



**vallourec**

SUSTAINABLE  
DEVELOPMENT  
REPORT

**2011**





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**Philippe Crouzet,**  
Chairman of the Management Board

**Vallourec is striving to be a responsible company, aware of the impact its business activities have on social groups and ecosystems.**

Interview with  
Philippe Crouzet, Chairman  
of the Management Board

**Vallourec is a player in the energy markets. What are your views on future supply and demand in these evolving markets?**

For the many countries aspiring to higher levels of business and well-being, having access to energy is a key requirement for development. But although energy demand continues to grow, supply is changing profoundly. Accessing resources is becoming increasingly difficult, operational safety is growing more and more complex, and access and production costs are rising in a highly volatile economic climate.

New opportunities are presenting themselves, with the rapid development of unconventional hydrocarbons and the rise of renewable energy sources, which until recently were still considered relatively marginal factors. Global warming is driving public authorities and the private sector to build their long-term future on the foundations of clean energy, at the same time as binding legal requirements are being introduced. We are rediscovering, if we hadn't already, ways of working that help preserve natural resources. Company business models are changing, and heralding a new, more restrained period of growth.

Vallourec, whose main target markets are in the energy sector, is fully aware of all of these underlying trends. My role is to ensure that the Group incorporates them into its strategy, enabling it to contribute to reshaping the global economy, and into its practices, as a socially responsible industrial firm.

>>>

>>>  
**With this backdrop in mind, what exactly are Vallourec's fundamental strategies?**

Our aim is to accompany these changes and offer our clients innovative, safe and premium solutions capable of responding to new demands, meeting the most complicated technical and environmental requirements, and creating value for our clients.

We are working to better understand our clients' expectations when it comes to sustainable development, and are multiplying our number of plants and local partnerships. Hence our significant investment in the most modern and competitive production tools in areas with excellent potential for growth. Hence also our substantially increased efforts in terms of innovation and R&D for premium products.

We are very well positioned to benefit from new development opportunities. For example, developing deep offshore operations, extracting unconventional hydrocarbons, continuing investment in clean thermal power plants, establishing stronger safety requirements for new nuclear power plants, and, finally, designing and producing structural tubes for harsh conditions, such as those needed for offshore wind turbines.



“  
**Our aim is to accompany these changes and offer our clients innovative, safe and premium solutions.**”

**How would you describe Vallourec's commitment to sustainable development?**

I would say it is long-standing and that it has been improving constantly. For example, Vallourec has long recognized the importance of good employment conditions, which is a concrete example of its values in action. We recently reasserted these values by distributing the Group's Code of Ethics to all of our employees.

At all levels, Vallourec is striving to be a responsible company, aware of the impact its business activities have on social groups and ecosystems, and eager to reduce its environmental footprint.

To this end, we are working to build relationships of trust with our stakeholders, all of whom enhance the Group with their experience, be they our clients and suppliers, government authorities, neighbors or local associations. This dialogue drives us to address their concerns with practical solutions and makes our business model more robust. That is our belief.

By doing this, we are establishing our commitment to sustainable development as one of the hallmarks of the Vallourec brand, making the Company more attractive to our shareholders, clients and new talents whom we would like to see join us.

In conclusion, I would simply say that this sustainable development report sets out our priorities, actions, and results in a completely transparent way. It demonstrates that our commitment and progress are real. We are proud of our progress, which serves as the best possible encouragement for all of our teams as we continue in our efforts.

“  
**Vallourec's commitment to sustainable development is long-standing and has been improving constantly.**”

PREMIUM AS  
AN ESTIMATED SHARE  
OF TOTAL OCTG MARKET  
BY 2015\*

**30%**

VS 25% IN 2010  
AND 22% IN 2005

R&D INVESTMENT  
IN 2011

**€78  
MILLION**

11% MORE THAN IN 2010

NUMBER OF EMPLOYEES

**22,200**

VS 20,600 IN 2010

\* Source: Vallourec forecast.

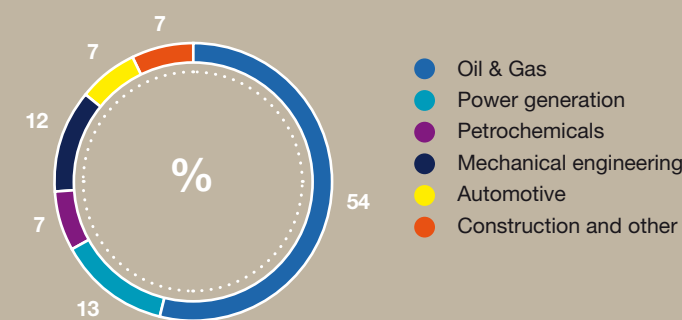




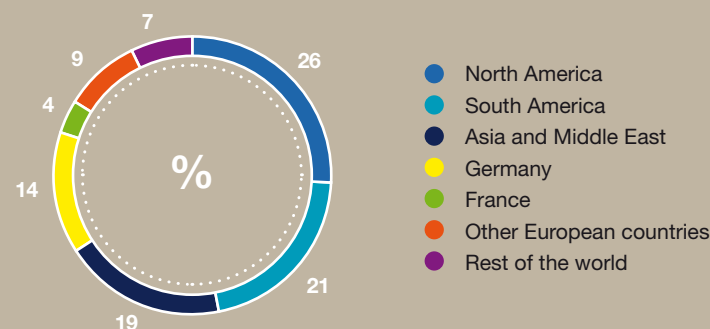
# INTERNATIONAL PRESENCE CLOSE TO OUR CUSTOMERS

Vallourec is a world leader in premium tubular solutions primarily serving the energy markets (oil and gas, powergen). Its expertise also extends to the industry sector (mechanicals, automotive, construction, etc.). With 22,200 employees, sales of €5.3 billion in 2011 – 73% outside Europe – integrated manufacturing facilities in more than 20 countries and advanced R&D, Vallourec offers its customers innovative global solutions to meet the energy challenges of the 21<sup>st</sup> century.

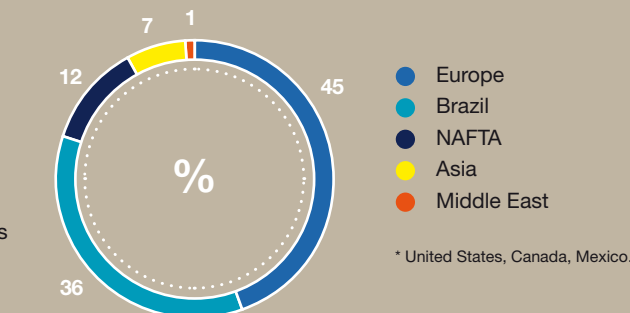
SALES BREAKDOWN BY ACTIVITY



SALES BREAKDOWN BY GEOGRAPHIC REGION



EMPLOYEE BREAKDOWN BY GEOGRAPHIC REGION



SALES IN 2011

€5,296

MILLION

PRODUCTION FACILITIES

>50

SALES OUTSIDE THE EUROPEAN UNION

73%

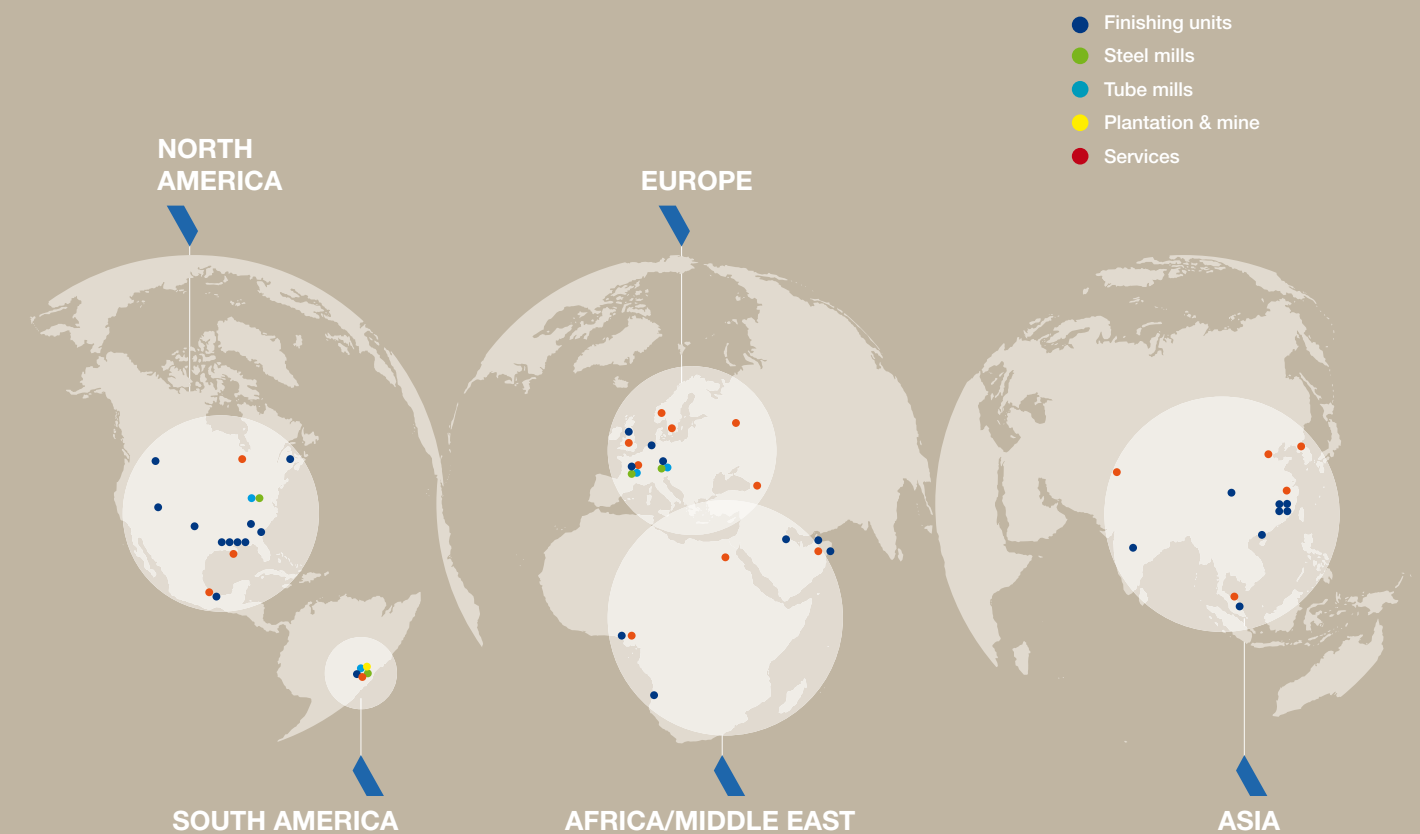
SALES IN THE ENERGY SECTOR

74%

EMPLOYEES

22,200

in more than 20 countries



## Europe

### Germany

- **Mülheim** – V & M Deutschland
- **Rath-Pilger** – V & M Deutschland
- **Rath-Plug** – V & M Deutschland
- **Reisholz** – V & M Deutschland

### France

- **Aulnoye-Aymeries** – V & M France
- **Aulnoye-Aymeries** – VAM Drilling France
- **Aulnoye-Aymeries** – Vallourec Mannesmann Oil & Gas France
- **Cosne-sur-Loire** – VAM Drilling France
- **Déville** – V & M France
- **La Charité-sur-Loire** – Valti
- **Maubeuge** – Interfit
- **Mitry-Mory** – Serimax
- **Montbard** – Valinox Nucléaire
- **Montbard** – Valti
- **Saint-Saulve** – V & M France
- **Saint-Saulve** – V & M France
- **Tarbes** – VAM Drilling France
- **Vénarey-les Laumes** – Valtimet
- **Vénarey-les Laumes** – Vallourec Umbilicals<sup>(1)</sup>
- **Villers-Cotterêts** – Serimax

### The Netherlands

- **Heerhugowaard** – VAM Drilling

### United Kingdom

- **Aberdeen** – Vallourec Mannesmann Oil & Gas UK
- **Evanton** – Serimax

## South America

### Brazil

- **Belo Horizonte** – V & M do Brasil
- **Belo Horizonte** – V & M do Brasil
- **Belo Horizonte** – V & M do Brasil
- **Brumadinho** – V & M Mineração
- **Curvelo** – V & M Florestal
- **Jeceaba** – Vallourec & Sumitomo Tubos do Brasil<sup>(1)</sup>
- **Jeceaba** – Vallourec & Sumitomo Tubos do Brasil<sup>(1)</sup>
- **Rio de Janeiro** – Serimax do Brasil

### North America

#### United States of America

- **Broussard** – V & M Tube-Alloy
- **Brunswick** – Valtimet HPT
- **Casper** – V & M Tube-Alloy
- **Houma** – V & M Tube-Alloy
- **Houston** – V & M Star
- **Houston** – VAM Drilling USA
- **Houston** – VAM USA
- **Houston** – V & M Tube-Alloy
- **Houston** – Serimax LLC
- **Morristown** – Valtimet Inc.
- **Muskogee** – V & M Star
- **Youngstown** – V & M Star
- **Youngstown** – V & M Star
- **Youngstown** – V & M Star (V & M two)<sup>(1)</sup>

### Mexico

- **Veracruz** – VAM Mexico

### Canada

- **Nisku** – VAM Canada
- **St John** – VAM Canada

## Asia

### China

- **Changzhou** – V & M Changzhou
- **Changzhou** – V & M Changzhou (VMC2)<sup>(1)</sup>
- **Changzhou** – VAM Changzhou Oil & Gas Premium Equipments
- **Changzhou** – Changzhou Valinox Great Wall Welded Tubes
- **Changzhou** – Changzhou Carex Valinox Components
- **Guangzhou** – Valinox Nucléaire Tubes Guangzhou<sup>(1)</sup>

### India

- **Hyderabad** – CST Valinox

### Indonesia

- **Batam** – PT Cintra Tubindo

### Malaysia

- **Pasir Gudang** – Serimax Malaysia

### Africa/Middle East

#### Nigeria

- **Onne** – VAM Onne Nigeria

#### Dubai

- **Dubai** – VAM Drilling Middle East

#### Abu Dhabi

- **Abu Dhabi** – VAM Drilling Protocols Oil Equipment

(1) Under construction.

(2) Consolidated for environmental indicators.

## Non-consolidated sites (Vallourec minority holding)

### Germany

- **Huckingen** – HKM

### South Korea

- **Bupyeong** – Poonsang Valinox

### China

- **Xi'an** – Xi'an Baotimet Valinox Tubes

## Research centers

### Germany

- **Düsseldorf** – Vallourec Research Düsseldorf
- **Riesa** – Vallourec Research Riesa

### France

- **Aulnoye-Aymeries** – Vallourec Research Aulnoye<sup>(2)</sup>

### Brazil

- **Belo Horizonte** – Vallourec Research Belo Horizonte
- **Rio de Janeiro** – Vallourec Research Rio de Janeiro<sup>(1)</sup>

### United States of America

- **Houston** – Vallourec Research Houston

# 01. STRATEGY AND SUSTAINABLE DEVELOPMENT

Vallourec is the world leader in premium tubular solutions, serving primarily the energy markets. The Group is strengthening its position with an ambitious development strategy based on innovation, local presence, and improved competitiveness. Its sustainable development policy aims to be concrete and credible. Formalized in a charter and complemented with progress indicators, it is a commitment to use resources responsibly, reduce the Group's environmental footprint, and respect its employees and local stakeholders. A signatory of the Global Compact, Vallourec has also drawn up its own Code of Ethics, the Vallourec Way, to guide its employees.

**50%**

OF STEEL USED  
IS MANUFACTURED  
FROM RECYCLED  
SCRAP METAL

LESS THAN

**10%**

OF OUR FINISHED  
PRODUCTS ARE  
TRANSPORTED BY ROAD

**37%**

OF ENERGY CONSUMED  
COMES FROM RENEWABLE  
SOURCES

ALMOST

**90%**

OF OUR PROCESS WASTE  
IS REUSED



Jean-Louis Merveille,  
Sustainable Development Director

“Our “premium” strategy also sets us apart on the sustainable development front.”

## Vallourec: a responsible company

Today, we can be proud of our industrial reality: nearly 40% of the energy we consume is renewable, nearly 50% of the steel used in the manufacture of our tubes comes from recycled scrap, almost 90% of our process waste is reused, and less than 10% of our finished products are transported by road. We are eager to communicate on non-financial matters more broadly. To that end, every year we publish new indicators and outline the areas in which we need to act in order to make progress. In 2011 we set ourselves five simple and realistic goals, and we shall continue to add to this list in the future. We have also published 12 additional key indicators. Finally, a selection of the 2011 figures that we publish here have been checked and their accuracy assured by our Statutory Auditors. We undertook a detailed review of the calculation methodology used to calculate indirect carbon emissions in 2011. The adjustments made as a result of this review revealed higher volumes than in 2010 and reflect a better understanding of our carbon footprint. This quest for transparency shows our clients that our “premium” strategy sets us apart on the sustainable development front, and it gives our other stakeholders a better understanding of our actions and results.

In 2011, we rewrote the Charter defining our commitment to sustainable development in order to strengthen and clarify it. This Charter now contains 15 voluntary actions that aim to make our activities more sustainable by using competitive and innovative products, consolidating long-term relationships with all of our stakeholders, and protecting our environment and using natural resources responsibly. In 2012, we will endeavor to deploy the measures in the Charter so that our employees can appreciate its impact, but more so that they can identify how to put it in practice within the scope of their individual roles and professional settings. The Company's commitment to sustainable development will thus be strengthened and shared. To underscore the role of the managerial chain in carrying out these actions, a committee member from each of the divisional steering committees will be in charge of supervising team participation, and ensuring the implementation of the plans drawn up by the Sustainable Development Steering Committee.

Jean-Louis Merveille

A demanding Sustainable Development Charter

Determined to increase the visibility of its commitment to sustainable development, in 2011 Vallourec drew up a new Sustainable Development Charter including performance indicators.

The Company's social responsibility consists of taking into account the impact its activities have on the economy, its workforce, society and the environment. More precisely, it is a question of identifying the challenges faced by the Company and the expectations of its stakeholders. For these reasons, Vallourec's business model favors innovation as a way of meeting the technological challenges faced by the energy sector, the Group's main market. The Group guarantees the safety of its clients' facilities. It protects the health of its employees and respects the environment and interests of local populations.

A new Charter for greater transparency

To ensure more attention is paid to the challenges posed by sustainable development, the new Charter, drawn up in 2011, clarifies the Company's objectives, precisely defines areas for moving forward, and boosts communication with stakeholders. Destined for the Company's external partners as well as its own employees, the Charter is conveyed by the management chain. It is in line with proposals made by the French Round Table on the Environment (*Grenelle de l'Environnement*) and new regulations.

New indicators to measure progress

Vallourec has selected one indicator related to each of its five commitments in its Charter to show its overall progress in sustainable development. Improvements in each indicator result from a number of actions taking place over time. The Group has decided to publish 12 additional indicators linked to its long-term strategy. Management focus areas for each indicator are also published in the report. The overall levels reached in 2011 can already be considered to be satisfactory.



