose is to execute the local portion of contracts and to develop competitive procurement platforms (for detail engineering and equipment).

In China, Fives Engineering Shanghai primarily supports procurement operations for export projects (Fives Cail in Guyana, Fives Solios in Russia, etc.). In India, Fives India, created in 2008, is working with Fives Solios on two large projects won in 2009.



> Over 60 companies

in nearly 30 countries

Europe

Belgium: Brussels, Falisolle
France: Paris (Headquarters), Bar-le-Duc, Évry, Givors, Golbey, Grigny, Héricourt, Lautenbach, Le Bignon, Marne-la-Vallée, Marseille, Nancy, Saint-Céré, Saint-Germain-en-Laye, Seclin, Vaulx-en-Velin, Villeneuve-d'Ascq
Germany: Taunusstein
Great Britain: Cranfield, Cross Hills, Derby, Didcot, Liverpool, Southend-on-Sea, Wombourne
Italy: Milan, Turin
Romania: Bucarest
Russia: Moscow, Magnitogorsk
Slovakia: Bratislava
Spain: Bilbao, Madrid, Valladolid
Switzerland: Allschwil
The Netherlands: Rijsenhout
Turkey: Istanbul

Asia, Oceania

Australia: Sydney
India: Kolkata, Chennai
Japan: Kobe, Tokyo, Yokohama
PR of China: Beijing, Shanghai, Suzhou, Tianjin
South Korea: Seoul
Thailand: Bangkok
Vietnam: Ho Chi Minh City

The Americas

Brazil: Sertãozinho, São Paulo
Canada: Ontario, Montreal
Mexico: Mexico, Saltillo
United States: Birmingham (AL), Carnegie (PA), Chardon (OH), Cleveland (OH), Farmington Hills (MI), Hagerstown (MD), Louisville (KY), Pittsburgh (PA), South Beloit (IL)

Africa, The Middle East

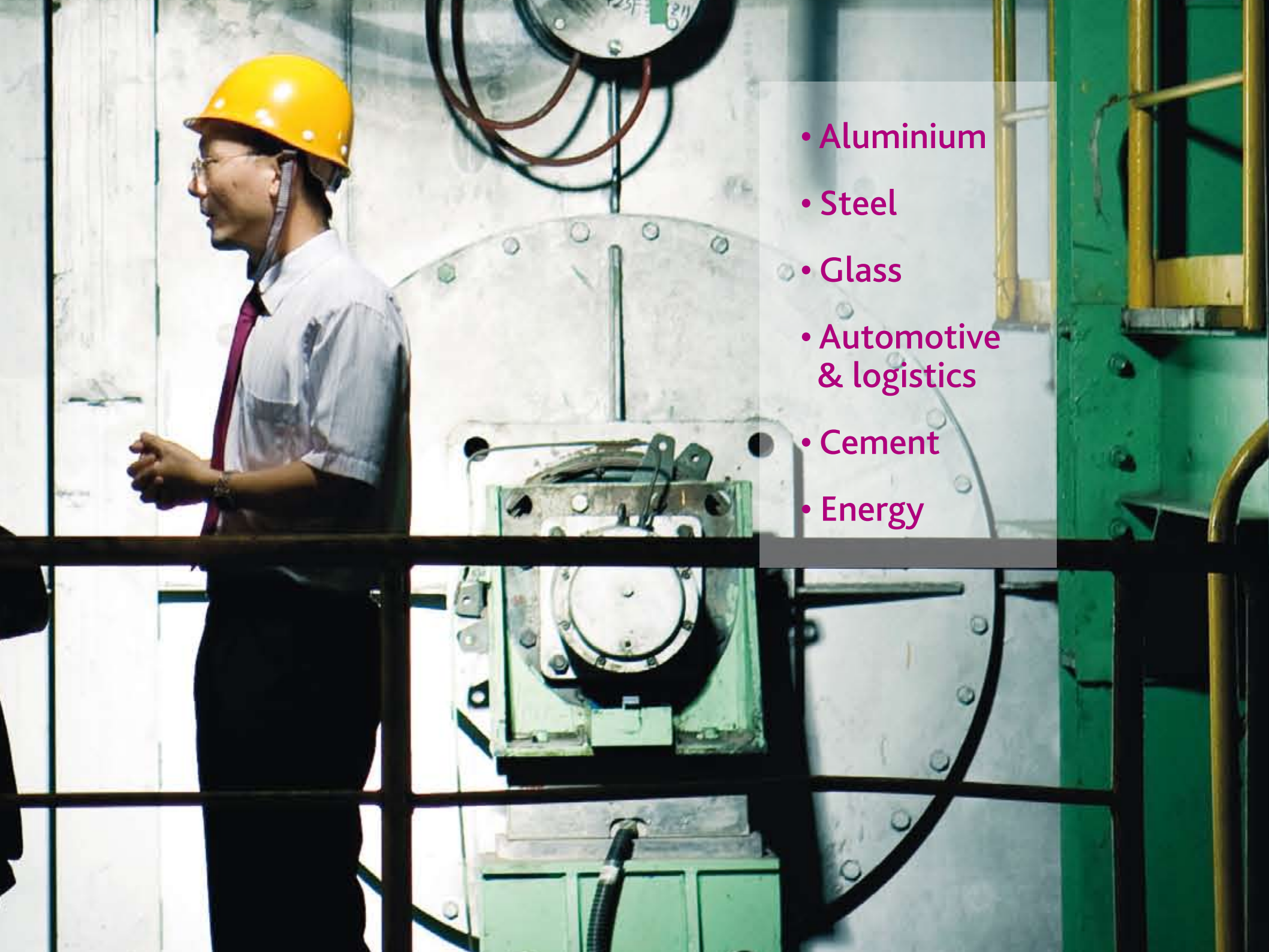
Bahrain: Manama
Qatar: Doha
South Africa: Johannesburg



Fives Japan was created for a different set of reasons than Fives' other representative offices abroad. Apart from bringing us closer to our clients or contractors, our Japanese base will help us identify new technologies in a market known for its openness to innovation and, when appropriate, will allow us to seize opportunities for external growth. In 2009, thanks to our Tokyo office, we were able to acquire the leading Japanese fluid filling supplier to that nation's major automakers. The combined market shares of Cinetic Filling (Nantes, France) and Cinetic Decker Filling (Yokohama) make them the global leader in their specialty. Fives Japan played a key role in identifying, approaching, analyzing and negotiating the Decker purchase. The acquisition three years earlier of Cinetic Sorting K.K. (Kobe), Japan's leading company in the large sorting-center market (serving express package delivery) was hailed by the French Agency for International Investment (AFII) during an official ceremony in Tokyo, last October, attended by 200 people from the French and Japanese industrial, financial and economic worlds. During this ceremony, Anne-Marie Idrac, the French Secretary of State for Foreign Trade, awarded Frédéric Sanchez with the prize for French investment in Japan. Whether in the automobile, steel, cement, combustion, air separation or cryogenics industries, our Japanese assets give Fives an advantage by significantly raising the Group's credibility there, and augment its ability to evaluate and take advantage of opportunities. With quiet Japanese modesty and determination, we are learning much in Japan and finding our place in a country rich in technologies and businesses complementary to ours."