Jean-Luc Dupuis, Director for the Environment.

If you cannot measure it, you cannot improve it.

Since 2001, when the New Economic Regulations (NRE law) were introduced, we have been publishing data on employee relations and the environment, a portion of which has been verified by an independent third party since 2006. This year, we have decided to anticipate the new requirements that are related to the "Grenelle 2" Round Table (see box). In addition to the 25 indicators that have been verified by our Statutory Auditors, we have also introduced and verified 12 assertions mentioned in this report. These clearly define our proactive sustainable development

strategy and our actions aimed at social and environmental responsibility. In our view, this reporting is a real opportunity for progress. It provides us with a measurable and global vision of our performance, allowing us to accurately assess our impact on the environment and define areas for improvement. This is also a good way for us to maintain the trust of our stakeholders, who will have greater visibility of our activities, the quality of our conduct, and the sustainability of the Company. For us, this approach is synonymous with sustainable performance.

Non-financial reporting: the regulatory framework

Article 225 of the so-called "Grenelle 2" law, adopted on July 12, 2010, requires listed companies to publish information concerning employee relations, the environment, and society in their management reports. This law, designed to eventually replace the 2001 NRE law<sup>(1)</sup>, has just been amended with an application decree providing an exhaustive list of the information that must be contained in these reports,

(1) NRE law: law on New Economic Regulations (*nouvelles réglementations économiques*).

and will require justification to be given if any of this information is omitted. The data will also have to be certified by an independent third party.

This new law represents a major step towards transparency of extra-financial information, addressed through the lens of sustainable development. These measures are taken for the benefit of all stakeholders.

COMMITMENTS IN THE SUSTAINABLE DEVELOPMENT CHARTER

Commitments

Ensure the safety and protect the health of our employees; provide everyone with good working conditions

Train and motivate our employees by enabling them to develop their skills, making the most of their expertise, promoting talent and ensuring career progression

Satisfy our shareholders over the long term

Improve energy efficiency of our equipment and reduce carbon emissions from our production processes

Respect our environment and protect biodiversity by minimizing all forms of pollution, reducing water consumption, recycling waste and reducing noise

Indicators

TRIR<sup>(1)</sup> FOR PERMANENT AND TEMPORARY STAFF

RESULTS OF THE "OPINION" SURVEY (EMPLOYEE SATISFACTION)

ASSESSMENT BY NON-FINANCIAL RATING AGENCIES

KWH/METRIC TON PROCESSED

% OF WASTE RECYCLED

2011 Results

9.4

61%

B-

984

89%

Targets for 2012<sup>(2)</sup>

8

62%<sup>(3)</sup>

B

950

90%

(1) TRIR (Total Recordable Injury Rate): total number of accidents per million hours worked.  
(2) Scope: 2011 sites excluding VSB.  
(3) Target for 2013.

2011 KEY FIGURES

	Policy	Unit	2010 Results	2011 Results
ECONOMIC RESPONSIBILITY		Ensure competitiveness and sustainable growth		
Profitability: EBITDA/sales	Ensure profitability above 15% during the trough of the economic cycle	%	20.6	17.7
Financial strength: net debt/equity	Maintain a constant healthy balance sheet	%	7.9	22.9
R&D budget	Maintain our technological lead	€ million	70	78
Employee share ownership	Associate employees to the Group's results and strategy	%	3.4	4.9
Dividend	Remunerate our shareholders over time: 1/3 of Net Income Group Share	%	37.3	39.3
SOCIAL RESPONSIBILITY		Long-term commitment to human relations		
Employees	Deploy our HR policy across a growing workforce	number	20,561	22,204
Staff turnover	Encourage job stability	%	7	8.7
Training	Anticipate skill requirements and changes	hours/employee	32	31
Management performance	Implement an annual assessment interview, "Talent 360", for all managerial staff	%	66	90
ENVIRONMENTAL RESPONSIBILITY		Reduce the environmental footprint of our activities		
Water	Reduce water consumption	m <sup>3</sup> /metric ton <sup>(1)</sup>	1.74	1.67
CO <sub>2</sub> emissions	Reduce the direct carbon assessment of our activity (scope 1)	kg/metric ton <sup>(1)</sup>	207	203
Replacement of CMR substances <sup>(2)</sup>	Eliminate risks associated with the use of products that are hazardous for employees and the environment	% replaced	5	20

(1) metric tons processed.  
(2) Carcinogenic, mutagenic and reprotoxic substances.



Governance

In 1994, Vallourec adopted dual corporate governance with a Supervisory Board and a Management Board. The Supervisory Board is responsible for overseeing management control, while the Management Board oversees Group operations according to the powers granted to it in the legal and regulatory statutes.

→ An independent Supervisory Board

Presided over by Jean-Paul Parayre, the Supervisory Board is composed of 11 members, nine of whom are independent and four of whom are women, ratios which are higher than those recommended by the AFEP-MEDEF Corporate Governance Code adopted by the Group in 2008. Four members are of foreign nationality. Its members hold their positions for four years. The Supervisory Board is assisted by three specialist committees: the Finance and Audit Committee; the Appointments, Remuneration and Governance Committee; and the Strategy Committee. These committees play a role preparing some of the Board's deliberations. They also provide proposals, recommendations and opinions. In 2011, the Supervisory Board convened seven times.

→ The Management Board: industrial experience and market knowledge

Vallourec's Management Board is composed of three members: Philippe Crouzet, Chairman; Jean-Pierre Michel, Chief Operating Officer; and Olivier Mallet, Chief Financial Officer. It relies on an Executive Committee made up of Divisional Directors and managers of key operations and of operational committees that meet on strategic investments, innovation and R&D, the savings and performance improvement plan, and areas for improvement. This operational organization is backed by long-term planning.

→ Internal control

The Group has defined and implemented a system of internal controls which aims to ensure conformity with laws and regulations, the application of instructions and guidelines issued by the Management Board, and the smooth functioning of internal processes, notably of these relating to the protection of assets and the accuracy of financial information. It is based on rules of conduct and integrity carried out by the governing bodies and communicated to all employees. The implementation of internal controls is exercised at all levels of decision-making and adapted to the level of responsibility (manager, expert, executive).



Meeting of the Supervisory Board.

Risk management: constant re-assessment and checks

For several years, the major risks that Vallourec may find itself confronted with have been charted in a detailed map of strategic and operational issues, which takes into account the risks associated with the environment, employees and society, health, the Company's reputation, and suppliers. For each of the identified risks, a rigorous internal audit allows the Group to assess the likelihood of the risk occurring and its seriousness.

For the highest risks, a senior Group manager is in charge of proposing preventive measures or action plans where appropriate. The Risk Management Department therefore defines preventive measures or action plans to be put in place based on their degree of seriousness. The risks are periodically re-assessed at Group, Division and job levels, during steering committee meetings chaired by the Risk Management Director.

➡ For more information: [www.vallourec.com](http://www.vallourec.com)

An efficient organization for sustainable development

A Committee and a Sustainable Development Department are in charge of steering the Group's policy in this area. The Committee sets the Group's strategic directions and approves action plans, which are then deployed by the Department. To improve its overall performance, the Group relies on its comprehensive methodology, the Vallourec Management System.

→ The Sustainable Development Committee: a strategic body

Since 2009, a Sustainable Development Committee has set Vallourec's strategic directions and defined its priority actions. It ensures they are coherent and oversees their deployment across the entire Group. Chaired by Jean-Yves Le Cuziat, Strategic Marketing and Sourcing Director, it brings together two Management Board members, each Divisional Director and managers of key operational departments. The Sustainable Development Committee meets five times a year.

→ A Sustainable Development Department to drive action

The Sustainable Development Department identifies challenges and risks, ensures stakeholder opinions are listened to, and represents Vallourec in various sustainable development bodies. In conjunction with other managers, it compiles short- and long-term action plans that have been submitted to the Committee, and ensures they are implemented. It also ensures that employees are trained and made aware of sustainable development objectives. The Environment Department, which is attached to it, works closely with Divisions in each country so that each entity can define its environmental policies. The Sustainable Development Department is also responsible for the GreenHouse project for energy efficiency. It runs several networks; the environment managers of the Group's main bodies and the designated energy managers at each industrial site. The different bodies adapt the policy to the local conditions and type of activity, all while upholding the Vallourec Management System (VMS) principles.

→ Priorities for 2012

In 2012, a greater level of involvement will be expected from the Group's Divisions. The Group will communicate more on its actions, in order to encourage commitment from all employees. The Committee will be required to approve the responsible purchasing policy and formalize the eco-design approach. To complement the objectives of the GreenHouse plan, and taking the Group's new industrial scope into account, the Committee will establish new, medium-term emissions targets.



Jean-Yves Le Cuziat, Strategic Marketing and Sourcing Director, member of the Executive Committee, and President of the Sustainable Development Committee.

One of the responsibilities of my role is to drive the Group's commitment to sustainable development. I work to make sure that any necessary changes are possible, and to get other company managers on board by showing them that the proposed actions are simple, practical, sensible, and in line with our values. In 2011, our main accomplishments in sustainable development

involved updating the Charter, devising a policy for the management of local stakeholders, managing critical suppliers, and creating an Environment award. The Committee I chair has also refined our system of extra-financial reporting, examined the level of the investments necessary for the achievement of the GreenHouse project objectives, and boosted the management's commitment to the Chemsafe project.

The Vallourec Management System: a responsible approach to management

The Vallourec Management System (VMS) is a methodology that has been designed to improve the Group's performance, especially in terms of quality, health, safety and the environment. This system provides the structure for the continuous progress procedures shared by all sections of the Company. Each area of improvement is led by a steering committee that defines an action plan and oversees its implementation.

To date, there are over 1,500 multidisciplinary and interdivisional Continuous Improvement Teams (CITs), who mobilize volunteer employees, sometimes from different sites, on common work issues. The results of actions carried out by the CITs are then consolidated by the relevant community and shared via a knowledge management system. This process was made more efficient with the launch of the online Company portal, Vallourec Inside, in 2011.



The Vallourec Way: Vallourec's Code of Ethics

Integrity, standards, performance, respect for human rights and collective commitment are the fundamental values shared by all the Group's employees. They are enshrined in Vallourec's Code of Ethics, the Vallourec Way.

The Vallourec Way aims to guide the conduct and decisions made by employees according to five principles: integrity and transparency; standards and professionalism; performance and responsiveness; respect for human rights; collective commitment. With these values, the Group hopes to reinforce best practice and create a cohesive identity for employees worldwide.

Living our values

- In 2011, Vallourec pursued the deployment of its Code of Ethics among all employees at all its sites around the world. Numerous awareness and information campaigns were run by human resource and other managers, and poster displays and meetings were also organized. These actions will continue in 2012. Employees in all the countries in which Vallourec is present have been given a booklet entitled "Living our values". Translated into six languages, this Code of Conduct is illustrated with examples and testimonies. In support of this, the Group has provided managers with a detailed guide and a question and answer box. New employees recruited from June 2012 will also have access to an e-learning module that introduces them to the Group's values. An ethics steering committee meets quarterly to evaluate this program's progress.

Dialogue on the Ethics Charter

Vallourec gives employees the opportunity to question their supervisors or local human resource managers on issues addressed in the Code as soon as they feel the need. This gives everyone the chance to claim ownership of these shared values, or to receive the best solution to a real problem concerning ethics when it arises. At the end of November 2011, over 19,000 people (or 87% of the total workforce) had received training in the Code of Ethics and were able to discuss ethical issues as presented by Vallourec.

87%

OF THE WORKFORCE RECEIVED TRAINING IN THE CODE OF ETHICS IN 2011

This assertion was verified by the Group's Statutory Auditors in 2011

Commitment to the Global Compact

Vallourec's Code of Ethics complies with the principles enshrined in the Global Compact. This compact encompasses ten principles related to human rights, working conditions, the environment, and anti-corruption. It requires signatory companies to adopt, support and enforce these principles in their sphere of influence, and to put in place actions for progress every year, which the signatory company must make public. Vallourec has set itself



WE SUPPORT

clear objectives in each of these areas. In 2011, the Group concentrated on implementing its Code of Ethics and making progress in the field of safety. In 2012, the Group is committed to pursuing these actions, conducting a general roll-out of its compliance program, and minimizing chemical risk.



All the Group's employees have received a booklet entitled "Living our values".

Training in compliance

- Over and above the principles inscribed in the Code of Ethics and in line with the commitments of the United Nations Global Compact, which the Group pledged to honor in 2010, Vallourec aims to prevent the specific risks arising from competition, anti-corruption and respect for the environment through a global program of legal compliance. This program has been devised by the Group's Legal Department and is aimed at raising awareness of the laws and regulations applicable in these three areas among the Group managers concerned, with particular emphasis given to internal training. It is intended to respond effectively to the risks to which they could be exposed in their day-to-day activities, through precise recommendations and case studies. Introduced in France, Germany, Scotland and the United States in 2011, the program will continue to be deployed in 2012 in Brazil and China.

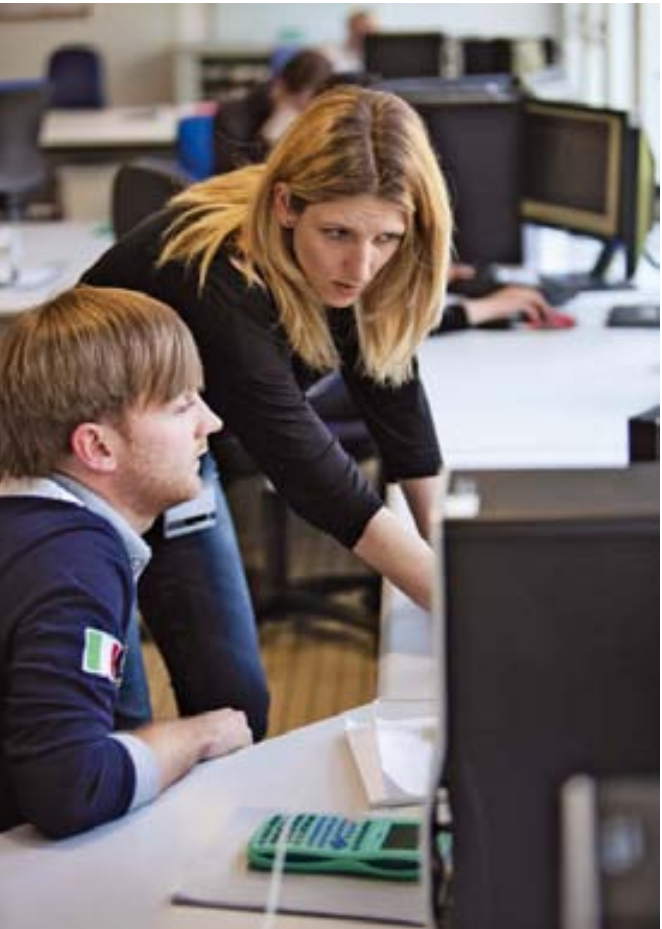
Creating and sharing value

Vallourec leads an ambitious local development strategy close to its clients, and adapts its premium offer to the most complex of applications. Its financial results enable it to invest to maintain its competitiveness and share the value created with its shareholders.

Vallourec's clients operate in increasingly complicated conditions, with ever-growing concerns touching safety and the environment. The Group, recognized for its technological leadership, is expanding its product and premium solution offerings in order to meet the challenges of these requirements. It leads an international development strategy that relies on an industrial and commercial presence in areas experiencing strong growth. This policy responds to the demands of clients who are sensitive to the local character of their products and the service quality associated with using local suppliers. Acquisitions made during recent years and investments in new capabilities – particularly in Brazil, the United States, China and the Middle East – have given the Group better access to local markets. This local presence makes it stand apart from its competitors while boosting the Group's competitiveness.

CAPTEN+: setting the course for excellence

Supplying premium products is accompanied by high expectations in terms of operational efficiency. The three-year continuous improvement program CAPTEN+, launched in 2011, focuses on six areas for improvement: safety, delivery deadlines, quality, customer service and satisfaction, reduction in energy consumption and raw materials, and optimization of support function efficiency. In 2011, this program generated €83 million in savings before inflation, the target being to achieve a total of €300 million by the end of 2013. CAPTEN+ is a sustainable development tool on several levels: besides its role in improving safety and reducing the Group's energy footprint, it provides a unified approach to shareholders satisfaction, be they clients, employees, communities, shareholders or suppliers.



x2

INCREASE IN DEMAND FOR PREMIUM PRODUCTS BETWEEN 2005 AND 2015

Source: Vallourec forecast.

€300 MILLION

EXPECTED COST REDUCTIONS BY THE END OF 2013 RESULTING FROM THE CAPTEN+ PROGRAM





>>> A growing business

In 2011, Vallourec registered strong business growth with total sales of €5.3 billion, up 18% compared with 2010, mainly due to the increase in production output (+19%). Because of the inflation of start-up costs associated with major strategic projects in Brazil and the United States, EBITDA reached €940 million in 2011, a slight increase over 2010. The deployment of major strategic projects continued throughout the year. In France, the extension to Valinox Nucléaire was put into service. In Brazil, the new VSB plant inaugurated in September delivered its first tubes in the fourth quarter. The qualifying process, as well as the increase in production, will continue throughout the year 2012. In the United States, the construction of the new tube mill will also continue.

A solid financial structure

The Group has a solid financial structure with limited debt (23% of equity as of December 31, 2011), reflected by a Standard & Poor's of BBB+/A-2 in the long and short term, with a stable outlook. Vallourec's financial situation allows it to continue investing throughout its business cycles and paying out to its shareholders. The proposed dividend of €1.30 per share for the 2011 financial year, identical to that of 2010, corresponds to a payout ratio of 39.3%.

A constructive dialogue with shareholders

Constructive dialogue, based on trust, with all shareholders, is a key element of the Group's communication strategy. In a continuing drive for clarity and transparency, Vallourec provides complete and regular information on the Group's results, outlook and strategic developments.



Pascale Chargrasse, Business Development Manager at Valinox Nucléaire in Montbard (France), where she has been representing shareholding employees in her capacity as member of the Supervisory Board since 2011.

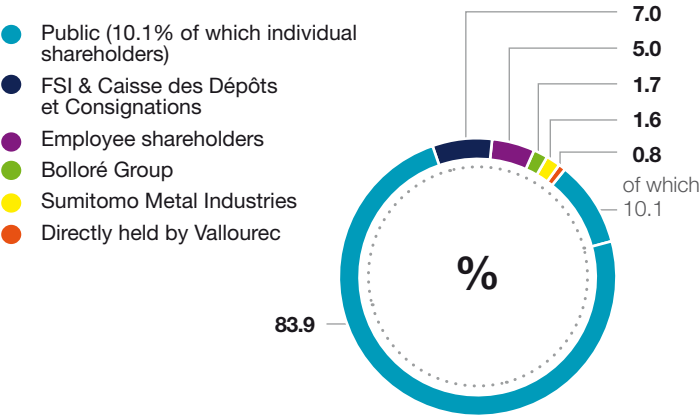
Being a salaried director and involved in the management of the Company is a unique and fulfilling experience. It has given me insight into the global economy and how it works, which helps me better understand the Group's strategic, economic and financial directions.