Jean-Marie Caroff • Head of the Group International Development Department





- Aluminium

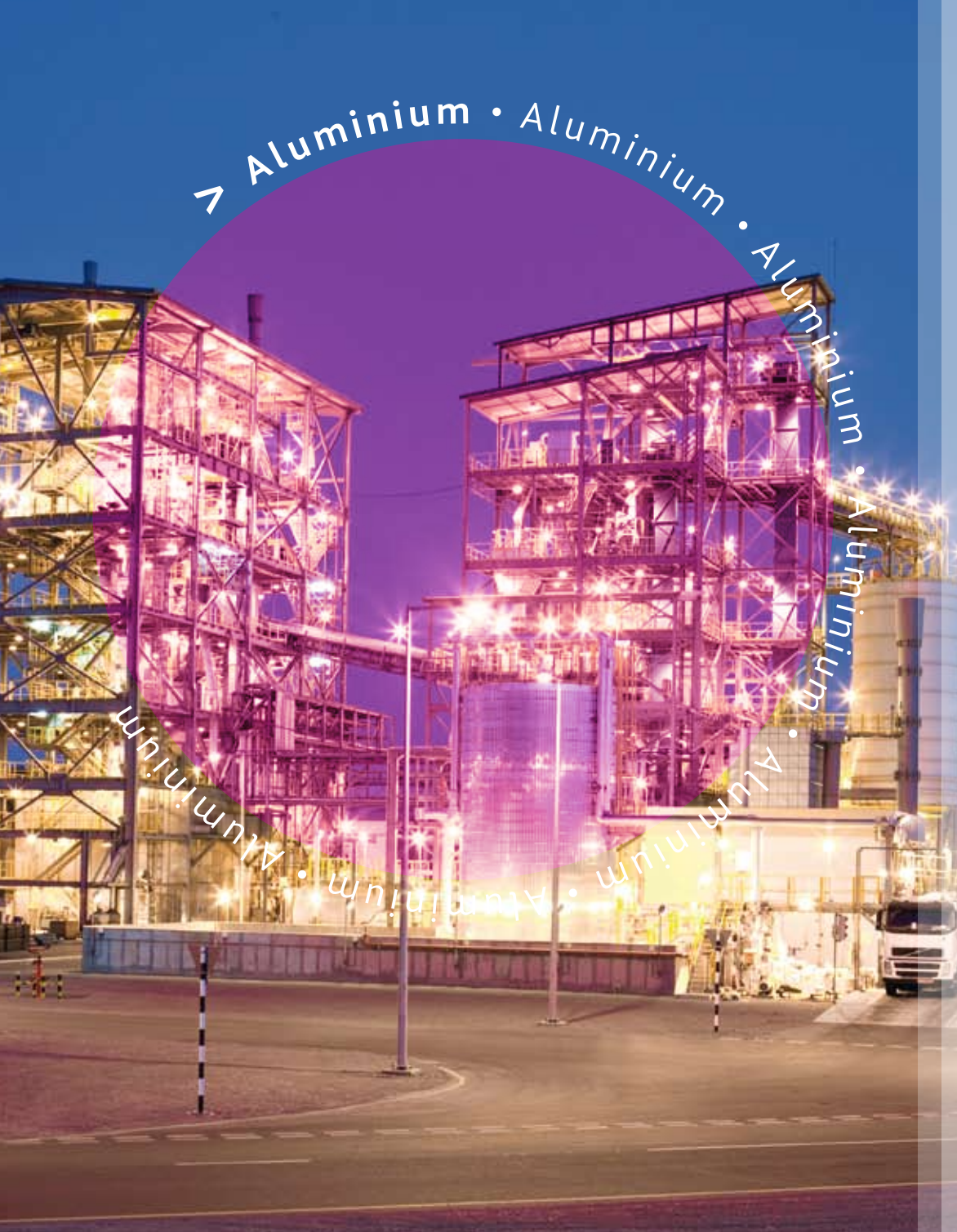
- Steel

- Glass

- Automotive & logistics

- Cement

- Energy



In aluminium: after a prosperous period, the primary aluminium industry contracted in 2008, due to a sharp decline in demand among its most important clients, the construction and transportation industries. American and European aluminium producers reacted quickly by freezing all their new investments. Thanks to the Group's global commercial activities and its local presence in India, it has nonetheless managed to bring in several large-scale contracts.

2009 was highlighted by commercial success in India

Fives Solios was awarded the contract for two green anode plants for the two new primary aluminium smelters to be built by Hindalco at Mahan and Aditya. These plants, with capacities of 35 tonnes per hour and 52 tonnes per hour, will be equipped with the latest technologies developed by Fives Solios - such as Rhodax® for dry material preparation, IMC® (Intensive Mixing Cascade) for paste preparation, mixing and cooling and the new Xelios high-density vibrocompactor for anode forming.

Vedanta, the Indian mining group, has also awarded Fives Solios with an order to supply four electrolysis gas treatment centers to expand its Balco plant in Korba. Each of these centers will be equipped with TGT-RI type filters and exhaust fans to treat gases coming from the pots, which greatly reduce fluoride emissions.

- **Electrolysis:** gas treatment centers on electrolysis pots and bath processing units.
- **Carbon:** green anode plants, fume treatment centers as well as firing equipment and process control systems for anode baking furnaces and carbon butts recycling units.
- **Casthouse:** holding and melting furnaces, heat treatment furnaces, and water cooling systems for the casthouse.



Fives Solios will carry out these contracts in collaboration with Fives India, the Group's operating subsidiary which will be responsible for a large portion of equipment procurement as well as some engineering studies. These orders significantly strengthen and extend the Group's presence on the promising Indian market.

Qatalum in Qatar: the construction of one of the largest smelters in the world continues

Fives Solios continued its work on Qatalum in Qatar, the most productive and cleanest aluminium smelter in the world and performed the first installations and commissioning. The liquid pitch marine terminal, a first gas treatment center and four casthouse furnaces were started up in 2009, in line with the contractual schedule. The gas treatment center is equipped with the Yprios double suction technology which ensures an extremely low level of fluoride and dust emissions. Seven other holding and melting furnaces and their associated water cooling systems, three gas treatment centers, the 60 tonne per hour green anode plant, the fume treatment center on the anode baking furnaces and their firing and control systems will be commissioned in 2010.

Qatalum, a joint-venture between the Norwegian company Hydro AS and nationally-owned Qatar Petroleum has chosen Fives Solios for its innovative and environmentally friendly technologies.

Hot bath processing successfully installed at EMAL in the Port of Al'Taweelah

In the United Arab Emirates, Fives Solios installed and commissioned a hot bath processing unit for EMAL (Emirates Aluminium in Abu Dhabi). This facility features the latest Fives Solios technological developments, customized specifically for high-capacity and high-amperage aluminium smelters.

“The Fives Solios and Fives India teams are working together on the Hindalco and Vedanta projects in India.”





This plant is equipped with Celsios, the clean bath processing solution, the latest technology for hot bath treatment developed by Fives Solios which implements a clean airswept autogenous mill. Celsios is capable of processing hot bath up to 900°C and includes an automatic unground scraps collecting device. The upstream part of the bath cooling is equipped with a duct network connected to the GTC for fluorinated fume collection and treatment, in order to reduce the global HF emissions of the smelters.

Fives Solios' proprietary fume treatment technology together with its expertise in project management enabled the Group to win a project in Kazakhstan

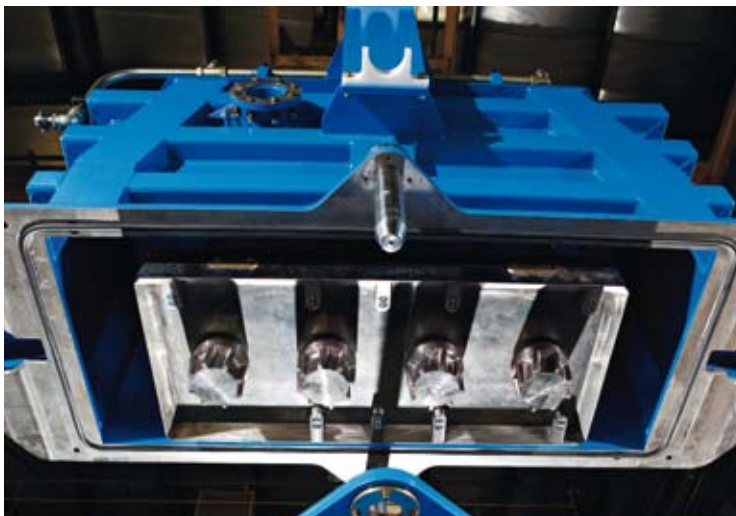
Riedhammer GmbH, a company specialized in the construction of anode baking furnaces, awarded Fives Solios a contract to design and supply a fume treatment center for the new Kazakhstan Aluminium plant in Pavlodar, Kazakhstan. Fives Solios was selected for the performance of its equipment and its expertise in managing projects under extreme conditions, whether due to the climate, a shortage of skilled labor or the pre-assembly of equipment.

For this contract Fives Solios will work with Fives Engineering in Shanghai, which will be in charge of manufacturing the bag filters.



Xelios, the new high-density vibrocompactor for anode forming

In operation in an aluminium plant since December 2008 and recently commissioned at Qatalum in Qatar, the new Xelios vibrocompactor, developed by Fives Solios, enables for the production of high-density anodes for high-amperage electrolysis. When combined with Rhodax® technology, IMC® for paste preparation and the new Amelios process-control system, the Xelios vibrocompactor ensures consistent anodes, even from a variety of raw material sources. This new machine is the result of a value and risk assessment process which led to a 20% reduction in the number of components in order to improve reliability and reduce maintenance costs. Although 30% lighter, it is designed with a compacting capacity far greater than the previous generation and includes numerous advances, particularly in the mold lifting and clamping system, the top-back pressure and vacuum system and the new, simplified pneumatic suspensions. Clients obtain unmatched performance with lower operating costs.



■ ■ ■ KEY REFERENCES

- **EMAL (U.A.E.)**
2008-2009: turnkey supply of a hot bath processing unit.
- **Alba (Bahrain)**
2003-2005: line 5- turnkey supply of the green anode plant, the carbon butts recycling unit, 2 gas treatment centers, the fume treatment center; supply of a total of 11 furnaces for casthouse no.3 and the extension of casthouse no.2.
- **Qatalum (Qatar)**
2007-2009: turnkey supply of a green anode plant, 4 pot gas treatment centers, the holding and melting furnaces for the casthouse with a water cooling systems, the fume treatment center and the firing equipment and process control system for the anode baking furnaces and the liquid pitch marine terminal.
- **Aluminerie Alouette (Canada)** **2003-2004:** phase II, supply of the fume treatment center for the new anode baking furnace, 3 gas treatment centers and the pitch fume treatment system for the green anode plant.
- **Sohar Aluminium (Sultanate of Oman)**
2006-2008: turnkey supply of a green anode plant, 2 pot gas treatment centers, the fume treatment center, holding furnaces for the casthouse with a water cooling system and liquid pitch marine terminal.
- **Alcoa Fjarðal (Iceland)**
2005-2007: supply of the bath processing unit, 2 gas treatment centers and 4 holding furnaces for the casthouse.





The steel industry was strongly affected by the economic crisis and global steel production reached an all-time low in 2009, falling 8%. Geographically, this overall trend conceals great disparities. Chinese production has kept up its substantial growth - 13.5% last year and now accounting for nearly half the world's production - while production has lagged to an unprecedented degree in the OECD countries with contractions of 30-35% on average. Depressed steel prices and anxiety about the indebtedness of large Western industrial clients have taken their toll on investments. Boasting excellent references and positions in China, the Group has however taken advantage of the few opportunities on this market.

Fives technologies and know-how recognized by Baosteel

At Baosteel, the leading Chinese steelmaker, Fives successfully commissioned the Ychang tinplate continuous annealing line, whose line speed of 800 meters per minute makes it one of the world's fastest, as well as two galvanizing lines at Baoshan. These use proprietary thermal and mechanical technologies that allow the production, among other things, of very high quality, high elasticity steel, used by the auto industry. They were commissioned and accepted within a very short time frame, demonstrating the Group's expertise and experience in terms of commissioning. At Baoshan, Fives Stein also commissioned a vertical annealing line equipped with a Flash Cooling® system. Meanwhile, at Meishan, the advancement of the project allowed for the production of the first strip on the tinplate annealing line.

Stainless steels

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

Silicon steels

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

Carbon steels

- Digit@l Furnace®, reheating furnaces (long and flat products)
- Tunnel furnaces and heat treatment
- Welded tube lines
- Annealing lines (carbon and tin)
- Galvanization lines (horizontal and vertical)
- Organic coating lines (convection and induction)
- Combined and compact lines



At the end of the year, Baosteel also entrusted Fives Stein to supply two grain oriented furnaces for silicon steel for decarburizing and final coating lines. These lines are part of the Baoshan plant expansion project to meet the growing demand for silicon steel used for its electrical properties. All these projects confirm the confidence granted by Baosteel to the Group for its technologies and know-how.

Fives consolidates its position as a supplier to Chinese industry

In 2009, Fives Stein received a major order from a leading Chinese steelmaker, Shougang Jintang, to supply two vertical furnaces for galvanizing lines and one vertical furnace equipped with a Flash Cooling® cooling system for a steel strip annealing line - in fact one of the largest in the world with a capacity exceeding one million tonnes per year. This investment is part of an ambitious program to relocate Shougang from its original site near Beijing for environmental reasons. Thanks to the supply of nine of the eleven vertical furnaces for continuous annealing lines ordered in the last five years, Fives Stein has confirmed its leading position in the segment of continuous annealing lines for carbon steel.

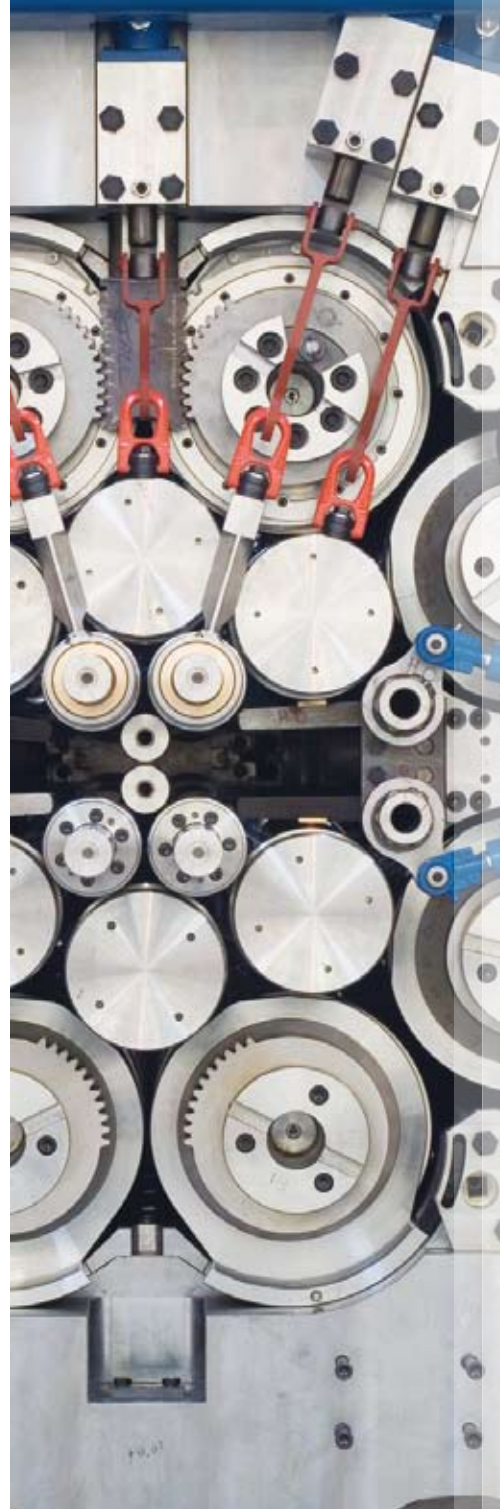
At the same time, Benxi Steel, in China, recognized as a carbon steel producer, gave Fives DMS the order for an annealing and pickling line and a Skin-Pass for stainless steel in order to diversify its production. Fives DMS also received a new order from the Posco Group, the leading South Korean steelmaker, to produce two Sendzimir-type rolling mills for their ZPSS stainless steel plant in China. This order solidifies Fives' leadership in the field of cold-rolling stainless steel.

In terms of commissioning for clients other than Baosteel, the Group successfully commissioned a new rolling mill for China's Shanghai Stal, specialists in superthin stainless steel sheet, showing Fives' expertise in superthin steel rolling.

Fives DMS also received the acceptance of the very large rolling mill ordered by Tisco, the largest producer of stainless steel in China.

Very high quality, high elasticity steel is among the range of products possible thanks to the thermal and mechanical technologies developed by the Group."





Fives Stein reheating technology chosen by steelmakers worldwide

Usiminas, one of the largest Brazilian steelmakers, chose Fives Stein, in association with its Chinese subsidiary Fives Stein Shanghai and its Brazilian licensee Combustol, to supply a new walking beam Digit@l Furnace® (130 tonnes per hour) to expand the capacity of the slab rolling machine at their plant in Ipatinga, Brazil. This contract also calls for the installation of a process-line optimization system for the new furnace and for two older furnaces at the same site, enabling Usiminas to synchronize and optimize production and realize energy savings on all three furnaces.

At the same time, several furnaces for reheating slabs and billets started up at Essar Steel (250 tonnes per hour), Welspun and Jindal Steel & Power in India, Isdemir in Turkey (2 of 400 tonnes per hour) and CST 2 in Brazil (450 tonnes per hour). Acceptances of a reheating furnace at voestalpine Stahl in Austria and of three furnaces for Handan in China were announced this year as well.

ArcelorMittal chose Fives for the modernization of its Lesaka plant in Spain

ArcelorMittal contracted Fives Stein and Fives Celes to supply an induction painting section for its plant in Lesaka, Spain. This project consists in adding an organic coating section to a galvanizing line, using Fives-patented processes for baking on coatings by induction and a system for re-injecting warm air into the drier, for a smooth-running and safe plant.