For example, I have a better understanding now of the challenges faced with governing a company listed in the CAC 40 Index, and as an employee I also bring my experience and views "from the field". This in turn gives the Board greater knowledge of human capital and employee concerns.



The Annual Shareholders' Meeting is an ideal moment to inform, share, and discuss.

BREAKDOWN OF SHARE OWNERSHIP AT DECEMBER 31, 2011



NUMBER OF SHARES AT DECEMBER 31, 2011  
**121,434,409**

Regular meetings with analysts and investors

The Investor Relations Department organizes regular meetings with analysts, institutional investors and individual shareholders in France and abroad. As well as presenting the quarterly results, the Department also organizes roadshows and attends conferences in which members of the Management Board and Investor Relations Department meet with portfolio managers, financial analysts, non-financial analysts and SRI investors. It also presents the Group's strategy and business activities during the annual Investor Day. Individual investors are also invited, once a year, to a presentation on the Group's strategy and results. One meeting was held in Lyon in 2011. In 2012, Vallourec is organizing a visit to the Saint-Saulve tube mill, as well as an information session in Strasbourg. The Annual Shareholders' Meeting is also a vital opportunity for exchange with all shareholders.

Information accessible to all

Company communications in various forms are publicly available on the Group's website (www.vallourec.com). The Group's Registration Document, Annual Report, Shareholders' Guide and Sustainable Development Report can also all be consulted, along with any information given to the financial markets and regulated information.

73%

PARTICIPATION RATE IN EMPLOYEE SHARE OWNERSHIP SCHEME "VALUE 11"

5%

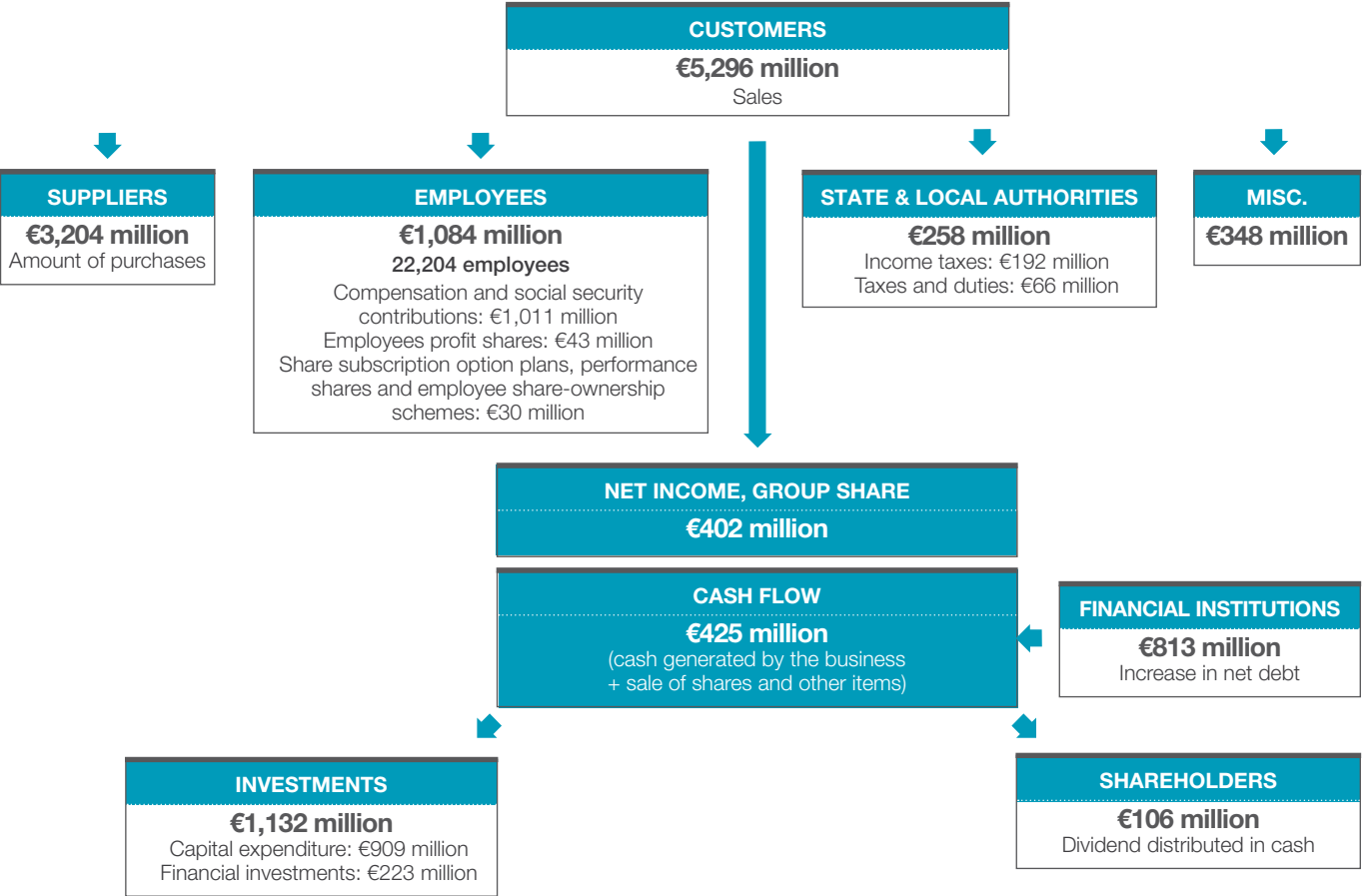
PERCENTAGE OF CAPITAL HELD BY GROUP EMPLOYEES AT 31 DECEMBER 2011

Employee share ownership: a growing share of capital

In 2011, over 15,000 employees in nine countries (Germany, Brazil, Canada, China, the United Arab Emirates, the United States, France, Mexico and the United Kingdom) signed up to "Value 11", Vallourec's global employee share ownership scheme, bringing the percentage of capital held by Group employees

under the plan to almost 5%. Participation has increased year after year, with 73% of the workforce signed up to the plan in 2011, compared to nearly 70% in 2010. By subscribing regularly, employees have demonstrated their confidence in the strategy and future of Vallourec.

VALUE ALLOCATION AMONG STAKEHOLDERS



## A responsible purchasing policy

An efficient and responsible purchasing policy helps increase competitiveness and mitigates risks to which the Company may be exposed. It is to these ends that the Vallourec Purchasing Department launched the “Responsible Purchases” project in 2010.

The first phase of the project was approved in 2011 by the Sustainable Development Committee.

### Suppliers classified by level of risk

- In 2011, the Sustainable Development Committee determined it necessary to identify suppliers that could put the Group at a high level of risk in the areas of employee safety, product quality, respect for the environment and reputation.
- An analysis of suppliers was conducted to examine a set of criteria that includes the type of purchases, the supplier’s nationality, Vallourec’s influence with them, the volume of purchases, and the effect on the relationship between Vallourec and its clients.
- Currently, the results of a questionnaire sent out to be completed by 450 suppliers are being evaluated by Vallourec. Adapted to the size of the supplier, the questionnaire covered their commitments, certification, the history of their relations with the Group, and the existence of health, safety and environment policies. Following this investigation, 10% of the Group’s suppliers were identified as being critical, and will therefore be subject to a more detailed examination, and potentially an audit. Ultimately, the suppliers who pose the most significant risk will be excluded from the Group’s panels.

### Looking to 2012

The “Responsible Purchasing” plan will continue into 2012. Its aims are to commit suppliers to be more responsible, modify selection processes, and amend terms of purchase and some contractual clauses. It also aims to assess the eco-design of the products and equipment supplied, and promote the use of recycled materials and products.



### VSB, adapting a sustainable model

The Vallourec & Sumitomo Tubos do Brasil (VSB) plant, situated in Jeceaba and composed of an ultramodern steel mill and tube mill, was inaugurated in September 2011. Its purpose is to produce large series of seamless tubes in the most sought-after diameters and grades. Vallourec has aimed to reproduce the sustainable VMB model ever since this site was in the initial design phase. Its hybrid blast furnace will be powered

by charcoal, a renewable energy source produced from eucalyptus trees farmed in the plantations by its subsidiary, V & M Florestal. Recycled process gases will cover 20% of the plant’s energy needs. The vast majority of raw materials and finished products will be transported by rail and sea, in order to limit the Group’s impact on the environment. The launch of VSB has created 1,600 direct jobs.



September 1, 2011, the VSB plant in Jeceaba was inaugurated in the presence of Dirlma Rousset, President of Brazil.

This assertion was verified by the Group’s Statutory Auditors in 2011.

## Sustainable investments and acquisitions

Vallourec’s strategic investments integrate its objectives for sustainable development. The Group conducts a detailed analysis of risks and procedures before any new projects and acquisitions are commenced, and decides which actions need to be taken.

Vallourec has strengthened its position as a leader in premium tubing solutions through a program of major investments. The Group ensures that all investments linked to its major projects, acquisitions, and the replacement of its industrial tools respect a framework for sustainable development.

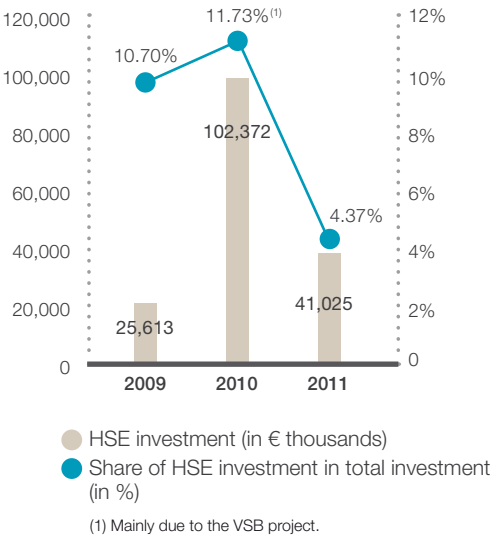
### Sustainable methods for acquisitions

When it comes to acquisitions, the Group couples its due diligence process with a thorough approach to sustainable development. An audit assesses the quality of the procedures and actions put in place by the Company to ensure that employees are protected and the impact of the activity on the environment is minimized. With the motivation of new employees a key deciding factor for a successful acquisition, Vallourec assesses the ability of the company to integrate into its way of working. It also monitors whether there is a lack of key skills. In terms of safety, the accident rate and participation of managers are analyzed. In the field of health, potential risks are identified using a detailed study of products used and an analysis of workshop air quality. Vallourec further guarantees that the main sites will be brought to ISO 14001 certification standards, and measures the environmental challenges specific to the company in process of being acquired. It checks past pollution data and the potential impact on the soil and waste, in order to protect itself from environmental liability. The results of these analyses are used as the basis for calculating the amount of investment needed to bring the company up to the Group’s standards.

### An HSE perspective for each new industrial investment

Prior to any industrial investment, the project manager carries out a health, safety and environment (HSE) risk analysis, with particular attention paid to the working conditions and noise levels inside and outside the sites. He ensures that best practices are implemented using the best technology available, especially with a view to optimizing energy efficiency, reducing CO<sub>2</sub> emissions, minimizing the impact of the activity on the natural environment, recycling process water, recovering rainwater, and reusing waste. In 2011, the Group’s HSE investment amounted to €41 million.

#### HEALTH, SAFETY AND ENVIRONMENT INVESTMENT (HSE)



€41  
MILLION

HSE INVESTMENT IN 2011

### A model site in China

In 2012, Vallourec will open a unit at its Changzhou plant in China for manufacturing and finishing wide-diameter tubes to be sold on the Chinese market of new-generation thermal power plants. The Group has decided to invest in proprietary technology that will allow it to have control of the entire manufacturing process locally, and to increase capacity at the site from 15,000 to 60,000 metric tons per year. Equipment is designed with special attention paid to its impact on the environment. The latest technology has been used in the furnaces and heat treatment furnaces to reduce energy consumption; the

processes now used mean that high alloy steel can be manufactured without the need for it to undergo intermediate reheating. Thanks to these innovations, the site will be able to use around 30% less energy than the industry standard. Industrial waste, dust, and air pollutants will also be less than the Group standards. Noise levels have been considerably reduced at source, and water effluents from the industrial water systems will not be released into the natural environment. Since the products are primarily for use at highly efficient, ultra-supercritical thermal power plants, this project will contribute to the reduction of CO<sub>2</sub> emissions.



# 02 . INNOVATION

Innovation is part of Vallourec's DNA. Sustainable innovation is satisfying the needs of demanding and ambitious clients by offering them products that improve the performance and safety of their operations while minimizing their impact on the environment. Vallourec's ability to continuously innovate and predict future technology has been bolstered by a restructuring of its product and process R&D teams, and by close cooperation with its clients and industrial partners within its own research laboratories.

## Innovation policy

**Vallourec is faced with the twin challenges of trying to predict profound and rapid changes in its clients' needs, and meeting the increasingly stringent environmental requirements that govern its activity. In 2011, the Group continued its investment program to keep momentum in its innovation processes.**

Ever since its creation, Vallourec's clients, especially oil, gas, and electricity companies, have expected the Group to respond quickly and to design customized, wholly reliable hi-tech solutions.

### → Innovating for a booming market

Global demand for primary energy is expected to rise by 22% between 2009 and 2020<sup>(1)</sup>, with fossil fuels (oil, gas and coal) maintaining their prominence in the energy mix over the coming decades, while the cost of energy and the investments needed to meet economic, technical and environmental requirements will increase. Vallourec's innovation strategy is part of a long-term vision that takes into account these trends.

### → Giving rise to breakthrough technologies and solutions

In 2010, Vallourec merged its Research and Development teams, dedicated to improving products and processes, to form a single Technology, Research & Development, and Innovation (TRDI) Department. The aims of this new team are to develop breakthrough technology and solutions, identify best practices and available technologies, and strengthen a culture of innovation. The Group relies heavily on its Knowledge Management system to achieve this last objective, promoting teamwork and specialist networks that encompass a wide range of technical expertise, such as international process communities. The TRDI employs over 500 engineers and technicians spread across different divisions and the five international research centers. In 2011, Vallourec invested €78 million in Research & Development.

### → Surrounded by world-class partners

To support its research programs, Vallourec has joined forces with numerous partners who are world leaders in their field, including Sumitomo Metal Industries for VAM® premium joints, Tubacex for seamless stainless-steel tubes, and the Salzgitter Mannesmann Forschungsinstitut, a long-term research partner. The Group also leads R&D programs in major universities in France, Germany, Brazil and the United States, and cooperates closely with its clients. In 2011, Vallourec filed 36 new patents. ■

(1) Source: International Energy Agency, New Policies Scenario, November 2011.

## Products that meet new energy challenges

**The energy market has made some spectacular advances over the past five years, and Vallourec has always been at the forefront of these changes. The Group has quickly developed premium products that are adapted to new operating methods for oil and gas deposits, and contributes to the exceptional performance of the latest generation of thermal power plants.**

The new TRDI capability has led to a surge in new high-range products designed by Vallourec for the oil, gas, and electricity markets.

### → Oil and gas: maintaining well integrity

Oil and gas deposits are increasingly difficult to access (very deep underwater, Arctic regions, distances between rigs and underground reservoirs, etc.). This has a double impact: firstly, equipment is used under increasingly severe conditions (High Pressure/High Temperatures), corrosion, torsional strain, and fatigue. Secondly, the impact on natural environments of any error during operations is significantly higher. These new deposits require specific products that are capable of maintaining well integrity. The new generation of tubes and connections developed by Vallourec makes use of steels and threads that can withstand aggressive environments and high stress. The improved performance of these premium products takes into account the expected tightening of safety regulations after the Macondo accident in the Gulf of Mexico.

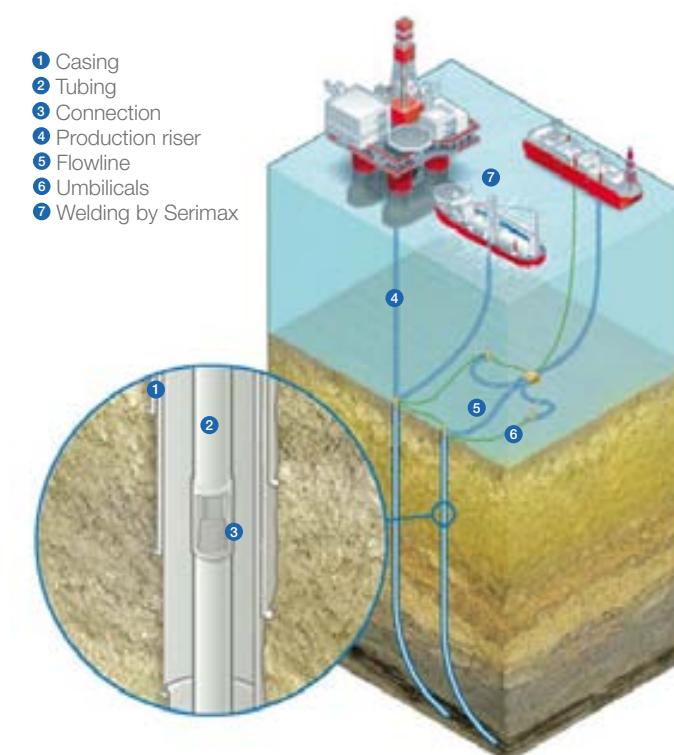
### → The challenges of deep offshore exploitation and exploration

The pre-salt fields discovered in 2007 by Petrobras 250 km off the coast of Brazil represent a true technological challenge. From an underwater depth of 1,500 to 3,000 m, they can only be reached by penetrating a 2,000-meter layer of rock and sand, and then a salt layer that can reach 2,000 m. The tubes required for bringing oil from the sea floor up to the floating oil rig (risers) must be highly resistant to fatigue. For their part the wells require very thick, large-diameter casing tubes in addition to tubing in steel grades that are particularly resistant to corrosion and the high temperatures and extreme pressures found at such depths. As part of the Vallourec Pre-Salt Project (VPP), Petrobras and Vallourec are developing and implementing R&D premium solutions to overcome these challenges, whether with regard to steels or connections known as High-Strength Steels, Corrosion-Resistant Alloys, VAM® 21 connections, Cleanwell® connections, Steel Catenary Risers, Pipe-in-Pipe, Double Jointing, and Tubes for Umbilicals.

### → Deviated wells for unconventional deposits

Two-thirds of drilling activities in the United States are currently focused on shale plays. Shale oil extraction is a real technological revolution, as these gas or oil deposits are locked in highly compact and impermeable layers of sedimentary clay, often at depths of between 300 to 4,000 meters.

### VALLOUREC'S OFFER FOR OIL OFFSHORE PLATFORMS



MORE THAN

**500**

R&D ENGINEERS  
AND TECHNICIANS

2011 R&D BUDGET:

**€78**  
MILLION

**450**

R&D STUDIES  
AND PROJECTS



>>> Their extraction requires extended reach horizontal drilling techniques and the implementation of hydraulic fracturing, where the rock is broken apart with an injection of water mixed with additives and sand at very high pressure. This new technique requires the use of small diameters premium tubes and connections. The VAM® SG connection, developed by Vallourec in 2010 and deployed in 2011, meets these requirements by being particularly gas-tight and having high torsional strength.