Baosteel: record strip speed for the tinplate annealing line

In July 2009, the performance tests conducted on the tinplate annealing line designed by Fives Stein and Fives DMS for the Chinese steelmaker Baosteel, for its Ychang site, resulted in the obtention of record strip speeds of 800 meters per minute. This treatment line, with an annual capacity of 425,000 tonnes, was designed for the very high-speed processing of very low-thickness strips (0.15 to 0.50 mm) with a width of 700 to 1,050 mm.



KEY REFERENCES

- **Baosteel (China) 2004-2009:** various continuous annealing and galvanization lines for carbon and silicon steels and one rolling mill for stainless steel.
- **Posco (Korea) 2007-2008:** a rapid wet Flash Cooling® system following the supply of 2 vertical furnaces for galvanization lines.
- **Shougang Jingtang (China) 2008-2009:** 4 vertical furnaces for galvanization and continuous annealing lines, of which, one continuous annealing with a capacity of 1,000,000 tpy, equipped with Flash Cooling®.
- **Benxi Steel (China) 2008-2009:** supply of a cold annealing and pickling line and a Skin-Pass.
- **Outokumpu (Finland) 2007:** mechanical equipment of a stainless steel annealing and pickling line.
- **Tisco (China) 2005-2007:** supply of the world's largest stainless steel annealing and pickling line with a capacity of 1,150,000 tpy, the "Jumbo Line".
- **ThyssenKrupp (USA) 2007-2009:** order of 3 rolling mills and one Skin-Pass.
- **Severstal (Russia), CST (Brazil), Celsa (Spain), Colakoglu (Turkey), Welspun et Jindal Steel & Power Ltd. (India):** supply of Digit@l Furnace®.
- **Thainox (Thailand) 2008:** supply of a new generation of rolling mill enabling a better integration of the rolling process.



Fives Stein, chosen for the only float glass project in Europe, in 2009

Last October, the Italian Sangalli Vetroitalia reiterated its confidence in Fives Stein by entrusting the design, installation and commissioning of a full tin bath for its second float glass plant located near Venice. In September 2000, Sangalli Vetroitalia had already chosen Fives Stein for the design and commissioning of the production line for its first float glass plant, located in Manfredonia in southern Italy. This new production line, with a capacity of 650 tonnes per day, should start-up in February 2011.

Hollow glass, fiberglass and special glasses, Fives Stein acclaimed worldwide

Through its British subsidiary, Fives Stein has won numerous orders from its traditional customers around the world for the supply of equipment for the production of container glass and fiberglass. In the United States of America, Fives Stein won a major contract to supply the working end and three "F" shaped tandem forehearth to an important customer for its container factory in Houston, Texas. In France, Fives Stein secured a repeat contact for the rebuild of the electric furnace, forehearth and hand gathering bays for a major quality glassware producer.

FIVES OFFER

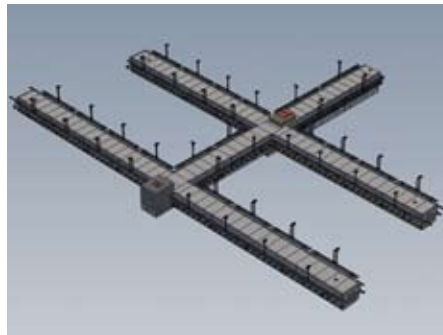
Thermal equipment and production lines for float glass (melting furnaces, tin baths, annealing lehrs and air pollution control systems), for flat glass (melting furnaces, rolling machines and annealing lehrs) and for hollow glass and special glasses (melting furnaces, conditioning equipment and ancillary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



The energy efficient oxy-gas combustion technology

In 2009, Fives Stein successfully installed its patented forehearth oxy-gas burners onto fibreglass lines in Goa, India. This technology was developed for high temperature glass conditioning applications where air-gas combustion is very inefficient and generates damaging high internal pressures. The system includes specially designed burner blocks, the patented burner nozzles and simple, but accurate mass flow controls and has resulted in fuel savings of 52% for this customer.

A spectacular result which allows this client to reduce its emissions as well as its carbon footprint.

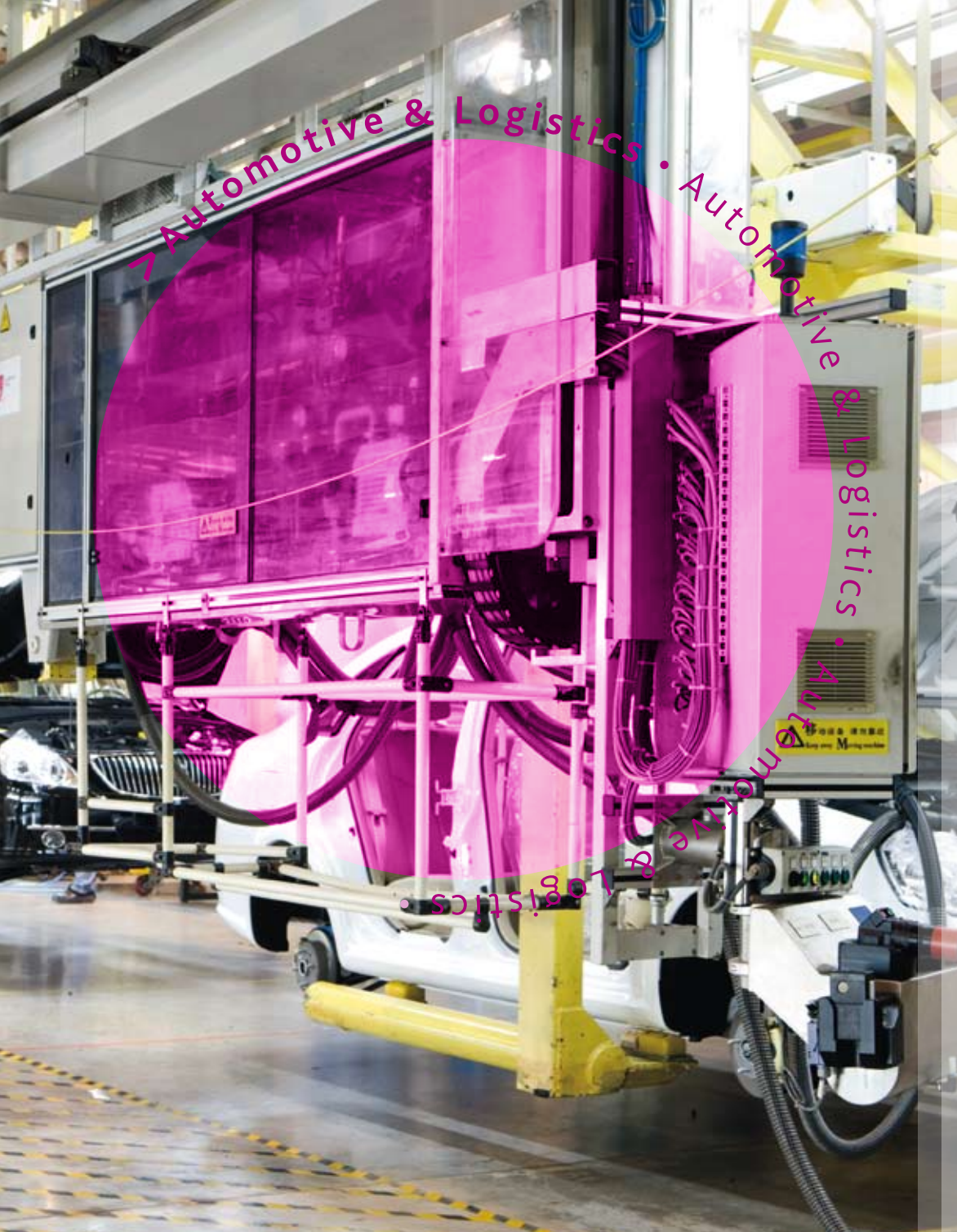


KEY REFERENCES

- **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.
- **Sejal Architectural Glass (India) 2007-2010:** complete* float glass production line of 550 tpd.
- **YugRosProdukt (Russia) 2007-2009:** complete* float glass production line, cutting line and nitrogen and hydrogen production stations.
- **Fuyao Group (China) 2003-2005:** float glass production line of 600 tpd for automotive production.
- **Guangzhou China Southern Glass (China) 2003-2005:** 2 complete hot ends for float glass lines of 550 tpd and 700 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)*





In the automotive sector, sales continued their decline through the summer of 2009 before reversing, influenced by accelerating growth in the emerging countries and the used-car replacement incentives offered in industrialized countries. The market emerged from this downturn utterly transformed. On the one hand there are the emerging countries and their new plant projects and on the other, the advanced economies, which found themselves saddled with large overcapacity needing to be drawn down. The Group adapted to these conditions by bringing its proven technology to meet the needs of traditional clients while continuing to expand its business in markets where automotive solutions could find new and different applications.