### → Power generation: research into ultra-supercritical power plants

For the latest generation of thermal coal power plants, Vallourec offers a wide range of tubes adapted to the High Temperatures/High Pressures (HP/HT) of the new generators found in supercritical and ultra-supercritical power plants. Research today is focused on the next generation of power plants, dubbed “advanced supercritical”, which require even more effective stainless steels. It is carried out in collaboration with Tubacex, a Spanish manufacturer of seamless stainless-steel tubes. For its part, the Boiler & Line Pipe Competence Center (see box p. 23), a Vallourec research center located in Düsseldorf, Germany, is working to develop tubes capable of withstanding high temperatures and steam corrosion using new steel grades and new heat treatments.

### → VM12’s exemplary carbon footprint

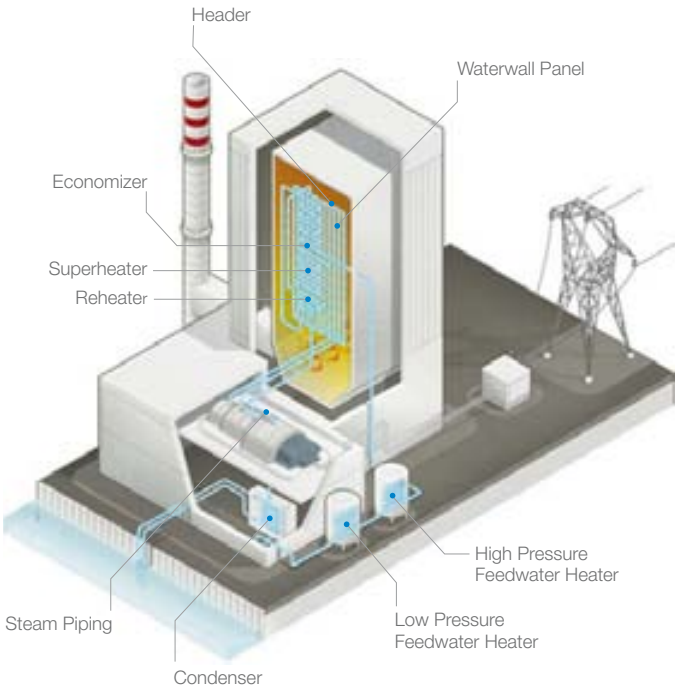
The VM12 steel tube, made from a 12% chromium steel alloy, has contributed to the emergence of ultra-supercritical (USC) power plant technology that is more efficient and releases less CO<sub>2</sub> than the supercritical (SC) technology that preceded it. Calculations obtained by Vallourec in 2011 using a USC furnace model show that CO<sub>2</sub> emissions are 30 kg lower per megawatt than those of an SC boiler. This translates to savings of 190 metric tons of CO<sub>2</sub> per megawatt of electricity transmitted every year. Since 2006, 26,000 megawatts of electricity have been installed with VM12 steel tubes, helping to save around 5 million metric tons of CO<sub>2</sub> emissions every year. ■

## VAM® 21: a high-performance connection that respects the environment

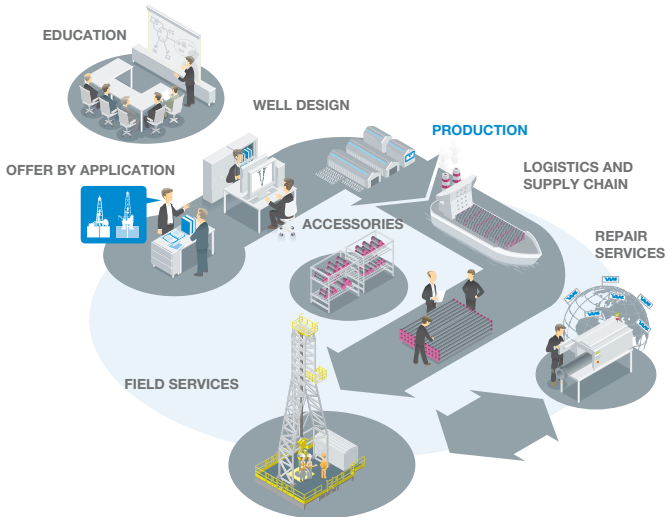
Launched after six years of development in Vallourec’s laboratories, the new VAM® 21 connection has enjoyed great commercial success in growth markets such as the North Sea, Indonesia, Brazil, and Nigeria. This high-performance connection, as leakproof as the tube to which it is fitted, is currently the only connection at this performance level that meets the new ISO CAL-IV 2011 safety standards required by the American Petroleum Institute, which establishes the norms applied in this sector. This coupled solution, which is extremely resistant to compression and guarantees performance and reliability levels that are unequalled in the harshest

environments such as HP/HT (High-Pressure/High-Temperature) deposits, facilitates the self-alignment of tubes. This allows them to be screwed together safely and quickly during on-site pipe-laying. It is compatible with Cleanwell® Dry coating, which preserves the environment by connecting tubes without the use of grease. Unlike polluting greases, this lubricant does not clog the well and therefore does not generate any waste from cleaning products. Safer, cleaner and greener than conventional methods, this solution has already been adopted in the North Sea and Brazil.

### VALLOUREC’S OFFER FOR THERMAL POWER PLANTS



### VAM GLOBAL SOLUTIONS OFFER



■ Supervising the fastening of the VAM® connections is the daily mission of VAM Field Service technicians.

## Innovative premium solutions

**Contributing to a client’s competitiveness also means innovating through a range of services to accompany the supply of equipment, and becoming a key strategic partner.**

Vallourec is developing a comprehensive range of services for its different markets. Its ambition is to position itself as a major partner for its clients through its ability to accompany their needs and advances over time. In addition to supplying products, the Group also offers them solutions designed to fit their needs, from design support to logistic, maintenance and training optimization services.

### → A portfolio of services for the oil and gas markets

Throughout 2011, Vallourec has pursued the deployment of its VAM Global Solutions package for its clients in the oil and gas industries. VAM Global Solutions include application-specific offers proposed to customers before the bidding stage, a range of products and services adapted to each type of drilling (deep offshore, shale oil, HP/HT); assistance in well design, which consists of advising the customer on the size, the steel grade of the tubes, and the choice of connections adapted to the drilling constraints; management of the entire logistics chain in order to ensure direct delivery to the location; the development of accessory sales with the implementation of the One-Stop-Shop offering, in addition to repair and pre-assembly services; a broadening of Field Services inspector services, with teams charged with accompanying and monitoring the connection of tubes together on site. The VAM licensee network is responsible for equipment sales and after-sales care. In addition, VAM Global Solutions offers a technical training program called Tubular Essentials. A dedicated team has also been specially set up to promote this new offer portfolio on an international scale.

### → A global offer that stretches to other markets

This global offer, which perfectly displays the Group’s ambition to become a major partner for its clients, extends to other markets too. The Pipe Project Division has put together a comprehensive range of services for engineering companies that notably includes welding and coating services. In 2011, the Industry Division began to market software designed to calculate ranges and preposition the solder points for MSH angle sections. These optimization tools form an effective service that is much appreciated by its clients, with pre-assembly reducing construction time by 30%.

### → Innovative tubular solutions for the industry

The Group is constantly expanding its range of products for the construction market, including bridges, stadiums and airports. Vallourec is developing pioneering tubular solutions for industrial and commercial buildings. The patented Preon large-span tubular roof frame system, which can support considerably more weight, is now being used in numerous applications. The deployment of light solutions for metal structures is a major area of development. ■



## Process innovation

**Innovation also applies to the manufacturing process, with changes made based on existing and future industrial, economic and environmental demands. In this area, TRDI relies on input from process communities, which are multidisciplinary teams composed of practitioners and experts from each of the main areas of expertise. Their role is taking on increasing significance in the Group.**

TRDI is constantly developing and improving Vallourec's industrial processes. In 2011, the majority of the work was focused on the development of new steels, the manufacture of hot tubes, improving energy efficiency, reducing CO<sub>2</sub> emissions, and the cast iron/charcoal industry.

These research projects, aiming to develop the offer, anticipate new demands and optimize production, have a significant environmental aspect.

### A joint research center with Petrobras

Petrobras, Brazil's national oil company, is one of Vallourec's long-standing partners. In the R&D center at Belo Horizonte, the two companies are already working closely together on the development of tubular solutions for the offshore exploration of pre-salt fields. In 2011, Vallourec signaled the next stage in this partnership with the launch of a new research center in Rio – the Vallourec Research Rio de Janeiro. This will be located in the Rio Technology Park near Petrobras's own research center, CENPES. Predominantly focused on

pre-salt topics, it will cover all of Vallourec's activities in this field, including drill pipes, umbilicals and accessories. The center will benefit from synergies with the Federal University of Rio de Janeiro (UFRJ) in research fields such as the environment, robotics or energy efficiency. The center is expected to open in early 2013. This supplier-client partnership is an integral part of the Group's proximity policy: meet the client's needs as much as possible, innovate with custom-made solutions, and grow increasingly responsive.

### Processes for manufacturing high-alloy steels

Chromium steel alloys (9% to 13%) provide the basis for the Group's high-tech solutions. They are used in ultra-supercritical thermal coal-fired power plants and more complex oil fields. Much work has gone into the development and continuous casting of these steels. Thanks to these innovations, the Group now possesses high capacity, high-technology steel mills that help guarantee its independence of premium steel supply.

### A patented solution for hot-process steel tube production

The ramp-up of a unique manufacturing process took place in 2011: the combination of a forge and hot piercing technology to make seamless tubes is unique to Vallourec. This new process allows the plant to produce tubes in a wider range of sizes, both in diameter and wall thickness, and to work with steel with a higher alloy content. It also offers flexibility by optimizing tool-changing processes. It favors the provision of tailor-made products in small production runs for the mechanical engineering, power generation, and petrochemical markets.



Developing new grades of steel is a key research area for Vallourec.

### The cast iron/charcoal industry: an exemplary environmental record

Demand for steel and sustainable development requirements have boosted interest in the cast iron and charcoal industry in Brazil, which Vallourec has been continuously improving and which combines respect for the environment and competitiveness. In the VMB plant in Brazil, the cast iron is produced from iron ore and charcoal. The wood is taken from eucalyptus plantations that have been cultivated by its subsidiary V & M Florestal, Cerflor certified since 2008. The objective of these research programs is to increase forestry productivity and the yield from the charcoal carbonization process. To achieve the first objective, the Group carries out work to increase forest density per hectare and strengthen resistance of the plantation to diseases and parasites, through the scientific selection of trees and new nutrition programs. In the field of carbonization, the Group is developing continuous processes in order to eventually replace batch processes. They will also enable energy from combustion gases to be reused and to reduce emissions of methane, a greenhouse gas that is 25 times more harmful than CO<sub>2</sub>.

### Process communities for faster progress

Process communities were established several years ago. They correspond with the Group's main expertise areas, such as the development and continuous casting of steel, hot-rolling, heat treatment, threading, and non-destructive testing. Their responsibilities were expanded in 2011 to promote fast and continuous progress. By sharing best practices, these multidisciplinary teams carry out benchmarks, develop common indicators for all plants, and examine the overall performance of equipment. In this field, the teams prioritize product quality and take maintenance issues and energy consumption reduction into account. They also participate in the design of new equipment. ■



### Vallourec Research Riesa: a world-first mini-plant

Inaugurated at the end of 2011, the new rolling laboratory at the Riesa Vallourec research center in Germany is a mini-plant that is the only one of its kind in the world. It gathers together some of the Group's key skills in a single place: piercing, thanks to which steel billets are transformed into hollows, and the hot-process rolling and redrawing of tubes. The smaller facilities of this plant function in real

conditions and allow testing to be conducted without interrupting production or damaging the machines. The tests aim to improve process methodologies and equipment and to test new steel grades and industrial automation before they are applied to the production process. The results of the work carried out by this laboratory can be accessed by all of the Group's production and R&D teams.

### The Boiler and Line Pipe Competence Center, a new dedicated research center

The new research center Boiler and Line Pipe Competence Center (BLCC), dedicated to the development of products and processes for boilers and line pipes, is located in Düsseldorf, near the Rath manufacturing site. For line pipes, it is currently working on optimizing steel nuances. The microstructures, which determine the characteristics of the steel, depend on manufacturing, transformation and heat treatment. The research aims to define these parameters precisely in order to satisfy the most demanding customer need. The BLCC also works to design pipes capable of

withstanding temperatures in the latest generation of electric power plants, which can reach up to 700 degrees. These R&D programs last for eight to ten years. The verification of thermal tube reaction at high temperatures is carried out over very long periods: up to 100,000 hours for warping testing. And finally, for the most innovative steels and alloys, the BLCC cooperates very closely with the Rath Rolling Competence Center and the Riesa Rolling Laboratory for validating rolling and transformation test conditions and for finalizing tubes at a prototype and pre-production stages.



# 03. ENVIRONMENT

Vallourec is committed to protecting the environment and using natural resources in a responsible way. It is actively participating in the fight against climate change through an energy mix composed of 37% renewable energy and its ambitious GreenHouse program. Through the introduction of systematic recovery and recycling, the Group has been able to significantly reduce the amount of natural resources it extracts from the environment. Aware of the impact its activities have on ecosystems, the Group is also undertaking an active policy to preserve biodiversity.

## A clear policy, an organized approach

**Fulfilling the environmental commitments outlined in the sustainable development charter requires a set of clear objectives, the active participation of each site, and perfect coordination. The organization and methodology adopted by Vallourec allow it to implement and follow a continuous improvement process.**

### → Organization

Vallourec has set out to minimize the impact of its activities on the environment, in all the countries in which it operates. There are over one hundred environmental specialists across the various Vallourec sites. Actions are defined by the Environment Department and coordinated with the support of the Environment Manager for each site. Environmental Management Systems (EMS) are adapted to the specificities of the activity and local conditions.

### → Methodology

Invested in a continuous improvement process that relies on the Vallourec Management System (VMS), the Group has set environmental targets to achieve over the course of several years, in particular reductions of water withdrawal, energy consumption, greenhouse gas emissions and waste. Dashboards, compiled by each manager and consolidated regularly at Group level, are used to track progress. Environmental audits are regularly organized in each country to assess compliance with regulations, environmental performance, and environmental risks. The Performance and Risk audit, in particular, compares environmental performance while the environmental management system (EMS) in place highlights priorities and action plans. In December 2011, all of the Group's main sites, responsible for 98% of production, were ISO 14001-certified as per objectives set in 2006. ■

✓ This assertion was verified by the Group's Statutory Auditors in 2011.

5%

INCREASE IN ENERGY  
EFFICIENCY BETWEEN  
2010 AND 2011

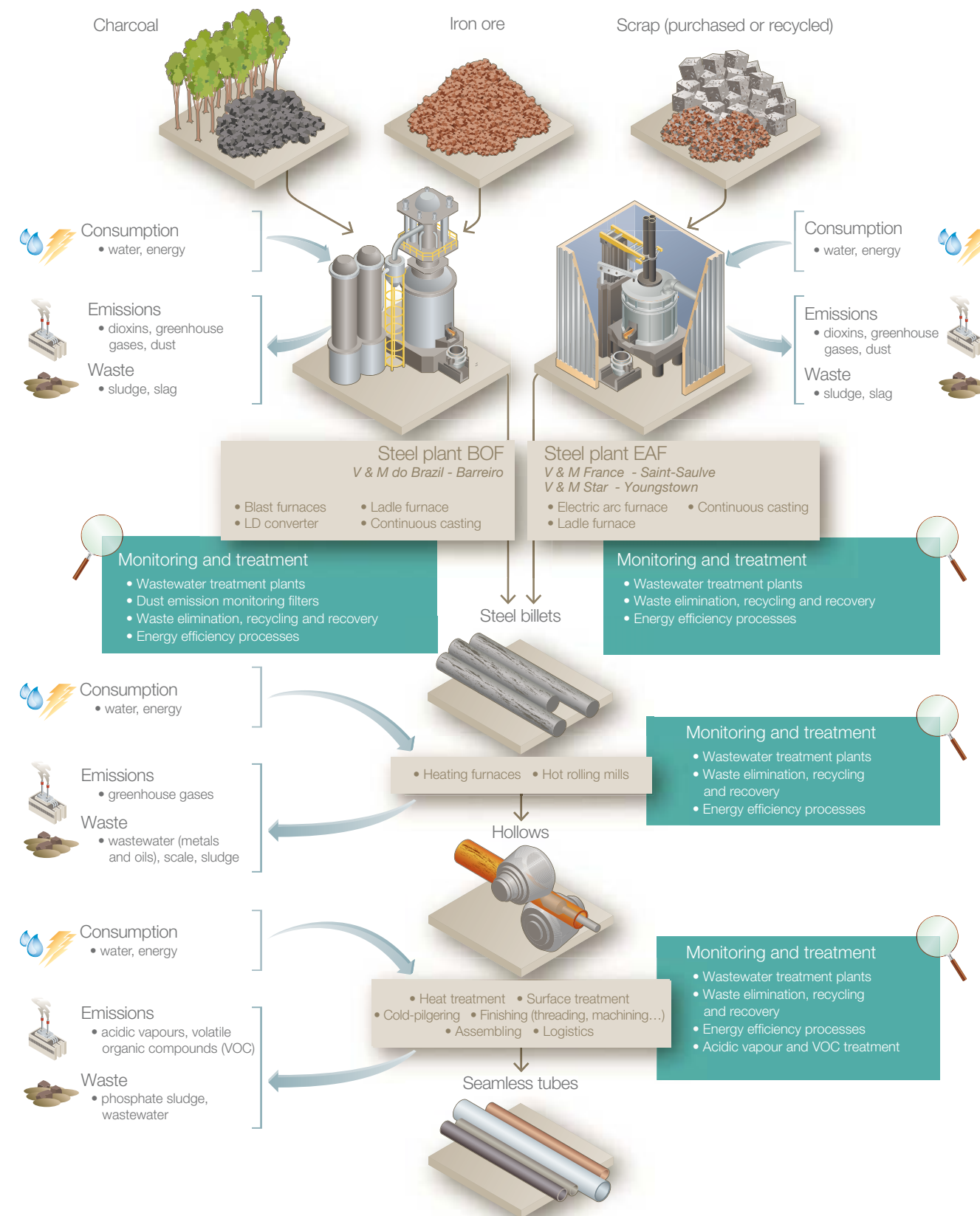
TARGET REDUCTION  
IN ENERGY CONSUMPTION  
BY 2020

20%

98%

OF SITES  
ISO 14001-CERTIFIED,  
BASED ON PRODUCTION

## PRODUCTION CYCLE AND ENVIRONMENTAL STAKES





# GreenHouse: for better energy efficiency

In preparation for a low-carbon economy, Vallourec has introduced the GreenHouse program, which aims to improve the energy performance of its processes and simultaneously reduce CO<sub>2</sub> emissions. Almost 40% of its energy mix already comes from renewable energy sources.