Companies in the logistics sector, where the Group booked several sizable orders this year, continued to invest in automated sorting systems for handling increasingly complex work flows.

Machining: Fives Cinetic solidifies its market leadership

Although the Group's clients slowed down their production considerably, they did continue to order the Landis and Giustina grinding technologies part of Fives Cinetic's offer. Orders were concentrated mainly in the emerging countries - from local manufacturers in China, General Motors in India and Thailand, Ford in Mexico and South Africa, etc. In the centerless grinder segment, Fives Cinetic also supplied Baosteel, China's largest steelmaker, with three automated steel bar grinding systems.

- **Automotive and manufacturing industries:** automated systems with high production rates for machining, foundry, automation, assembly and integration of industrial processes.
- **Logistics:** automated handling and sorting systems (sorting installations and high production rate equipment, computerized solutions for order picking and for the exit of production lines); maintenance of automated systems.



Automation and assembly: recognized expertise in many different industries

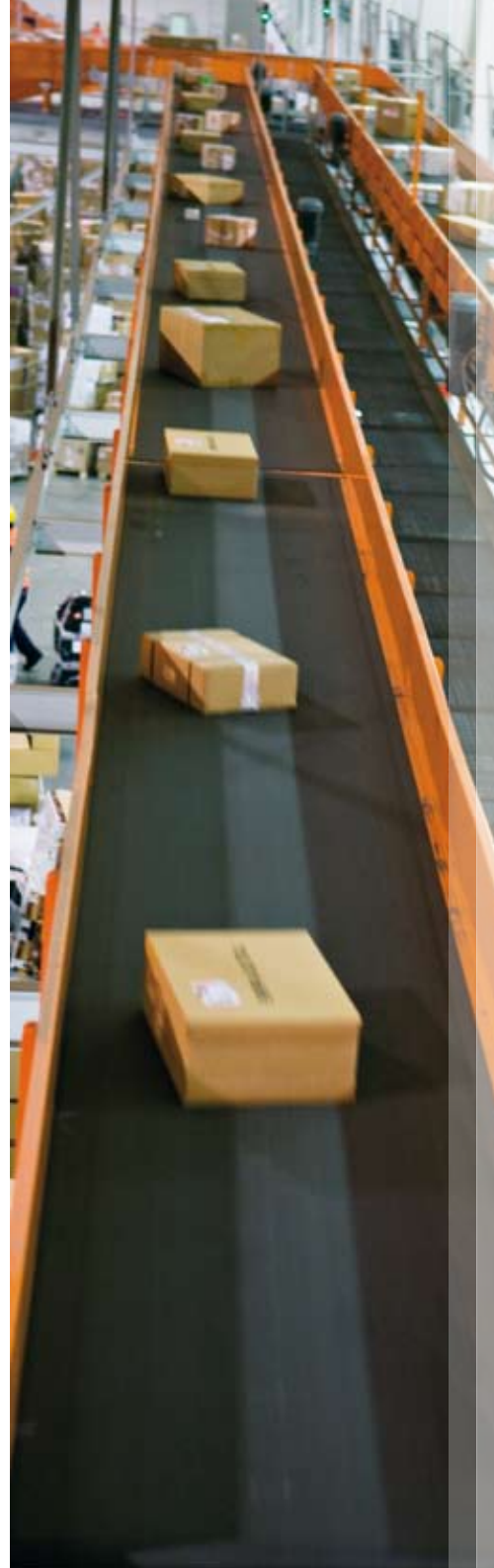
In 2009, General Motors engaged the Group to produce the assembly line for its new "Family 0" engine. The Fives Cinetic engineers on this project came up with particularly inventive ways to meet the auto maker's needs for shorter production times, lower costs and greater flexibility. In Europe, Fives Cinetic's expertise in automation made it possible to develop new applications in new sectors. A good example was the robotic cell for chamfering the heads of heat exchangers, designed and installed in 2009 by Fives Cinetic for Fives Cryogenie. This highly innovative and ergonomic system, based on a robot that recognizes the parts it is working on, requires no off-line programming and actually assists the operator as he machines. An intuitive man-machine interface has the further advantage of simplifying the workstation's computer-configuration. Fives Cryogenie was so pleased with this installation that it ordered a new robotic cell from Fives Cinetic for welding the exchanger heads. These developments open up fresh possibilities for the Group, particularly in automated machining and large part welding.

With the acquisition of Decker Corporation, the Fives group becomes the global leader in fluid filling

At the end of 2009, the Group acquired Decker Corporation, a Japanese company headquartered in Yokohama, which designs and supplies fluid fill systems and sealing equipment, mainly serving Japanese auto manufacturers in Asia. This company is complimentary to Cinetic Filling in Nantes, France, which works in the same business, and makes the Group the global leader in the fluid filling segment, being the only competitor in this market with access to both Western and Japanese manufacturers.

With conditions in the automotive sector remaining difficult, Fives Cinetic seized the opportunity to diversify its leak test and filling machinery business by looking into the fast-growing heat pump market, where technologies developed as alternative refrigerants for automotive applications are used in HVAC (heating, ventilation and air-conditioning) applications. The Japanese company Sanden entrusted Fives Cinetic with the development of a CO₂ filling system and a first vacuum-chamber test unit. Both these applications have the specific constraint of operating at much higher pressures than those used for the same type of equipment in the automotive industry. Fives Cinetic has also concluded a contract with the Zehnder Group, via Acova, a radiator manufacturer best known for its towel-drying ranges. These recent projects have extended a series of equipment bringing it closer to the standards already implemented for Saunier Duval and Atlantic, two major actors in the area of hybrid domestic boilers.





Internationally recognized logistics solutions

In terms of high speed sorting and material handling systems for order fulfillment, sorting and distribution centers, the Group has a first rate offer and know-how.

In 2009, Fives Cinetic was awarded a large contract to supply a parcel sorting system for an air hub in China. The system will include four cross belt sorters with an overall throughput exceeding 44,000 parcels per hour. The Canada Post Corporation has once again selected Fives Cinetic to supply two high-speed sorting systems for the postal parcel distribution centers in Winnipeg and Toronto.

Other international players in the courier service industry, such as FedEx in Germany, Yamato and Sagawa Kyubin in Japan, DHL in France and Italy have also chosen Fives Cinetic's solutions.

In France, Fives Cinetic has completed the commissioning of the largest postal parcel distribution center for Coliposte (300,000 parcels per day) in Moissy (France) and installed five new tray handling systems for La Poste at the postal distribution centers in Lille, Bordeaux, Toulouse, Montpellier and Les Yvelines. The global solution provided includes high-throughput cross belt sorter and high-speed conveyors as well as the new WCS TRACE® warehouse control system.



The Landis LTC1, dedicated to the small vehicles market

In 2009, Fives Cinetic developed a grinding machine dedicated to the small vehicles market derived from the highly successful Landis LT1 machine. The new Landis LTC1 has a smaller capacity, leading to a reduced overall footprint, as well as a leaner control system and mechanical equipment to suit the production of small camshafts and crankshafts. In India, several Landis LTC1 machines have been ordered by Bajaj Motors, a major supplier to Hero Honda (the largest motorcycle producer worldwide) and NETMEC a supplier to Bajaj Auto (one of India's largest motorcycle manufacturers), to grind motorcycle camshafts and by Tata Motors to produce crankshafts for their new Nano car engine. The Landis LTC1 allows Bajaj Motors to grind over 2,000 camshafts per day with a floor to floor cycle time of 34 seconds. The new crankshaft line at Tata Motors, which produces 1,000 crankshafts per day for the Nano engine, includes Landis LTC1 grinding machines processing main journals, crank pins and end features. This machine provides a leaner, cleaner and more efficient process to Cinetic Landis' customers.



KEY REFERENCES

- **Renault Batilly (France) 2008:** conveying systems for the modernization of the trim and final assembly lines dedicated to the production of light commercial vehicles.
- **PSA Peugeot-Citroën (France) 2008:** 3 transmission gear laser welding machines.
- **Faurecia (France) 2008-2009:** 4 laser welding machines for car seat hinges.
- **Alfing Kessler (Germany) 2007-2010:** 6 grinding machines for marine and gen sets engine crankshafts.
- **Fiat Powertrain (Poland) 2008-2009:** 9 grinding machines for crankshafts of which 2 dedicated to the machining of "multi air" engine parts.
- **Daimler AG (Germany) 2009:** 6 grinding machines for crankshafts.
- **General Motors (India, Thailand, Uzbekistan) 2009-2010:** 10 grinding machines for crankshafts.
- **SALM (France) 2008:** high pressure jet pannel cutting systems and an automatic panel storage and retrieving system for the Selestat and Turkismühle plants, respectively in France and in Germany.
- **SATE, Atlantic group (France) 2009:** automated cells and gantries for electric and solar water heaters.
- **Baosteel (China) 2008-2009:** steel bar grinding system for valves.
- **Latecis for Airbus (France) 2009:** handling system for the production of aircraft jet engine masts.
- **Areva TA for Airbus (France) 2009:** assembly conveyor for the central section of aircrafts.
- **Sanden (Japan) 2009:** CO₂ filling machines and a first vacuum-chamber test unit.
- **Canada Post Corporation (Canada) 2009:** high-speed automated sorting systems at the parcel distribution centers in Toronto (14,000 pph) and Winnipeg (6,000 pph).
- **FedEx (Germany) 2009:** high-speed automated sorting system for parcels at the Cologne air hub (12,000 pph).
- **Yamato (Japan) 2009:** high-speed automated sorting systems for small parcels and documents.
- **Sagawa (Japan) 2009:** automated sorting system.
- **DHL (France, Italy) 2009:** automated sorting systems for parcels (3,000 pph each).
- **La Poste - Coliposte (France) 2009:** the biggest postal parcel distribution center in France including a 1.2 km sorter and 6 automated singulators (16,000 pph).
- **La Poste (France) 2009:** commissioning of 5 new tray handling within the scope of a three-year agreement (2006-2010) for the equipment of 15 postal distribution centers.





After a very bullish four years, the capital spending cycle turned sharply downward in the second half of 2008 and went into a bearish phase, growth in emerging countries did not offset the significant decline in Western countries. Certain geographic areas, such as China and Africa, did remain on an upward path but stood out as exceptions on the gloomy global landscape and enabled the Group to book several orders, especially in the combustion and grinding fields.

A year full of achievements throughout the world for Fives FCB

Operationally, 2009 was a very busy year, especially with the execution of major contracts in Qatar, Egypt, Vietnam and Mexico. In Vietnam, following the production of the first clinker, the inauguration of the Thai Nguyen (Vinaincon group) 4,000 tonne per day cement plant took place on December, 2009, in the presence of the Prime Minister and other Vietnamese government representatives. This plant is equipped with the most advanced technologies and processes developed by Fives FCB to reduce energy, water consumption, gas emissions and the carbon footprint. In addition, the Twin Horomill® system enables the grinding plant to continue working at half capacity when one of the Horomill® is stopped for maintenance.

In Egypt, Fives FCB started up the Titan group's 4,000 tonne per day production line at the Beni Suf Cement Co. plant. This new line includes a 170 tonne per hour cement grinding plant. The ultra-modern facility meets the strictest environmental standards and is equipped with Fives FCB technologies to reduce energy consumption as well as gas emissions.

In Mexico, Fives FCB's teams assured the assembly of the 3,500 tonne per day greenfield cement plant controlled by Holcim Apasco. This production line is

- **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.
- **Dust collection equipment** for kilns, coolers and grinders.



equipped with a Zero-NOx precalcination system allowing for the use of alternative fuels and does not emit NOx at this step of the process. The grinding plant is equipped with three Horomill®, a technology which is particularly efficient in terms of energy, which also eliminates water consumption for the operation during the grinding process. The commissioning of this second plant entrusted by Holcim to the Group in this region is planned for the first half of 2010.

Grinding: Fives FCB equipment acclaimed by the cement and minerals industries

In 2009, Bunge Maroc Phosphore of Morocco engaged Fives FCB to produce a dry-process phosphate grinding plant at their Jorf Lasfar site. It will integrate a ball mill and a TSV™ separator. Well-known among cement manufacturers for its unrivalled performance, the TSV™ separator, with its patented shaped rotor blades and anti-vortex system, allows manufacturers to obtain a minimum recirculation rate while maintaining low pressure drop and extremely low energy consumption.

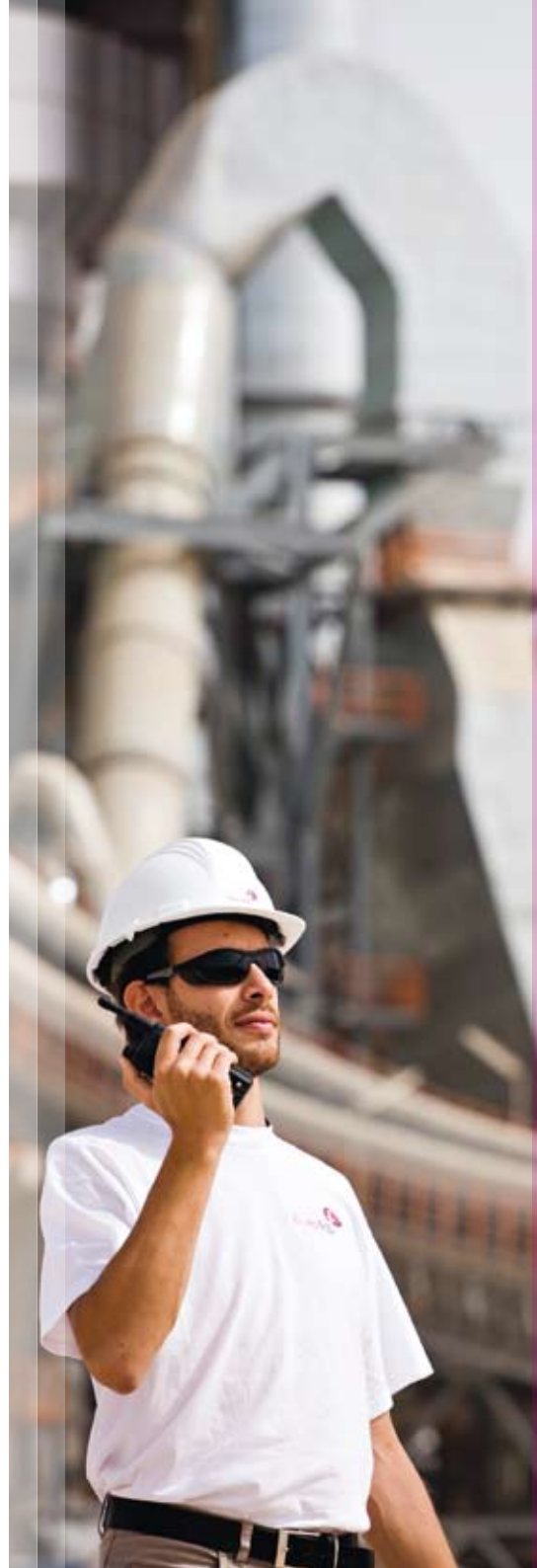
As part of its development to recycle the steel slag, the Chinese company Jianhuan Technology & Trade Co. Ltd. (Jingye) chose Fives FCB for the supply of two grinding plants. Dedicated to the Jiujiang and Xinyu sites in Jiangxi Province, each one will be equipped with a Horomill® 3800 grinding mill and a TSV™ 4500 classifier. Renowned for its operation flexibility, the Horomill® allows raw, clinker and slag grinding. Thanks to its lower energy consumption compared to all other types of mills, this technology now occupies a key position in the new approach to cement production with low CO₂ emissions.

Fives Pillard offers a particularly efficient combustion system

Fives Pillard has reinforced its technological lead in calcination and mineral drying by once again securing a large number of orders this year for burners and complete fuel preparation plants, especially from Chinese customers. In the area of burners for cement plant furnaces, following up on the success of its Rotaflam® burner,



The Horomill® technology occupies a key position in the new approach to cement production with low CO₂ emissions."





Fives Pillard has recently marketed a new burner called the Novaflam®. Highly acclaimed by its first clients, this new burner is finely adjusted to each application, thanks to its flame quality, simplified operation, efficiency and ability to run on up to 70% alternative solid fuels. The Group focused its priorities on providing this segment of the market with combustion equipment that is capable of improving the quality of the product being processed, while drastically reducing the emission of pollutants and CO₂.