Vallourec's industrial activity entails high levels of electricity, gas, and charcoal consumption. In 2009, to significantly reduce its energy consumption, the cost of which amounted to €240 million in 2011, the Group set up the GreenHouse project. This project aims for a 20% reduction in the total consumption of gas and electricity by 2020, at like-for-like scope, product mix and level of activity, taking the year 2008 as the reference basis.

## → The GreenHouse project outline

The GreenHouse approach draws on the Vallourec Management System (VMS), contributions from experts, and process communities. It allows the Group to identify and quantify potential energy savings, 50% of which could come from the implementation of best practices combined with a more accurate measure of actual industrial conditions; the remaining 50% are expected to come from investment, particularly in the replacement and renovation of existing installations. Four major actions have been decided on: sharing best practices, calculating heat balances for furnaces, deploying systems for the measurement of energy consumption and carrying out energy efficiency diagnostic testing.

## → Sharing best practices: actions with immediate results

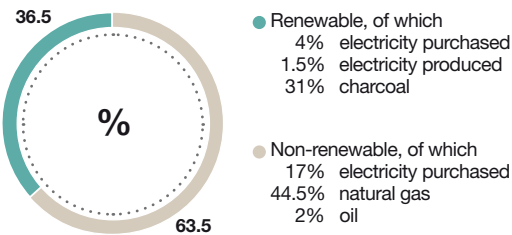
Guidelines highlighting the best practices and technology in all energy-related fields were distributed throughout the Group in 2011. They largely focused on thermal, electric, compressed-air and steam-production processes. Numerous "quick wins" in energy efficiency have been achieved. These actions are easy to implement and have immediate results. Seventy-two Continuous Improvement Teams have been working exclusively in the energy field to improve the Group's performance.

## → Furnace heat balance: a major source of energy savings

Determining the heat balance of a furnace makes it possible to identify potential areas for improvement and propose measures or investments to increase thermal efficiency. To date, heat balances have been calculated for 45 furnaces (i.e. half the total number). This approach has highlighted the savings made possible by better insulation, more efficient refractories, upgrading and temperature monitoring systems in different parts of the furnace. At the Rath-Plug site in Germany, the Group has installed 35 regenerative burners at a cost of €3 million, thereby reducing energy consumption by 20% and increasing capacity by 8%.

✓ This assertion was verified by the Group's Statutory Auditors in 2011.

VALLOUREC'S ENERGY MIX



## Optimized management of CO<sub>2</sub> at the Saint-Saulve steel mill

The implementation of the ETS<sup>(1)</sup> European directive on the management of CO<sub>2</sub> quotas currently affects the Saint-Saulve steel mill in France, with quotas of 106,037 metric tons of CO<sub>2</sub> per year (scope 1, direct emissions). Its CO<sub>2</sub> emission rose to 64,235 metric tons in 2011. The discrepancy between emissions and attributed quotas was mainly caused by the fact that actual production was lower than the site's maximum capacity and optimized production planning.

The steel mill uses steam for the vacuum degasification of steel. Two new steam generators were installed in June 2011, and after only two months of service, a 30% reduction in specific gas consumption compared to the previous boiler was recorded.

From 2013, the ETS directive will extend to all tube mills and finishing units in France and Germany.

(1) Emissions Trading System.

## A better energy balance

The large increase in production output in 2011 was accompanied by an overall increase in energy consumption. Nonetheless, energy consumption per metric ton is decreasing, and came to 675 kWh/t for gas and 309 kWh/t for electricity, a reduction of 3% and 6% respectively in comparison with 2010. Specific consumption, however, was

higher than that of 2008, the reference basis for the GreenHouse project. This increase is mostly due to the growing share of premium products in production, which has risen from 48% in 2008 to 57% in 2011. These products need to undergo more energy-intensive heat treatment and finishing processes than other products.



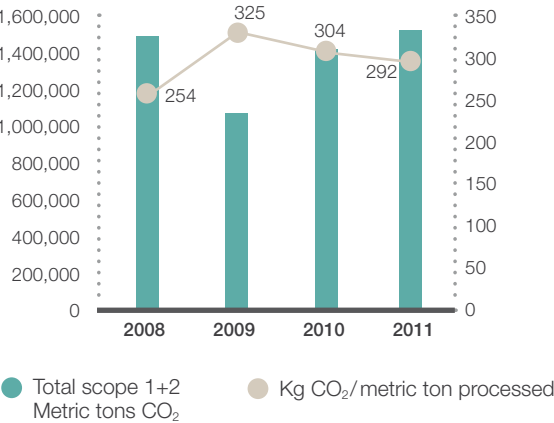
## Making progress thanks to Continuous Improvement Teams

The work of the Continuous Improvement Teams (CITs) on energy performance has mostly involved testing and repairing recuperators that recover heat from steam, and organizing thermal cycles or heat recovery systems. At Rath-Pilger, cleaning and testing the recuperator has

made it possible to increase combustion air temperature in the billet furnace by 100 °C. At the Mülheim and Deville-lès-Rouen sites, the heat generated by air compression systems is used to provide hot water for the heating and sanitary facilities.

GREENHOUSE GAS EMISSIONS TREND

292 kg CO<sub>2</sub>/metric ton in 2011 versus 304 kg CO<sub>2</sub>/metric ton in 2010



Scope 1: Direct emissions  
Scope 2: Indirect emissions (electricity)  
Greenhouse gas emissions (scope 1 & 2) as reported per metric ton processed are higher in 2011 compared to 2008 due to the increased use of heat treatment and methane emissions generated by higher production of charcoal.

## → Measurement: for accurate control of the energy supply

Measurement systems for real-time energy consumption make it easier to manage this consumption, identify any possible deviations and improvements that can be made, and accurately forecast just how much energy needs to be supplied. Successfully installed at Mülheim in 2011, these systems should be deployed on all sites in 2012 and 2013.

## → Site analysis to help draw up action plans

Vallourec has had the energy needs, consumption and performance of its most energy-consuming sites analyzed; 80% of them now have the quantitative results needed to put their action plans into place. One of the measures adopted consists in replacing electric motors in the main fans of the Aulnoye tube mill (northern France) with energy efficient engines that have electronic speed control. This specific measure reduced energy consumption by half.

## → Development of renewable energy

Almost 40% of Vallourec's energy mix in 2011, or 2,800 GWh, came from renewable sources. The two main energy sources used were charcoal, and blast-furnace gas. In Brazil, 75% of the energy consumed by the V & M do Brasil (VMB) plant came from charcoal produced by V & M Florestal. This renewable energy source has contributed to a significant reduction in the plant's carbon footprint. V & M Florestal manages 250,000 hectares of forest: native forest, accounting for a third of the total surface, is maintained in its natural state while the rest is farmed. Approximately one-seventh of the cultivated area is cut down every year to be used for the production of charcoal. The area is then replanted, the idea being that the CO<sub>2</sub> emitted by the combustion of coal is absorbed by the trees as they grow. The thermal power plant at Barreiro, with a power of 12.9 MW, reuses part of the blast-furnace gas to produce electricity, thus covering a third of the VMB plant's needs. Another portion of the blast-furnace gas is used to partially replace natural gas for the heating of billets in the furnaces.

## → Evaluating the costs of CO<sub>2</sub>

The Group's investment projects for the reduction of energy consumption have, until now, only been evaluated based on the extent to which they cut energy costs. A new parameter is now taken into account when determining whether a project is profitable or not: the estimated cost of CO<sub>2</sub>. The cost of energy – one of the Group's largest expenditures – is evaluated based on the forecasted cost of a megawatt in each country. The cost of CO<sub>2</sub> emissions is calculated based on the emissions trading market in Europe and a representative carbon price for the rest of the world. The aim is to incorporate the cost of carbon in investment decisions and fulfill Vallourec's commitment to reducing its CO<sub>2</sub> emissions.

>>>

>>> A complete carbon assessment that is even more precise

Vallourec has undertaken a “carbon assessment” of its activities since 2007. In 2011, the Group decided to refine its methodology and enlarge the scope of the investigation, for which it received assistance from Carbone 4, an expert consultancy firm. The work consisted of:

- accounting for the additional sources of indirect emissions (purchase of raw materials, extraction, transport and refining of fossil fuels used, manufacture of machinery);

– refining emission factors stemming from product transport, waste generation, and the carbonization process. The 2011 assessment, more exhaustive than that of the two previous years, revealed a significant increase in scope 3. This new assessment will provide the basis for improvement plans in future years.

AN EVEN MORE ACCURATE CARBON ASSESSMENT

The table below includes the calculation for 2010 as previously published and the assessment for 2010 and 2011 using the new methodology.

Scope	Component	2010 <sup>(1)</sup>	2010 <sup>(2)</sup>	2011 <sup>(2)</sup>
		M. Tons of CO <sub>2</sub>	M. Tons of CO <sub>2</sub>	M. Tons of CO <sub>2</sub>
Scope 1 – Direct emissions	Combustion of natural gas (furnaces)	588,220	588,220	656,332
	Methane emissions (carbonization of wood)	213,346	250,362	270,933
	Emissions due to production of steel	90,048	90,048	81,680
	Internal transport and storage	32,634	32,634	41,833
TOTAL Scope 1		924,248	961,264	1,050,778
Scope 2 – Indirect emissions (electricity)	Electricity purchased	451,320	451,320	462,931
TOTAL Scope 2		451,320	451,320	462,931
Scope 3 – Indirect emissions (other)	Purchases of raw materials and services	1,372,032	1,793,127	1,836,270
	External transport	190,784	561,495	625,999
	Waste treatment	238,177	238,177	239,225
	Losses related to energy transport (gas and electricity)		137,741	148,433
	Emissions due to our machinery (equipment in plants)		100,832	115,872
	Transport of personnel	34,138	54,602	68,688
TOTAL Scope 3		1,835,131	2,885,974	3,034,487
TOTAL CARBON FOOTPRINT (SCOPE 1 TO 3)		3,210,699	4,298,558	4,548,196
CARBON FOOTPRINT KG CO <sub>2</sub> /METRIC TONS PROCESSED		692	926	879

(1) Following old methodology.  
(2) Following new methodology.

Consumption of raw materials

Around 60% of the steel used in the manufacture of tubes is produced in the Group’s own steel mills, with the remaining needs satisfied by HKM<sup>(1)</sup> and various steel manufacturers. Steel working teams at tube mills have designed a scrap metal sorting and recycling program for Vallourec’s three steel mills in order to reduce both the amount of raw materials purchased and CO<sub>2</sub> emissions.

Steel is a recyclable material that does not lose its original properties which can be reused for all its regular purposes. The raw materials needed for its manufacture differ according to the production process: iron ore, steel pellets, various agents (such as dolomite, calcium, etc.), alloying elements and charcoal are all used to produce steel in the basic oxygen furnace (BOF) process. For steel produced in an electric arc furnace (EAF), scrap metal and alloying elements are used. In all its mills, Vallourec promotes the reuse of scrap from its production process (see illustration p. 25). CIT’s work to ensure the efficiency of the process. They work with the steel mills to develop new grades of steel whilst optimizing the energy efficiency of the furnace.

Euroscrap: an organized sorting and recovery process

Launched in 2009, the Euroscrap program was developed through collaboration efforts to benefit the Saint-Saulve steel mill in France. The project, which aims to optimize recycling of tube mill offcuts, makes up part of the Group’s continuous improvement policy. It has mobilized teams across different disciplines to introduce a complete process that includes rigorous qualitative sorting of steel alloys, a new logistics organization, optimization of charges, and the creation of a process to resell any unused scrap metal. This increases the amount of recyclable steel and reduces the amount of expensive alloy that needs to be purchased. Thanks to Euroscrap, 30% of the scrap metal used in the production of steel comes from internal recycling. This has generated savings of over €7.2 million.

(1) Steel mill, in which Vallourec has a 20% stake.

STEEL MANUFACTURED BY VALLOUREC FROM SCRAP METAL

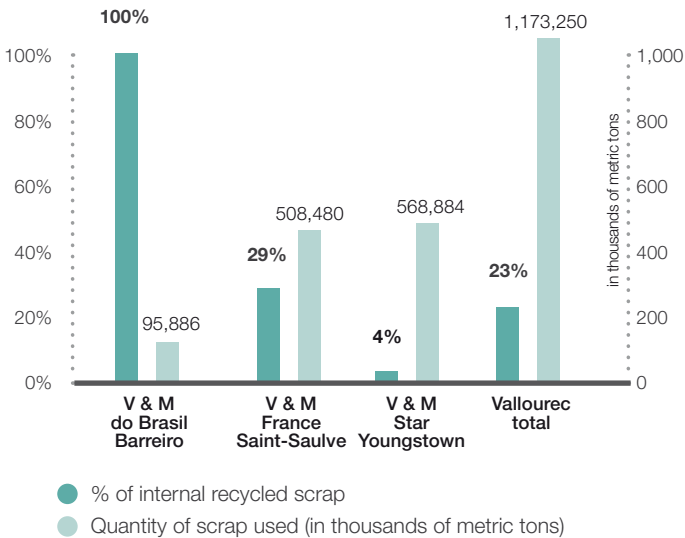
63%



Iron mines: extending the life span of a site to preserve natural resources

The Pau Branco iron mine, owned by V & M Mineração, a VMB mining subsidiary, has been in service since 1983. Its operations involve extracting 4 million metric tons per year to meet the needs of iron ore of VMB and the market for high-quality ore. The current treatment facility is going to be replaced to extract ore with a low iron content, until now considered unusable. With new equipment for sifting, separating and concentrating, this material will become useable and marketable. This will prolong the life span of the mine for at least 10 to 15 years, and the Pau Branco mine can continue to supply the VMB and VSB steel mills. This model project, which eliminates wastage of natural resources and turns waste products into a raw material, comes under Vallourec’s pledge to use resources responsibly.

% OF RECYCLED SCRAP IN STEEL MILL PRODUCTION





## Waste: prevention, recycling and elimination

Waste management is a major economic and environmental challenge for Vallourec. The Group has a proactive policy for reducing waste acting at the source of the manufacturing processes and constantly improving its recycling and recovery rates.

With the aim of preserving non-renewable natural resources, Vallourec is developing the recovery and recycling of waste, whichever country it comes from. This approach, which also helps optimize costs, promotes the creation of a circular economy. Restituted into secondary raw materials, the waste from the Group's production sites can be used for other industrial applications. This is the case for slag from steel mills that is used to fill in roads (see box).

### → An ambition: achieve a 95% recovery rate

In 2011, the Group's business generated 670,000 metric tons of waste, 89% of which was recovered (compared to 86% in 2010). Vallourec aims to be recovering 95% of its waste in three years' time. To achieve this, the Group is acting at the source in the reprocessing sector.

To optimize management, each category of waste is monitored monthly and yearly by each of the Group's sites. In the spirit of continuous improvement, this procedure reduces waste production and the high disposal costs associated. Non-hazardous waste is processed in accordance with local regulations, with maximum emphasis on recycling or waste-to-energy conversion.

As hazardous waste represents a risk to health and the environment, it is subject to particular processing rules. It accounts for 7.5% of all waste generated by Vallourec. A study conducted in 2010 and 2011 enabled the Group to identify and work on two categories of hazardous waste: organic waste (sludge and oils) and solid mineral waste (dust). In 2011, the amount of hazardous waste generated was 49,000 metric tons, 18% less than in 2010. ■



## Slag: from the electric furnace to roads

Phénix Services is a company that specializes in preparing raw materials and processing and converting slag. One of its centers is located close to the Saint-Saulve steel mill. Its director, Denys Duterte, describes the slag processing cycle.



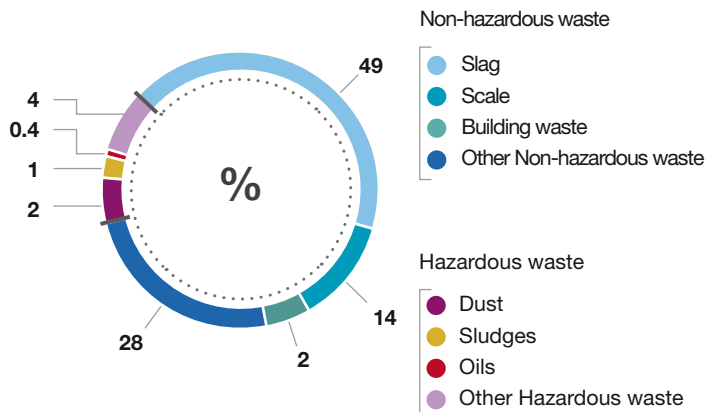
We work together with over a dozen steel production sites in France and Belgium. At Vallourec, we recover slag from the electric furnaces in the Saint-Saulve steel mill and process it in our facilities. Slag is a by-product of melting scrap metal, and often also contains lime, silicon, and other substances released from the scrap. We manage the removal, deferrization, processing and recovery

of slag. Once molten slag has cooled and been stripped of any metallic elements it may contain, it has the appearance of rock and is used in civil engineering projects. We market it to professionals who use this material for the completion of roads or in the bottom layers of new roads. Slag replaces noble materials, which are non-renewable resources, such as the aggregates extracted from quarries. ■■



At Saint-Saulve, the slag produced by the electric arc furnaces is recycled by partner companies for road building and other uses.

BREAKDOWN OF WASTE GENERATED IN 2011 OUT OF A TOTAL OF 670,000 METRIC TONS



## Preserving air and soil, tackling noise

Vallourec constantly monitors its sites in its quest to minimize waste released into the air and soil. Its plants, in accordance with the strictest standards, are equipped with effective protection systems. The Group has decided to turn its attention to noise reduction, for the comfort of its employees and neighbors.

### → Noise reduction

Inside the plants, noise comes from the furnaces, from the cutting and storage of steel bars, from tubes banging together, and steel-rolling processes. In 2011, the Group devised a structured, comprehensive set of measures to better protect its employees and neighbors from noise pollution, which in some cases goes beyond local regulations. It attains this through noise monitoring campaigns and gathering indicators that provide source profiles. The solutions subsequently adopted fall into one of two categories: noise reduction at source by using quieter equipment, or soundproofing by surrounding machines with containment screens or building soundproof walls.

### → Soil monitoring

Due to the age of the sites in France, the Group decided to conduct a full range of soil tests at all of them, at its own initiative. As a result of these investigations and with the agreement of local authorities, eight facilities introduced programs to monitor groundwater using piezometric sensors. This has also been the case for two of the plants in Germany. In Brazil, there were potential risks at one depot used to store slag and another used to store sludge at the Barreiro site. These have now been brought up to required standards. Groundwater at these sites is also being monitored. In the USA, analyses performed at the vast majority of production sites have not revealed any significant risk of pollution.