Fives Solios a leading provider of gas filtering technologies

With its TGT filter technology, Fives Solios provides particularly well suited processing solutions for filtering high-volume gas streams on modern high-capacity cement furnaces and for vertical grinders. In 2009, Fives Solios was chosen by Saint-Gobain Proppants to equip the two bauxite kilns at the Fort Smith plant in Arkansas (USA), with a SO₂ and HF treatment unit integrating its last enhanced all-dry technology. Proppants are spherical ceramic powders that are used in oil and gas wells. The bauxite is processed in long rotary kilns, similar to cement kilns, driving off particulate materials as well as sulfur and fluoride acid gases. Fives Solios' enhanced all-dry technology offers the best combination of performance, equipment footprint, and capital and operating costs.



Fives FCB has received the provisional acceptance certificate for the third cement production line installed for QNCC in Qatar

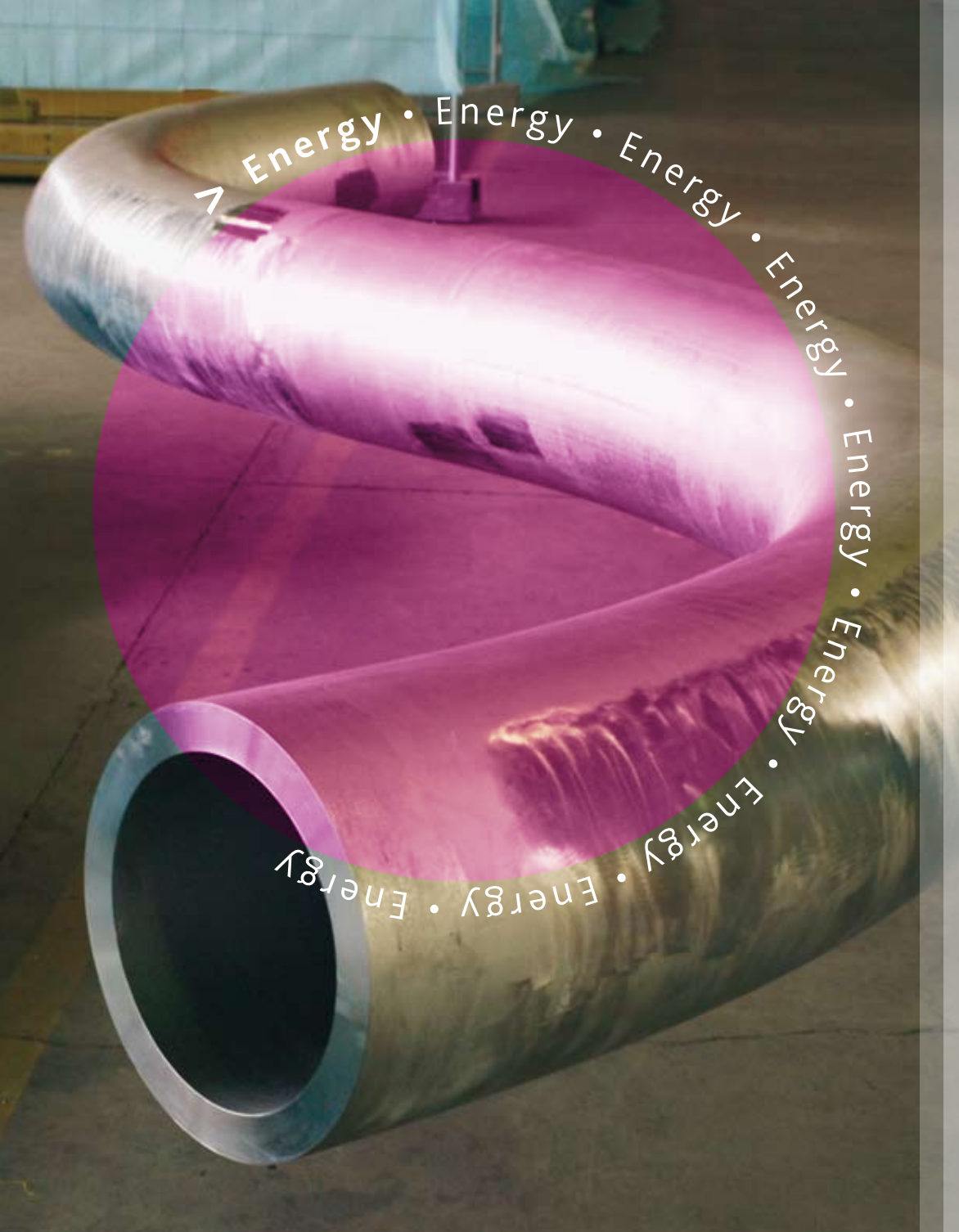
On July 9, 2009, following the achievement of industrial tests, Fives FCB obtained the provisional acceptance certificate for the complete Umm Bab line no.4, with a capacity of 5,000 tonnes per day from the Qatar National Cement Company. QNCC, a 45% state-owned company, had entrusted Fives FCB with this third turnkey contract in November 2006, following those signed in 1995 and 2004 for the construction of Umm Bab lines 2 and 3 (2,000 tpd and 4,000 tpd). The three Umm Bab production lines supplied by Fives FCB enable this cement plant to produce up to 15,000 tonnes of cement per day (5 million tonnes of cement per year), making it one of the largest and most modern cement plants in the Gulf region. Furthermore, thanks to the unique Fives FCB Zero-NOx precalciner, this is one of the most environmentally-friendly plants with reduced NOx emissions meeting the most stringent environmental conditions.



■ ■ KEY REFERENCES

- **Qatar National Cement Company (Qatar)**
1995-2009: turnkey supply of Umm Bab 2 (2,000 tpd), 3 (4,000 tpd) and 4 (5,000 tpd) production lines.
- **Lafarge (Mexico)**
2004-2006: turnkey supply of a 1,500 tpd cement plant in Tula.
- **Holcim/Apasco (Mexico) 2007-2009 and Holcim (Costa Rica) 2002-2004:** supply of two production lines of 3,500 tpd and 3,000 tpd, using Horomill® technology.
- **Beni Suef Cement Company (Egypt)**
2007-2009: turnkey supply of a cement plant with a capacity of 4,000 tpd, comprising a 170 tpd cement grinding unit.
- **Vinaincon (Vietnam)**
2005-2007: supply of a complete cement plant of 4,000 tpd using Horomill® technology.
- **Cemex (Panama) 2006:** turnkey supply of a cement grinding plant equipped with a Horomill® 3800.
- **Cementos Moctezuma (Mexico):** 13 Horomill® grinding mills, of which the oldest were commissioned 13 years ago.
- **Holcim (Texas, USA), Graymont (Utah, Pennsylvania, USA) and Polysius (California, USA):** various TGT filters for clinker furnaces and lime kilns.
- **Holcim (Merone, Italy):** conversion of the existing Rotaflam® burner into a Low NOx Rotaflam®.
- **Holcim (Lumbres and Dannes, France / Benelux - Obourg, Belgium):** supply of Novaflam® burners.





The energy sector continued to offer opportunities in 2009 despite significant slowdowns in industrial combustion and cryogenic exchangers. The high-performance pipe segment stayed busy, thanks largely to demand in the nuclear industry. This was in turn thanks to new power plants built in places such as France and China and a growing replacement market as operators try to extend the useful life of existing power plants. In bio-energy, the Group continued to modify its product line to meet the needs of sugar cane processors.

Fives Nordon, a key supplier for the nuclear industry

This year, Fives Nordon was again awarded major orders in the nuclear field, particularly in France and China. Fives Nordon will supply China Nuclear Energy Industry Corp. with the pressurizer surge lines for China's power plants in Changjiang, Fangjiashan and Fuqing, while supplying the plants in Ningde, Fangchenggang and Yangjiangin with rolled and welded carbon steel tubes.

In addition, Fives Nordon provided maintenance services at the French nuclear installations and received new contracts for such work. One of the Group's contracts in nuclear maintenance is for Électricité de France (EDF), performing tasks such as welding works during unit shutdown or in operation, replacement of expansion joints, pipe spools, fittings and valves. Fives Nordon has also won a general contract for pipes for the nuclear power stations operated by EDF.

- **Equipment and complete plants** primarily used in sugar and bioethanol production.
- **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.



Under the leadership of Fives Nordon this contract will involve all the maintenance performed on the twelve nuclear units at the P-4 level. The work will be provided by Fives Nordon's various regional units from 2010 to 2017.