### → Three types of atmospheric emissions under surveillance

To preserve air quality around its plants, Vallourec monitors the levels of atmospheric emissions and seeks to reduce them by introducing solutions appropriate for each type of emission, be they vapors or particles. Vapors include nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOCs), oily vapors and vapors released by surface treatments. The main sources of particle emissions are the steel mill furnaces, tube mills and finishing plants, but other sources also include trucks, cars and other handling vehicles operating on our sites or around. ■



The Group's operators are equipped with personalized ear plugs to protect them from the noise.

## NO<sub>x</sub> and VOCs: low-NO<sub>x</sub> burners and substitute products

To limit nitrogen oxide (NO<sub>x</sub>) emissions, furnaces for steel billets and heat treatment of tubes are fueled by natural gas, which releases very little nitrogen oxide. Every year, some of the burners are replaced by low-NO<sub>x</sub> burners. In 2011, 667 metric tons of NO<sub>x</sub> were released into the atmosphere, equating to 0.12 kg per metric ton of final product. Emissions of volatile organic compounds (VOCs) are

caused by the tube finishing processes. Vallourec favors the use of substitute products that do not contain VOCs, or handles these emissions in accordance with the regulations. The Group will concentrate its efforts on improving temporary protection of OCTG tubes, which is the main source of VOC emissions. In 2011, VOC emissions were estimated to be 400 metric tons.



# Water: towards the standardization of best practices

For Vallourec, water management is a priority. The Group has devised a new approach that will enable it to accurately measure its water footprint, site by site. In 2011, water withdrawal decreased and the quality of effluents confirms the positive trend registered over the past several years.

Water is used at all stages of production in Vallourec's plants. Cooling hot machinery (such as furnaces for steel billets, tube rolling machines and heat treatment furnaces) accounts for 50% of the Group's water consumption. The cooling of tubes during heat treatment accounts for 25%, and the remaining 25% is required for surface treatments, hydraulic operations, non-destructive tube tests, and the cooling of other production equipment.

## A new approach: the "water footprint"

As part of its water management policy, the Group hopes to standardize practices across all of its sites. In 2012, the sites that consume the most water will be asked to measure their water footprint and outline ways in which they will conserve water and improve its quality. The indicator that illustrates this footprint will be calculated based on the volume and quality of water that is consumed and discharged, and will also take into account the ecological status of the water source and water scarcity in the drainage basin.

## Water withdrawal

Water withdrawal has fallen over the past decade, mostly thanks to the introduction of measures that promote water recycling, from 11.5 million m³ in 2002 to 8.6 million m³ in 2011. At the same time, relative consumption has steadily increased, except in 2009 when activity slowed down. In 2011, consumption was 1.67 m³/metric ton processed.

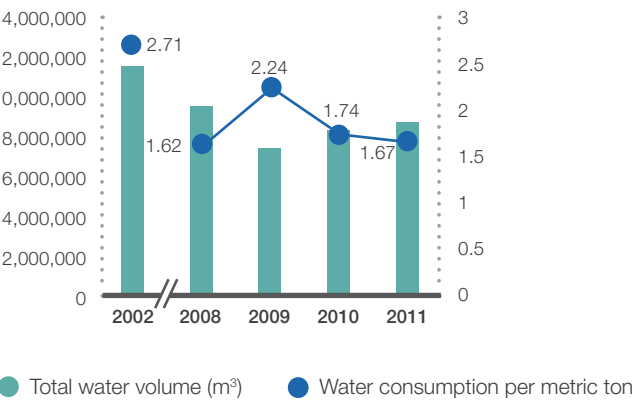
## Quality of effluents

Industrial water from the majority of plants is discharged into municipal sewer systems, and then treated at the municipal water treatment station. These plants must strive to reduce the volume of effluents, while at the same time maintaining their quality. At other sites, industrial water is treated at the on-site water treatment station before being discharged into the natural environment. This is the case for V & M France (in Déville, Saint-Saulve and Aulnoye), VAM Drilling in Tarbes (France), V & M Deutschland in Rath (Germany), V & M Star in Houston (USA) and PTCT (Indonesia).

Two environmental incidents occurred in 2011. At VAM USA (in Houston), it was brought to light that there were discharges containing above the permitted levels of metal concentrations (such as zinc, nickel, aluminum and copper). The problem was resolved in cooperation with the competent authorities. Various improvements were put in place – in particular an evaporator that reduced all of the plant's discharges to zero – and the water treatment plant is now entirely compliant with regulatory requirements. No legal action was taken against the Company. At the V & M France plant in Déville, industrial water discharged into Le Cailly river occasionally displayed signs of iridescence and red coloration. However, the problem was purely a visual one, as the discharges met all required concentration limits. An action plan, submitted to the local environment authority DREAL<sup>(1)</sup>, will be put into place in 2012 and 2013.

(1) French Regional Environmental and Housing Administration.

## CHANGES IN THE GROUP'S WATER WITHDRAWAL



Industrial water treatment plant at the steel mills in Saint-Saulve (France).



Vallourec makes every effort to protect the plant and animal life around its Brazilian sites.

# Biodiversity: Brazil

In the areas surrounding its subsidiary sites in Brazil, Vallourec does everything it can to preserve biodiversity. V & M Florestal, V & M Mineração and VSB deploy simple, effective measures to protect plants and animals and to restore natural sites.

To protect any plants and animals living in the surrounding area, Vallourec's Brazilian subsidiaries create wildlife corridors and reserves, install cameras and organize monitoring programs.

## Hundreds of species caught on camera

V & M Florestal cultivates eucalyptus plantations on a large scale, and produces the charcoal that is used for fuel in the Brazilian steel mill. This subsidiary owns a total 250,000 hectares of plantation, and conducts flora and fauna monitoring programs in cooperation with the universities of Minas Gerais and Lavras to measure the impact of its activity. Several remedial and management solutions have been introduced to preserve ecosystems and biodiversity, such as the creation of wildlife corridors where animals are able to move about freely. Thanks to cameras that have been installed in the forest, hundreds of species have been identified in the surrounding areas, several of which are on the endangered list.

## 200 hectares reserved for protected species

V & M Mineração, which runs its mining operations around fifty kilometers (thirty-five miles) away from the Barreiro industrial complex, regularly monitors the biodiversity at the mine site and in surrounding areas. Wildlife corridors between the savannah and the Atlantic Forest have helped preserve ecosystems, and a reserve covering 200 hectares in the Atlantic Forest protects many species of animal. Almost 148 different species of bird have been counted. The Company also oversees the environmental rehabilitation of mined sites: in 2011, 100,000 m² of land used for mining was rehabilitated with the plantation of 60,000 species native to the region grown at the site's greenhouses.

## A center of reference to monitor 1,700 vertebrates

The Atlantic Forest, situated around the VSB site, contains over 1,700 vertebrate animal species including carnivores, which is a good indicator of a healthy ecosystem. The Group has introduced a monitoring system that focuses especially on several endangered species. Cameras installed in a "reference center" obtain photographs of different species, which can then be compared to any tracks that have been discovered.



**Circuit** to raise awareness of road safety issues.



**Fire prevention** workshop.



**Introduction** to first aid for accidents.



**At Vallourec, safety is everybody's responsibility.** Employees share a culture of safety.

## Safety Day: an essential annual gathering

Improving safety is one of the Group's top priorities. Since 2010, one day a year has been specifically dedicated to safety in all of the Group's sites around the world. All employees and managers, including members of the Management Board, are involved in various initiatives, from basic first aid training and fire prevention workshops, to learning about the correct posture to adopt at your work station. The goal

is to create a strong safety culture shared by all employees across the Group.



**Introduction to safety measures** in case of fire.

## Soil decontamination: containing the lagoon at the Aulnoye site

At the Aulnoye site in France, Vallourec has contained an old lagoon and implemented a network of piezometric sensors to monitor groundwater quality. For many years, the wastewater from the Aulnoye tube mill flowed through a porous storm-water basin, to form a deposit of sludge containing 10-15% oil and weighing thousands of metric tons. As the clay soil is watertight, there was no contamination of the water table located

approximately 12 meters underground. With DREAL's<sup>(1)</sup> consent, a new watertight storm-water basin made from concrete was built and the old previous one was drained. To avoid rainwater penetration, the sludge has been covered, with a watertight geomembrane, which has then been covered with soil to revegetate the area.

(1) French Regional Environmental and Housing Administration.



**A new leak-proof storm basin** has been created to collect rainwater.



**The former lagoon** has been dried out and covered with a leakproof geomembrane.



**Free medical check-ups** in the region of Nangsa.

**A mobile library,** funded by the Foundation, allows children to borrow books.



## Indonesia: PT Citra Tubindo, an exemplary commitment to social responsibility

The PT Citra Tubindo TBK (PTCT) plants in Batam carry out heat treatment and premium threading for OCTG tubes, as well as manufacturing specific accessories for the oil and gas markets in the Asia-Pacific region. This committed subsidiary received the Riau Islands Province Award in 2011 for the positive contributions its projects have made towards the health, education, access to sports and living conditions of local residents. PTCT works closely with the Citramas foundation, established in 2003, and has a financial engagement amounting to between 1 and 1.3 million dollars every year. The Citramas foundation supports screening campaigns for visual impairments (carried out on 3,000 children every two years), and finances medical visits in the Nangsa

region (2,400 care recipients) with the help of volunteer doctors. It carries out surgical operations or provides food aid. In the social sphere, the foundation is involved in the construction of orphanages, schools, social housing and religious buildings: 20 buildings, currently under construction, will accommodate 4,000 people in 2012. In the field of education, the foundation has financed a mobile library, organized English language or IT training, and offers scholarships to the children of employees. It is also developing soldering and metal-working schools. In sports, the foundation has invested €750,000 in Batam for the construction of its first stadium meeting international standards. It also rallies for biodiversity and is especially active in the preservation of the Nangsa mangrove.



# 04. HEALTH AND SAFETY

Ensuring the health and safety of its employees is one of Vallourec's top priorities. With its CAPTEN+ Safe program, the Group is motivating teams at all levels to develop a real culture of safety. Health risks are kept under constant scrutiny and countered through ambitious prevention programs. Be it against stress, exposure to chemical risks, or workstation ergonomics, Vallourec takes the necessary precautions and applies effective, ever-better methods company-wide.

## Safety: the Group's number-one priority

**Vallourec considers safety a top priority and aims to become an international reference in the field. Following the success of its CAPTEN Safe prevention program, the Group launched a new, ambitious three-year plan, CAPTEN+ Safe, which will rely on the participation of managerial staff and Continuous Improvement Teams, as well as awareness of risk behavior.**

The Group ran its first prevention program, CAPTEN Safe, from 2008 to 2010. This plan was primarily based on accurate assessment of risk situations and shared responsibility of managers and employees during the daily course of their work. The outcome of the three-year program was very positive, with the successful establishment of safety management systems, the creation of dedicated Continuous Improvement Teams, and raised employee awareness. Thanks to this program, the number of accidents in the workplace was divided by three between 2008 and 2010.

### → Taking safety to the next level with CAPTEN+ Safe

In 2011, Vallourec refined and tightened its policy with the launch of a new three-year plan called CAPTEN+ Safe (see box opposite), which aims to increase awareness and accountability of all employees in matters of safety. A new project director was appointed to oversee the program. LTIR<sup>(1)</sup> fell below 3 in 2011, and the Group is now focusing its attention on TRIR<sup>(2)</sup>, a more representative indicator of safety breaches as it takes into account the total number of accidents that have happened, regardless of whether any time was lost.

Despite the active engagement of all its employees and a tightly coordinated program across the Group, Vallourec is saddened by two fatal accidents involving sub-contractors in 2011: one at the VMB tube mill in Brazil and the other at the Saint-Saulve steel mill in France.

(1) LTIR (Lost Time Injury Rate): the number of accidents with lost time per million hours worked.  
(2) TRIR (Total Recordable Injury Rate): the total number of accidents per million hours worked.

LTIR	TRIR
<b>2.79</b>	<b>9.39</b>
IN 2011 (TARGET: 3)	(TARGET: <10) 2012 TARGET: 8

These tragic accidents have strengthened the Group's resolve to systematically train all staff members and external contractors, given that 90% of industrial accidents are caused by failure to respect safety guidelines.

### → Active managerial involvement

To ensure that safety forms a fundamental component of Company culture, Vallourec requires the active involvement of all of its management and supervisory staff. Safety targets are used in the calculation of bonuses and profit-sharing programs. The objective is for each operator to receive a safety visit two times per year. Directors, accompanied by at least one workshop supervisor, carry out safety visits twice a month. The aim of these visits is to observe operators individually, at their workstations, to determine any immediate areas for improvement. In 2011, a total of 28,000 safety visits were held. There are also small safety debriefing sessions between process planners, engineers, workshop managers and various supervisors, held once every week of production, to discuss any weaknesses or progress made and share experience or feedback.

### → Safe Start: changing behavior

These measures, which fall under the framework of the CAPTEN+ Safe program, are supported by the Safe Start plan, which was launched in 2011 and targets the behavior of individual employees. Safe Start complements the Group's set of golden safety rules, applicable to all employees, that lay down the basic principles of safe behavior. Safe Start identifies four physical and psychological states that can frequently result in accidents in the workplace: haste, fatigue, frustration and over-confidence. These are states that can often lead to carelessness and vulnerability. Ten pilot sites are currently testing a prevention program that incorporates the basic concepts of this plan, with a view to rolling it out to other sites later in 2012.

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## CAPTEN+ Safe, a five-part program for 2011–2013

The CAPTEN+ Safe program has been developed around five major areas.

**Area 1:** gain OHSAS 18001 international certification for the safety and occupational health management systems at all of the Group's sites.

**Area 2:** engage all levels of management to help promote a safety culture.

**Area 3:** continue to organize safety visits to workstations.

**Area 4:** organize regular mini-safety meetings on a regular basis.

**Area 5:** use the Continuous Improvement Teams to work on risk assessment, reporting and a wider deployment of the "Hands Free program". This program, launched in 2010, involves identifying situations where employees are in physical contact with tubes or other products and looking for ways to reduce or eliminate these manual tasks.

## The Safety Excellence Award 2011

The teams at the VAM Drilling USA site in Houston were rewarded for their commitment to the CAPTEN+ Safe program, with an LTIR

of zero in 2010. There have been no recorded accidents resulting in lost time at the plant for over 600 days, since August 2009.

SAFETY VISITS  
**28,000**

2011 SAFETY CITs\*  
**313**  
\*Continuous Improvement Teams



>>> Continuous Improvement Teams: safety sentinels

Continuous Improvement Teams (CITs) were strengthened and grew in number from 58 in 2008 to 313 in 2011. Over the past year, CITs in all plants have predominantly been working on hand and eye protection. Furthermore, they have determined that the risks associated with loading cars and trucks are some of the most significant risks employees are exposed to on Vallourec sites. They have also designed dashboards for all identified risks, that each unit can adapt to its own local conditions. The target that has been set is to reduce the RPI (Risk Priority Index), i.e. the total number of risks on a site, by 20%.

> Sharing best practices in every way possible

CAPTEN+ Safe promotes best practice through employee awareness campaigns and training courses. Training programs are aimed at all members of staff, both permanent and temporary. New employees undergo systematic training and regular refresher sessions are offered to all employees. In Europe, the United States and Brazil, an e-learning program allows employees to continuously test their knowledge and understanding of safety regulations. Each year, the Group also conducts awareness campaigns, with the 2011 theme focusing on hand and eye protection, and cross-audits organized between different plants.

Health: a global approach

Exposure to chemicals, bad posture at workstations, stress: Vallourec pays close attention to employee health in these three areas. In 2011, the Group introduced its Chemsafe program, signed a Seniors agreement to improve working conditions, and formalized its prevention plan for psychosocial risks.

In 2011, Vallourec continued the work on employee health that it started in 2010: formalizing a way to design workstations, training its staff in the prevention of psychosocial risks, and deploying its Chemsafe program to prevent exposure to chemical risks.

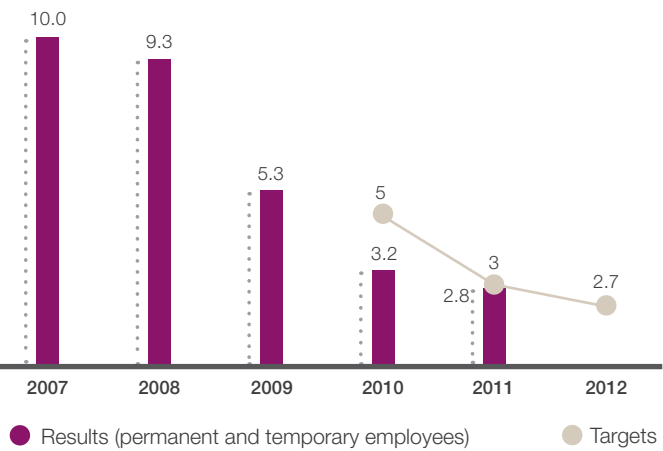
> Workstation ergonomics

Bad posture or physical stress can lead to serious health problems. Adapting workstations to the needs of individual employees is a real health issue that is closely monitored by the Group. To keep abreast of these challenges and make progress in this area, Vallourec has employed a full-time ergonomics expert, who reports to the CAPTEN+ Safe program director. This specialist in musculoskeletal disorders has been working for the past five years on systematically improving workstations at the majority of sites in France, and working upstream in the design phase of new projects. As a result, fifty workstations are adapted every year in France. In Brazil, this project has been running for several years and targets over 100 workstations per year. In 2011, Vallourec devised a method of analyzing and designing workstations that will be implemented in 2012. It will consist

Weekly mini safety meetings are the opportunity to analyze the progress and risk behaviors observed during a week of production.



ACCIDENT FREQUENCY RATE (LTIR <sup>(1)</sup>)



(1) LTIR (Lost Time Injury Rate): number of accidents with lost time per million hours worked.



An exercise circuit at the Saint-Saulve steelworks allows employees to warm up their muscles.



Jonathan Rousseau, ergonomics and safety specialist, reports to the Department responsible for overseeing the CAPTEN+ Safe program. He has been responsible for improving working conditions for five years.

In 2011, we launched the Senior agreement to improve working conditions and respond to regulatory changes regarding older employees<sup>(1)</sup>. With the support of the Continuous Improvement Teams, we compiled a list of all workstations and factors increasing work severity. For example, we studied operator posture at the machines (e.g., hunched over or craning) or reaction to their environment (e.g., cold or vibrations). Our aims are to reduce physical

constraints in the workplace, define improvement measures, and continuously measure progress, changes or setbacks. The aim of prevention is to stop musculoskeletal disorders from developing. To reach a solution, we have been training and informing people who are most at risk at their workstations. In 2012, this method will be standardized for deployment across all sites in 2013. Of course, this applies to all our employees, regardless of their age.

(1) One of the action areas stemming from the 2009 law on senior citizens in the workplace is improving working conditions and preventing particularly strenuous and stressful situations.

The European REACH program

Since 2010, in compliance with the European REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) regulation, any chemical substances manufactured or used in Europe must be registered and submitted for health and environmental impact testing. Substances that are considered highly dangerous can be included in appendix XIV of the regulation and enter into the approval process. In time, the objective is to withdraw them from the European market or restrict their use.

of establishing a set of standards to facilitate a comprehensive approach. This will make use of check lists, shared experiences, and examples of best practices collected from different sites. This will be a collective approach in accordance with Vallourec's management principles, and supported by employees with complementary skills from all different levels. Each plant will have a dedicated point of contact, and specialists will be gradually trained.

> Prevention measures against psychosocial risks

In France, the prevention of stress and psychosocial risks is a legal obligation. In 2010, following an employee opinion survey at its French sites, Vallourec instigated an action plan, after having first consulted with trade unions. In 2011, as part of this action plan, almost 1,000 managers, including those in Human Resource teams, were made aware of psychosocial risks. An enhanced monitoring system was put into place with the help of occupational physicians.

> Chemsafe: minimizing chemical risks

In 2010, Vallourec made the decision to apply the European REACH regulation on chemical risks to all of its workshops around the world, with the introduction of its Chemsafe project, during which almost 400 employees were trained locally. An up-to-date computer database indexes nearly 5,000 chemical substances, of which 100 can pose a serious risk. These risks are mapped out according to the chemical's precise conditions of use. Substitution plans, currently being developed locally, will be finalized by the end of 2012; suppliers will then be required to offer products that do not contain any dangerous substances. Four categories of chemicals are targeted by a specific Group-wide action plan: refractory ceramic fibers, products that contain chromium VI, greases containing lead, and nickel-based products used for phosphating. All new products must now undergo evaluation and usage checks before being submitted for the approval of HSE managers and the occupational medic. In accordance with local regulations, the occupational medic at each site is responsible for monitoring employee exposure levels.



# 05. HUMAN RESOURCES

Vallourec maintains a relationship of trust with its employees, treating them with fairness and capitalizing on their skills. The Group is particularly keen on motivating them and providing smooth career development. It aims to promote the development of a corporate culture that is shared by everyone, encourage discussion, and develop a sense of belonging among its 22,200 employees around the world. The Human Resources Department runs numerous projects within the scope of this policy, among which one of the most significant was the opening of Vallourec University in 2011.

## Human Resources policy

**The Group ensures that pay is fair and working hours are flexible in all countries where it operates. As a signatory of the UN Global Compact, Vallourec respects the international labor standards laid down by the ILO. In 2011, it led an investigation into gender equality that resulted in an action plan to be implemented starting in 2012.**

Present in several different countries, Vallourec promotes and respects the concepts enshrined in the International Labor Organization's basic conventions: freedom of association and the right to collective negotiation, the elimination of discrimination in the field of employment or occupation, the elimination of forced or compulsory labor, and the abolition of child labor.

### ➤ Over 22,000 employees around the world

At December 31, 2011, Vallourec had 22,204 employees at its production or service sites working under contract (permanent employees and employees working under fixed-term contracts). This workforce grew by 8% in comparison with 2010, as the result of investment and business growth in Brazil, North America, Europe and Asia in 2011.

- ✓ In France, the permanent workforce of the company Interfit was adjusted using voluntary transfers within the Group, in particular to neighboring units in the North of France. In Germany, the 2010 adjustment plan, which provided for the closure of Valti GmbH and the reduction of its workforce at the Mülheim plant, was implemented through age-related measures or voluntary transfers to other sites in the Düsseldorf area. The age pyramid remains unbalanced in Europe, with over 38% of the workforce aged 50 and over.

NUMBER OF GROUP  
EMPLOYEES IN 2011

**22,204**

**87%**

OF EMPLOYEES AROUND  
THE WORLD ARE  
COVERED BY WORKERS'  
AGREEMENTS

**84%**

PARTICIPATION IN THE  
2010 "OPINION" SURVEY  
CONDUCTED IN FRANCE  
AND CHINA

### ➤ Rise in permanent staff

The number of permanent (permanent contract only) employees grew by 6% in 2011, with a relatively mixed geographical distribution: +26% in China with expansion of the Changzhou plant, +14% in the USA with the start-up of the Youngstown rolling mill, and +8% in Brazil with the ramp-up in production at the VSB plant. Europe hosts 45% of the total workforce. The proportion of management staff increased following changes to certain roles and growing emphasis on R&D teams, a key area of Vallourec's strategy. By the end of 2011, 14% of the total workforce had been recruited during the year.

### ➤ Flexible solutions to manage business cycles

One of the characteristics of Vallourec's activity is its alternation between periods of high and low activity. To manage this variation in a balanced way, the Group allocates sufficient resources for an average cycle and ensures there are local flexibility solutions in place in order to avoid redundancies or recruitment campaigns that are larger than need be. This approach relies on the ability to transfer staff between different plants and hire temporary staff or those on fixed-term contracts. The latter accounted for 11% of the Group's total workforce at December 31, 2011, compared with 8% in 2010. This set of measures is complemented by flexible working hours, especially the possibility of overtime (three million hours in 2011), which allows plants to adapt to their current production needs. A system of continuous shift work, shared between three and five alternating teams, has been adopted at a majority of sites. In order to improve working conditions, trials are under way to adapt workplaces to physiological rhythms, taking cultural factors and local legislation into account. It is for this reason that in early 2011 the Saint-Saulve tube mill decided to reverse its team rotation, upon recommendation by an occupational physician.

### ➤ Creating equal opportunities for men and women

Women account for 11% of the permanent workforce and 14% of new recruits. Few are employed as workers, except in China. There are an increasing number of female employees in Brazil and North America. In 2011, Vallourec's Management and Supervisory Boards held discussions on gender equality in the workplace.

- ✓ The Group hopes to boost the number of women working in operational divisions, particularly in production, and improve their access to senior executive positions. An action plan will be deployed in 2012. A member of the Executive Committee will be the plan's sponsor and will be responsible for setting priorities. The sponsor will ensure that recruitment policy is aligned with the job market, that any inequalities are addressed and that gender equality will be incorporated into succession plans. This new structure and its programs will be assessed using relevant indicators linked to the processes put in place by the Human Resources Department. Special attention will be paid to improving the work-life balance of employees. This action plan reflects senior management's desire to commit to gender equality over the long term.

>>>

## Human Resources

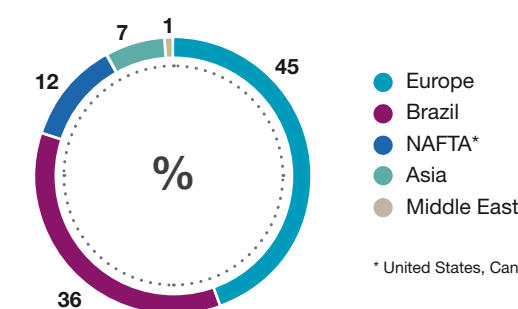


**Philippe FERRIÉ,**  
Worldwide Employee Relations  
Coordinator.

With each acquisition of a new company, Vallourec organizes intercultural seminars that have proven crucial for integration. The acquisitions of VAM Drilling Dubai and VAM Drilling Abu Dhabi in 2010 led to the creation of the multicultural entity VAM Drilling Middle East, united by a strong team spirit and the sharing of a new management culture. Having an awareness of religious or cultural differences from the very beginning is a vital step to avoiding misunderstandings on both sides. To ensure the success of our first industrial plant

in Saudi Arabia, with the acquisition of Zamil Pipes, we believed it incredibly important to have a thorough understanding of the local culture and managerial practices before deciding what needed to be done in the transition towards the Vallourec model. One of our first priorities was to recruit a locally based HR manager familiar with the conditions in Saudi Arabia. In this particular instance, American, Mexican, French, Saudi, Indian, Pakistani, Yemeni and Romanian managers will all have to learn how to form an effective and cohesive team.

### BREAKDOWN OF EMPLOYEES BY GEOGRAPHIC REGION



\* United States, Canada, Mexico.

✓ This assertion was verified by the Group's Statutory Auditors in 2011.



>>> Integrating people with disabilities

At the end of 2011, 3% of the Group's employees had a disability or medical restriction requiring an adjustment to their workstation. In the main countries where Vallourec conducts business, policies have been established to support these employees. In Germany and Brazil, priority is given to maintaining employment for employees with a disability. Copies of the policy are displayed and distributed. In the United Kingdom, a company-wide agreement has been signed. In France, Vallourec signed a professional integration charter proposed by the state in 2009 for those with disabilities. The Group's action plan in France also includes purchasing services from businesses employing individuals with disabilities.

→ Fair pay

Vallourec has a structured policy for attractive and fair remuneration that takes into account duties and responsibilities of the role evaluated according to international best practices, how the employee carries out their role, the state of the local job market, and the practices of similar companies. The objective is to pay for skills and performance. The remuneration of the majority of senior managers includes a variable portion dependent on agreed goals that are evaluated at the end of the year. This policy also includes short- and medium-term payouts such as profit-sharing plans or allocation of shares, as well as non-financial benefits. Depending on the country, employees can have access to a company savings plan or a pension plan.

Employer-employee dialogue

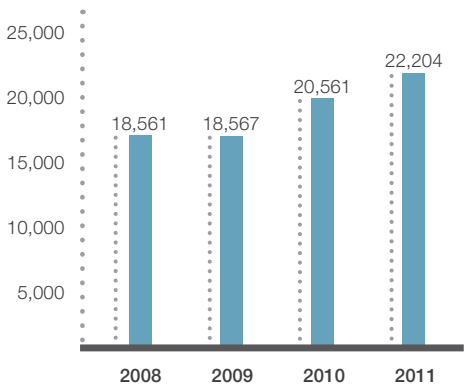
Vallourec places great stock in employer-employee dialogue as a tool for establishing a relationship of trust with its employees. It works to maintain this in each country, and encourages transparency in all dealings with employer and employee representatives. An opinion survey carried out among its employees has highlighted possible areas for improvement.

Employer-employee dialogue, driven by the Human Resources Department at Group level, is organized in each country based on applicable national legislation, under the leadership of the local Human Resource Departments. This dialogue is formalized by collective agreements concerning the occupational branch or company. In 2011, over 19,000 people in some 20 countries, representing 87% of Vallourec's workforce, were covered by these agreements.

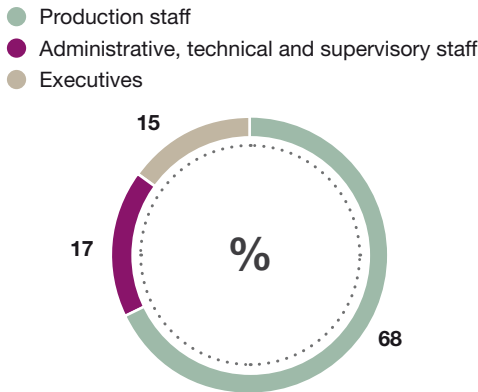
→ A European Committee

A European Committee composed of 30 French, German and British representatives is kept informed of the Group's activity, results and strategy in Europe and the rest of the world. Every year it holds one plenary meeting in the presence of the Group's senior management, and five meetings with limited attendance. The committee office meets with the Chairman of the Management Board and the Director of

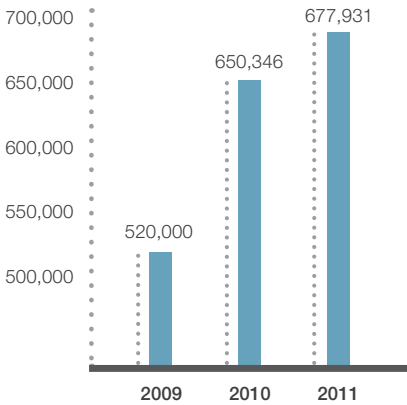
NUMBER OF GROUP EMPLOYEES



BREAKDOWN OF PERMANENT EMPLOYEES BY PROFESSIONAL CATEGORY IN 2011 (IN %)



NUMBER OF TRAINING HOURS



Internal "Opinion" survey

Vallourec actively nurtures employer-employee dialogue through its internal "Opinion" satisfaction survey. Launched in Brazil in 2001, this survey was extended to France and China in 2010, where almost 5,000 people were questioned. The final results in 2011 showed that, in France as well as China, employees feel very proud to belong to the Group and have a positive perception of its strategy and management. Several areas for improvement were also identified, involving performance evaluation and pay, recognition, work-life balance, training, and career development.

In response to this, Vallourec deployed numerous measures at local level. In France, individual global pay reports have been introduced. Chinese sites have implemented annual performance meetings and yearly objectives, and will encourage clearer communication on pay in 2012. In both countries, information sessions and social gatherings are now organized regularly. Over the course of 2013, the "Opinion" survey will be redeployed in all countries where Vallourec has a presence. It is to be conducted every two years thereafter.

Human Resources at least twice a year to discuss recurring topics, such as the Group's results and outlook, or exceptional projects, such as the start of a production line at Mülheim in 2011.

→ A "Group Committee" in France

In France, there is dialogue on a national scale and at each of the individual French companies. The "Group Committee" represents all of the French companies, and is comprised of 20 representatives selected by trade unions. This body receives general information from senior management once a year. It is involved with the management of employee welfare and savings plans. Agreements are negotiated with employer and employee representatives during consultation committees. In 2011, negotiations concerned wages, job and skills management, prevention of psychosocial risks, and employee welfare. Each French company has its own workers' councils, consultative committees, staff representatives and delegates to the Committees for Healthy, Safety and Working Conditions (*Comités d'Hygiène, de Sécurité et des Conditions de Travail* – CHSCT).

→ Germany and the UK

Labor relations in Germany are managed by three main bodies. One workers' council per site, whose members are elected by the workforce, represents employees and deals with internal affairs. This is placed under the responsibility of the workers' council for the German subsidiary, V & M Deutschland, and its agreement is required for all matters relating to the management of the subsidiary. It is closely involved in matters concerning safety. A general committee assists the subsidiary's workers' council. A senior managers' committee represents managerial staff. Salary negotiations take place between the national employers' organization and the trade union, which represents the majority of employees in the metallurgy industry. In the United Kingdom, the workforce is represented by trade unions. In 2011, negotiations focused on salaries and employment.

→ A unique local organization for V & M do Brasil

In Brazil, trade unions, which represent most employees, are the only bodies entitled to negotiate salaries within the subsidiaries. They are represented by six employees, who are appointed by the union and paid by V & M do Brasil. A specific body made up of 13 members elected for two years, the Conselho Representativo dos Empregados (CRE), was created to represent the staff of V & M do Brasil at the Barreiro plant. The CRE is called upon for matters concerning safety, working conditions, promotions, and staff management. In Mexico, there is a trade union representing workers and employees that manages the collective bargaining agreements.

→ Direct representation in the United States and China

In the United States, employees chose to have no union representation in favor of frequent meetings at the Group's premises attended by senior management and employees. In China, employer-employee dialogue is also arranged via direct contact or through a single national union representative.

✓ This assertion was verified by the Group's Statutory Auditors in 2011.

Career management

In order to support the Group’s premium strategy, Vallourec’s Human Resources Department is developing the skills of its employees and boosting their motivation through an ambitious shared goal. The Department has the necessary tools at its disposal to manage talent, allowing it to anticipate the Group’s future needs and offer employees new career paths.

On dynamic markets, Vallourec’s competitive advantage rests on the commitment of its employees and their ability to innovate and adapt. Vallourec’s Human Resource Departments have developed career management tools designed to capitalize on the skills within the Group and anticipate changes in job roles, while motivating staff at the same time. This win-win strategy also cements a shared culture among all the Group’s entities and encourages a strong sense of belonging.

Talent 360: a common assessment grid

At the start of 2011, the Human Resources Department introduced a software tool called Talent 360 for evaluating the performance of employees in management and guiding their professional development. This tool, which standardizes the overall approach using individual objectives, guarantees objectivity, fairness and transparency of the annual performance meetings conducted by their managers. It provides a common assessment grid linked to both job-specific role definitions and skill definitions. This enables employees to track the achievement of their objectives, evaluate their progress thus far and express desired career changes. It also provides the Human Resources Department with reliable data to capitalize on potential, manage transfers and accompany proposed development or training needs. Talent 360 has already been deployed in 17 countries, including Germany, Brazil, China, the United States, France, Mexico and the United Kingdom. In 2011, more than 4,600 employees (3,100 managers and 1,500 administrative staff and supervisors) were able to access the tool. In 2012, access will be gradually opened up to operators. By the end of the year, 4,000 additional employees in France and the USA will have access to this tool.

Talent Review: identifying intellectual capital

The Human Resources Department also relies on another tool for the collective management of talent, Talent Review. It describes what skills can be found in the company for each of the 13 job categories. By providing a clear overview of the Group’s intellectual capital, it gives human resource managers a means of identifying and anticipating career changes and the skill needs of each Division. Talent Review allows senior executives to analyze each business area in order to evaluate potential, training needs and succession plans in each area of business.

Experts: a specific career path

In order to preserve and enhance the Group’s technical expertise, in 2010 the Human Resources Department launched a career and skill management tool specifically aimed at technical experts. This tool especially aims to retain or attract rare core skills specific



Vallourec University  
A structuring program for Group managers

The year 2011 saw the operational start-up of Vallourec University, which offers training programs for Group employees around the world. The aim of the university is to capitalize on the best aspects of the Group’s cultural influences to create a common culture. In this center of excellence, employees can meet to share and enhance their understanding via continuous learning. The goal is to strengthen ownership of the Group’s key areas: client relations, creativity, innovation, and respect for people and their differences.

In 2011, 530 employees took part in international programs and 2,100 in regional programs that were either held at Vallourec’s headquarters or in one of the countries where the Group is present.

This assertion was verified by the Group’s Statutory Auditors in 2011.

Vallourec University has defined four principles (experiment, share, learn, and apply) that unite theory and practice and guide all of their actions. Three programs were launched. “Leadership” offers preparation for managerial duties. “Operational Excellence Training” covers operational skills, processes, technology and best practices. The “Sales School” program trains managers in growth strategies and close relationships with their clients.

An on-demand e-learning training program is currently being tested. Furthermore, some modules, such as “business knowledge” and “tubular essentials,” are designed for clients and suppliers.

TOTAL NUMBER OF TRAINING HOURS IN 2011  
678,000

2,630  
EMPLOYEES TRAINED BY VALLOUREC UNIVERSITY

229  
EXPERTS, OF WHICH  
14 TECHNOLOGY DIRECTORS  
50 CHIEF EXPERTS



Vallourec University is a cornerstone of the Group’s manager training policy.

to Vallourec: steel manufacture, rolling, heat treatment, threading, non-destructive testing, etc. It offers the same level of recognition of technological expertise as is given to managerial expertise. Where the grades are equivalent, there is scope for crossover from engineering or R&D roles to managerial positions. This new program, which opens up motivational career opportunities, will help attract new talent and ensure existing engineers and researchers remain loyal to the Group. Four skill levels have been defined for technical roles: expert, senior expert, chief expert and technology director. These correspond to levels of operational responsibility: senior engineer, production line manager, production manager and director. Throughout their careers, these experts will have the option to choose between operational management posts or continuing to exercise their technical expertise, without having to change their skills in the Group. Equivalence between salary grades and skill levels is also taken into account. In 2011, the expert category accounted for 1% of the Group’s workforce.