Fives Cryogenie, a recognized expert in air separation and hydrocarbon treatment

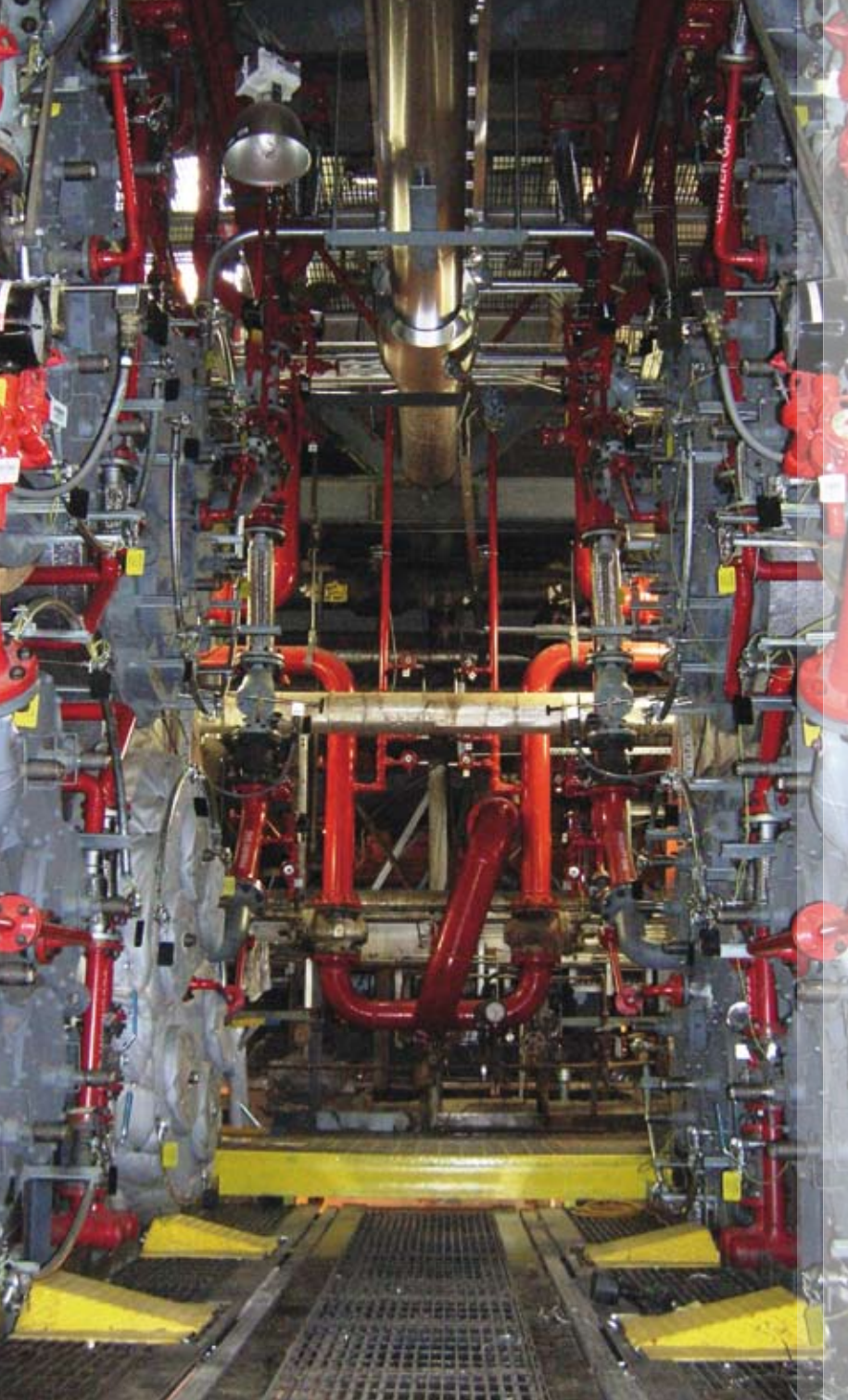
On the strength of increased demand for industrial gases produced by air separation and increased use of natural gas and hydrocarbons, Fives Cryogenie continues to develop ever more effective equipment. Accordingly, Air Liquide Hangzhou has asked Fives Cryogenie to supply exchangers for an air separation unit that will provide 2,700 tonnes of oxygen per day for the Chinese company Yuntianhua's 600,000 tonne per year coal-to-methanol conversion plant. To meet its clients' needs, Fives Cryogenie will supply a batch of exchangers of varying pressure ranges, including four batteries of high-pressure, 99 bar exchangers and ten batteries of 57 bar exchangers. These exchangers will partly be produced by Fives Cryo Suzhou, the workshop Fives Cryogenie has developed in China.

In terms of high-pressure cryogenic pumps for natural gas, Fives Cryogenie, through its Swiss subsidiary and in collaboration with Mitsubishi Heavy Industries, has developed a new generation of pumps known as THOR. Designed to perform up to the high standards the market demands, the first pre-series unit will soon be installed at Mitsubishi for the qualification phase. Following that, Fives Cryogenie engineers will modify the pump's design as needed to make it ready to go into production.

Fives Pillard and Fives North American, undisputed leaders for high-performance combustion systems

Supplier of combustion systems for a wide range of industries, Fives offers several solutions that combine high performance and very low emissions. For example, Fives North American concluded a remarkably successful project of retrofitting a refining boiler thanks to the design and the implementation of a unique combustion system allowing a 90% reduction in NOx emissions while attaining high energy efficiency. In the field of combustion systems for thermal power plants, Fives Pillard delivered the last batch from the sixty dual fuel postcombustion burners ordered by Alstom Power Baden. They are to be used at the Fujairah 2 plant in the United Arab Emirates on five 365 MW combined-cycle lines. The outcome of several months of development at the Fives Pillard combustion research center, these burners fulfill particularly demanding flexibility requirements and environmental standards.





Fives Cail helps the sugar industry transition into energy production

The sugar industry continued its entry into the energy-production sector, especially in the sugar cane producing regions, where production is now geared to three products: sugar, ethanol and co-generated electricity, with the surplus sold off to local electrical grids.

It was with this in mind that Richard Toll in Senegal gave Fives Cail the complete order for a new sugar cane milling unit, including five MillMax® 84". This technology, which reduces a sugar plant's energy consumption by 40%, enables a potential surplus of electrical energy that can be transferred to the grid. This order solidifies MillMax®' reputation as an essential piece of equipment in the sugar-producing countries due to its significant contribution to energy production through biomass.



Fives North American completes the large-scale rebuilding of a refining boiler

Fives North American has enabled one of its clients to reduce its NOx emissions by 90%. Required by law to reduce NOx emissions from 400 ppm to 35 ppm, the client was experiencing comparatively high emission rates as a result of using preheated combustion air.

Since simply reducing such air would have led to a significant drop in efficiency, Fives North American proposed a solution to drastically reduce NOx emissions without giving up high temperature combustion air.

Besides this technical challenge, Fives North American also had to deal with physical constraints (there were only two meters of space between the burners of the two boilers) and a tight deadline. The installation and incorporation of the system designed by Fives North American were done in October 2009, all within 29 days and involving up to 270 people on site for nearly 50,000 man-hours.



KEY REFERENCES

- **Hamworthy KSE (South Korea) 2005-2008:** supply of 31 cold boxes and 26 cryogenic pumps for the reliquefaction of liquid natural gas vapours during transport.
- **Air Liquide:** supply of exchangers and pumps everywhere in the world.
- **Alstom, EPR Flamanville 3 (France) 2007-2011:** prefabrication and erection of steam and feedwater piping in the turbine hall.
- **Framatome Olkiluoto (Finland) 2006-2010:** prefabrication of primary coolant piping systems and surger line for the EPR reactor.
- **Areva NP - EPR Flamanville 3 (France) 2008-2011:** design, prefabrication and erection of secondary and NSSS auxiliary piping systems.
- **CNPEC (China) 2009:** supply of pressurizer surge lines for the Changjiang, Fangjiashan and Fuqing plants.
- **Alstom Power Baden (Switzerland) 2008:** supply of 60 postcombustion dual fuel burners for the Fujairah 2 plant in the United Arab Emirates.
- **EDF (Aramon and Porcheville, France) 2009:** revamping boilers (fuel oil burners).
- **ADGAS (U.A.E.) 2009:** revamping of sulfur recovery units, Claus process.
- **Total (Lacq, France) 2009:** revamping of two industrial boilers with Low NOx gas burners.
- **White Nile Sugar (Eastern Africa) 2008:** complete engineering of the process workshop (24,000 tpd plant).
- **Açúcar Guarani - Tereos Brazil (São José plant - Brazil) 2008:** 5 MillMax® 102", 2 continuous vacuum pans, 3 batch centrifugals ZUKA® 1750 and 2 continuous centrifugals FC 1550.
- **Richard Toll (Senegal) 2009:** supply of five MillMax® 84" for a complete cane grinding line.





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