The Atlas program: anticipating the needs of future talents around the world

In order to facilitate the integration of Vallourec’s activities in the countries where it is present, the Company encourages the recruitment of local skilled workers. Anticipating the construction of future sites, the Human Resources Department is recruiting employees from local areas, and training them for three years with teams before posting them in key roles in their home countries. This policy promotes a common language throughout all of the Group’s subsidiaries. A talent pool of nearly 15 people, from China, India, the Middle East and Nigeria, is currently undergoing training in the Group’s European and American plants.

Local training programs

Every year, each one of the Group’s companies designs its own training program in line with its educational needs. As part of the launch of major investments in 2011 and 2012, training programs have been especially developed for new recruits at VSB in Brazil, the new Youngstown plant in the USA, Valinox Nucléaire in France and the expansion of V & M Changzhou in China.

Apprenticeships and work study vocational training for the future

Vallourec runs an apprenticeship program in Germany, with 294 apprentices in 2011, and hopes to develop this in France where 80 students were on work-study vocational training courses at the end of 2011, a 50% increase from 2010. This program responds to the dual challenge of ensuring skill transfer – a means of offsetting the age pyramid imbalance in Europe – and welcoming more young people into training courses adapted specifically to the Group.





# 06. COMMUNITY RELATIONS

Vallourec’s global activities are deeply rooted in the local areas where it is present, and given its size, the Group is able to make a real, positive impact on these areas. It wants local communities to be able to benefit from its development, and maintains a relationship of trust and mutual understanding with them in the same way it does with all of its other stakeholders. This policy is also in line with the expectations of the Group’s clients, who are increasingly mindful of the quality of its contribution to society.

## Establishing long-term relationships with local communities

**Aware of its significance in the lives of local communities, Vallourec expects all plant managers to maintain constant dialogue with these communities and develop initiatives that benefit them. In order to ensure a standardized approach to this issue, the Group gave its subsidiaries some simple recommendations in 2011 which respect local conditions.**

For several years in Brazil, Vallourec has conducted a policy of dialogue and partnership with its stakeholders, who are neighbors, administrative authorities, political or cultural bodies, and NGOs. Motivated by the success of this experiment, the Group hopes to expand the policy, especially in developing countries, where the needs of local populations are more pressing. Each of its subsidiaries is to deploy this policy through concrete actions that take local conditions into account. Approximately €5 million was devoted to financing partnerships in Brazil in 2011, to which can also be added other partnership activities carried out in Indonesia, North America, France and Germany.

### ➤ One constant: employment

Vallourec’s sites around the world contribute to direct job creation by recruiting skilled workers locally. The new high-end tube mill currently being built at the V & M Star site in Youngstown, Ohio, has created 1,600 jobs during its construction phase. Once it enters into service, 350 job opportunities will be created in a region suffering from a progressive decline in industry, as demonstrated by the 16,000 applications received in response to the recruitment campaign. In Brazil, the new Vallourec & Sumitomo Tubos do Brasil (VSB) plant employs 1,500 people, 250 of whom came from VMB. In France, the extension of Valinox Nucléaire in Montbard created 150 new jobs. By making 40% of its purchases from suppliers who are located geographically close to sites or chosen by local teams, Vallourec is also responsible for boosting indirect job creation.

### ➤ A variety of initiatives to respect local cultures

Vallourec encourages its subsidiaries to develop their own initiatives – in line with local political, economic and environmental practices – for aiding and supporting local communities. The Group asks them to give priority to measures relating to training, education and health. Support given by subsidiaries varies according to their size, available resources, and the cultures they are trying to target. In Brazil, VMB succeeded in developing a highly structured approach with the encouragement and support of the local authorities. This approach also involves economic stakeholders, who may be granted assistance in the form of skilled volunteers. This is the case in France, for example, where Vallourec has already helped dozens of contractors from nuclear SMEs/SMLs through the Alizé<sup>(1)</sup> mutual aid program.

(1) Inter-enterprise development support program in the same employment region; Vallourec sites are involved in the Burgundy region (Valinox Nucléaire, Valtimet, Valti and Vallourec Umbilicals).

### ➤ Encouraging subsidiaries to adopt a societal approach

Until recently, with the exception of Brazil, relationships with stakeholders were not strictly formalized and no summaries of local practice and common activities existed. Fifty local operational and functional managers were therefore given a structured questionnaire to complete, in order to gather information on current practices in this field. The decision to implement a policy and simple guidelines was taken as a result of the findings of the survey. The survey also showed that managers view social responsibility as a major issue, whether with regard to the Company’s reputation or managing risks linked to its social environment. All noted that Vallourec’s integration is based on trust and that its relationships with local communities are good. However, they expressed a desire that the Group define a general approach and provide a framework for their actions. Subsidiaries wanted more commitment from the Group, and were in favor of creating a network to share best practices.

### ➤ A new approach in 2011

To meet these expectations, in 2011 the Sustainable Development Committee defined the framework for a common approach. First of all, the Group’s subsidiaries will compile a detailed map of their stakeholders, identifying their values, needs, and objectives. Any initiatives must be consistent with other measures in the same region, and give preference to actions that are supported by employees. A community of local organizers will transmit best practices between the different sites around the world.

### ➤ Partnership with GoodPlanet

At the Group level, Vallourec decided in 2011 to support the GoodPlanet foundation’s “Carbon Action” program, which works to educate and inform the general public in the fight against climate change. This program offers companies the option to voluntarily offset some of their carbon emissions by providing financial support for CO<sub>2</sub> reduction projects. This activity will have enabled the Group to offset some employee air travel made necessary by its international expansion.

This assertion was verified by the Group’s Statutory Auditors in 2011.



## V & M do Brasil: effective community outreach

For the past six years, the Living Community Program (*Programa Comunidade Viva*) has played a part in peoples’ lives in the Barreiro region. Sponsored by V & M do Brasil, Vallourec’s Brazilian subsidiary, the program carries out educational and training activities serving young students and their teachers across three priority areas: professional qualification courses; integrating into the job market; and community development activities.

To do this it has set up dedicated committees and engaged local institutions. In 2011, the Living Community Program directly reached more than 950 people in two Belo Horizonte districts and a housing complex in Contagem. Indirectly, some 10,000 people have also benefited from the program, thanks to the involvement of local institutions and the efforts of the program’s various committees.

RESOURCES ALLOCATED FOR FINANCING PARTNERSHIPS IN 2011

€6 MILLION

GROUP PURCHASES MADE LOCALLY

40%

METHODOLOGY NOTE

Intended to inform shareholders and the greater public on Vallourec’s efforts in the field of Sustainable Development, this report has been compiled based on data gathered from systems deployed all around the world, from each participating site. The introduction of the law of July 12, 2010, or Grenelle 2 Round Table, has inspired Vallourec to modify its reporting process in anticipation of the regulatory requirements established by article 225 of this law. Besides a set of indicators concerning the environment and employment conditions, some of the assertions contained in this report were verified by the Statutory Auditors, with limited assurance. These assertions are designed to preempt any future regulatory requirements and clearly define our strategy and actions, with regards to social and environmental responsibility.

Indicator system

Vallourec devised this system by drawing upon proposals put forward by the Global Reporting Initiative (GRI), whose aim is to develop directives that can be applied globally for reporting on the economic, environmental and social performance of companies. This system is in line with future regulatory requirements linked to article 225 of the Grenelle 2 Round Table. Environmental and safety indicators have been retained in the ERMIT reporting system, which allows these factors to be monitored and consolidated monthly. These are included in a glossary available in the Group’s four main working languages (French, English, German and Brazilian Portuguese), distributed by the Sustainable Development Department to its network of contacts. Indicators on employment conditions also have precise definitions that have been standardized for the entire Group and incorporated into a procedure. Each site collates these indicators into an Excel spreadsheet on a monthly basis. The data is then consolidated by country by the local HR contact, and then at company level by the Human Resources Department.

Reporting scope

The scope of Environment and Safety reports is determined in accordance with the rules put in place by Vallourec’s Sustainable Development Department. The scope includes: 1. Sites carrying out industrial activities. Therefore the following are excluded from Environment reports: the IT Europe IT Center at Saint-Saulve, the administrative offices and headquarters located in Boulogne (France), Rath (Germany), Houston (USA) and Beijing (China), as well as all sales offices. Research centers are also excluded, with the exception of VRA, whose activity is

- more varied. As for consolidation of the Safety indicators, all sites must participate with the exception of small sales offices.
2. Sites that have belonged to Vallourec for over six months. This rule needs to be considered when an acquisition or disposal is under way.
3. Sites that conduct effective industrial activity throughout the financial year. This thereby excludes sites under construction that have not hosted a minimum of six months of activity. In 2011, this was the case for the VSB plant in Brazil, V & M two in the USA and VMC2 in China.
4. Sites for which Vallourec holds over 50% of voting rights. Conversely, the sites for which Vallourec has a non-controlling interest are not incorporated into the scope. An example of this is the HKM steel mill, in which the Group has a 20% stake.

The social reporting scope includes all companies who fall within the scope of financial reporting, with the exception of:

1. Companies with fewer than 5 employees.

2. Companies in which Vallourec has a non-controlling interest.

Consolidation principles

1. Companies and sites that fall within the scope in accordance with the rules described above are not treated using the equity method, but are all placed on the same baseline at the moment of consolidation, i.e. as if they were all owned 100% by the Group.
2. The prudence concept: consolidation is based on cautious evaluations so as to avoid transfer and reputation risks.
3. Accruals concept: financial years are all independent of each other.

Consolidation and verification

Environment indicators are consolidated and verified every month by the Sustainable Development Department, who judges whether deadlines are met, and whether the information provided is accurate and complete. If there is any doubt or incoherence, the corresponding sites will be questioned and required to provide explanations demonstrating whether the reported indicators have been properly understood and whether the year’s objectives have been met. This stage is crucial for the quality of reporting and for guaranteeing that indicators are monitored and that an approach of continuous progress is followed. Furthermore, in order to verify and compare data, the Sustainable Development Department publishes a quarterly summary for the Department and all sites. Safety indicators are released monthly, following verification, to senior management, Divisions and all sites. Each month, the Human Resources Department verifies social data gathered and then distributes a summary on this data to Vallourec’s Executive Committee.

Verifying assertions

A number of assertions made in this report were verified with limited assurance by Vallourec’s Statutory Auditors. For each assertion presented in the report, a list of which is summarized in the table on pages 50 and 51, Vallourec prepared a file which rigorously and exhaustively documents the implementation of its policy.

Production calculations

Per metric ton processed, Vallourec defines this as the metric ton of output from each plant (the number of units of work produced in the plant), whether this is steel, hot tubes or fully finished cold tubes. Production of all plants is added together to obtain Vallourec’s total production in metric tons processed or units of work. For integrated sites, such as V & M Star in Youngstown and V & M do Brasil in Barreiro, total production is the sum of steel and tube production. The production of iron ore at V & M Mineração, along with the production of charcoal at V & M Florestal, is not however taken into account when calculating Vallourec’s total production.

Per metric ton shipped, we define this as metric tons shipped to our clients during the year. This is the official production figure used in the Group’s results.

In graphs and tables of results, environmental data is consistently expressed in absolute and relative values. Relative values are calculated over production in metric tons processed, which allows for a degree of benchmarking between different sites, or production in shipped tubes, which allows us to measure our environmental footprint in relation to the number of tubes shipped to our clients.

METHODOLOGICAL LIMITS AND SPECIAL CASES

The following table shows numerous exceptions or special cases.

Issue	Plants concerned	Description
Determining the reporting scope (rule N° 1)	V & M Mineração	The activity carried out by V & M Mineração differs greatly from that of other Vallourec sites, as it is responsible for producing the iron ore used by a part of the integrated V & M do Brasil site in Barreiro. Its environmental indicators are monitored in the same way as for all other Vallourec plants, but are not consolidated at company level. They are included separately in tables of data. On the other hand, its indicators for safety and employment conditions are consolidated with the data from other Vallourec sites.
Effluent quality	V & M France (Steel and tube mills in Saint-Saulve, Deville, Aulnoye, VAM Drilling in Tarbes), V & M Deutschland Rath, V & M Star Houston, PTCT	Indicators used to monitor the quality of discharged water (SS, COD, THC and metals) are only consolidated for sites that discharge water directly into the natural environment after it has been treated in an internal effluent treatment station. These indicators are calculated based on a concentration average weighted by discharge water flow rates. Samples are taken quarterly in Germany and the United States, and at least weekly in France.
Waste	All plants	“Historic” waste (be it hazardous or non-hazardous) that was produced prior to the reporting period and stored on site is not included in the total tonnage of consolidated waste.
Sludge from blast furnaces and steel mills	V & M do Brasil	In Brazil, sludge from blast furnaces is classified as non-hazardous waste which is totally different from sludge generated by tube mills.
Dust from blast furnaces and steel mills	V & M do Brasil	In Brazil, dust from blast furnaces is classified as non-hazardous waste which is totally different from the other types of dust produced by American and French steel mills.
Methane	V & M Florestal	The calculations used to determine methane emissions are based on, for want of more accurate data, the statistical study included by Plantar in its Project Concept Document, which was approved and registered as a CDM project at the UNFCCC (pages 90-94 and 183-188, available at <a href="http://cdm.unfccc.int/usermanagement/FileStorage">http://cdm.unfccc.int/usermanagement/FileStorage</a> ). According to this study, methane emissions released during the process depend on the efficiency of wood combustion in the furnaces; that is, the relation between the final dry charcoal mass (after combustion) and the initial wood mass.
Water consumption	V & M Mineração	From 2011, water consumption at this site will only take into account water used during processes.
Raw materials	All plants	Raw material indicators (iron ore, iron ore pellets, charcoal, charcoal dust, scrap metal, cast iron) correspond to the quantities loaded in the furnaces. Scrap metal is considered by Vallourec as a “coproduct” and is not included in the waste indicator or recycling rate.
Remuneration	All	The Remuneration indicator is calculated as the sum of staff salaries, social security charges and welfare contributions.
Turnover	All	The Turnover indicator is calculated as the ratio of the sum of permanent employee departures during the financial year in question divided by the total permanent workforce at the end of that year. The following reasons for departure are taken into consideration: retirement, resignation, redundancy and others (death, category change, standard termination of contract and termination during probationary period).



ASSERTIONS CONCORDANCE TABLE

Topics that arose from decree No. 2012-557 of April 24, 2012, on obligations of corporate transparency in matters of employee relations and the environment.

ASSERTIONS VERIFIED BY THE STATUTORY AUDITORS		PAGE	
INFORMATION ON EMPLOYMENT CONDITIONS	JOBS		
	Recruitments and redundancies	In France, the permanent workforce of the company Interfit was adjusted using voluntary transfers within the Group, in particular to neighboring units in the North of France. In Germany, the 2010 adjustment plan, which provided for the closure of Valti GmbH and the reduction of its workforce at the Mulheim plant, was implemented through age-related measures or voluntary transfers to other sites in the Düsseldorf area.	40
	EMPLOYEE RELATIONS		
	Summary of collective agreements	In 2011, over 19,000 people in some 20 countries, representing 87% of Vallourec's workforce, were covered by these agreements.	42
	TRAINING		
	Policies implemented regarding training	The year 2011 saw the operational start-up of Vallourec University, which offers training programs for Group employees around the world. The aim of the university is to capitalize on the best aspects of the Group's cultural influences to create a common culture. In 2011, 530 employees took part in international programs and 2,100 in regional programs.	44
	EQUAL TREATMENT		
	Measures implemented to promote gender equality	The Group hopes to boost the number of women working in operational divisions, particularly in production, and improve their access to senior executive positions. An action plan will be deployed in 2012. A member of the Executive Committee will be the plan's sponsor and will be responsible for setting priorities. The sponsor will ensure that recruitment policy is aligned with the job market, that any inequalities are addressed and that gender equality will be incorporated into succession plans. This new structure and its programs will be assessed using relevant indicators linked to the processes put in place by the Human Resources Department. Special attention will be paid to improving the work-life balance of employees.	41
	Measures implemented to promote employment and integration of disabled people	In Germany and Brazil, priority is given to maintaining employment for employees with a disability.	42
	PROMOTION AND COMPLIANCE WITH ILO FUNDAMENTAL CONVENTIONS:		
<ul style="list-style-type: none"><li>• for respecting freedom of association and the right to collective negotiation</li><li>• for the elimination of job- and career-related discrimination</li><li>• for the elimination of forced or compulsory labor</li><li>• for the effective abolition of child labor</li></ul>	In 2011, Vallourec pursued the deployment of its Code of Ethics among all employees. At the end of November 2011, over 19,000 people (or 87% of the total workforce) had received training in the Code of Ethics and were able to discuss ethical issues as presented by Vallourec.	12	
GENERAL ENVIRONMENTAL POLICY			
Organization of the company to integrate environmental issues and, where appropriate, assessment and certification processes regarding environmental issues	Environmental audits are regularly organized in each country to assess compliance with regulations, environmental performance, and environmental risks. The Performance and Risk audit, in particular, compares environmental performance, while the environmental management system (EMS) in place highlights priorities and action plans.	24	
Energy consumption, measures implemented to improve energy efficiency and renewable energy use	In 2009, to significantly reduce its energy consumption, the cost of which amounted to €240 million in 2011, the Group set up the GreenHouse project. This project aims for a 20% reduction in the total consumption of gas and electricity by 2020, at like-for-like scope, product mix and level of activity, and taking the year 2008 as the reference basis.	26	

ASSERTIONS VERIFIED BY THE STATUTORY AUDITORS		PAGE	
SOCIETAL INFORMATION	Conditions of dialogue with the persons or organizations interested in the company's activity	With the exception of Brazil, relationships with stakeholders were not strictly formalized and no summaries of local practice and common activities existed. Fifty local operational and functional managers were therefore given a structured questionnaire to complete, in order to gather information on current practices in this field. The decision to implement a policy and simple guidelines was taken as a result of the findings of the survey.	47
	Actions of partnership or sponsorship	Approximately €5 million was devoted to financing partnerships in Brazil in 2011, to which can also be added other partnership activities carried out in Indonesia, North America, France and Germany.	46
	SUB-CONTRACTING AND SUPPLIERS		
	Importance of subcontracting and recognition in the relationship with subcontractors and suppliers, of their social and environmental responsibility	In 2011, the Sustainable Development Committee determined it necessary to identify suppliers that could put the Group at a high level of risk in the areas of employee safety, product quality, respect for the environment and reputation. An analysis of suppliers was conducted to examine a set of criteria that includes the type of purchases, the supplier's nationality, Vallourec's influence over them, the volume of purchases, and the effect on the relationship between Vallourec and its clients. Currently, the results of a questionnaire sent out to be completed by 450 suppliers are being evaluated by Vallourec.	16
	FAIR PRACTICES		
	Actions implemented to prevent corruption	Over and above the principles inscribed in the Code of Ethics and in line with the commitments of the United Nations Global Compact, which the Group pledged to honor in 2010, Vallourec aims to prevent the specific risks arising from competition, anti-corruption and respect for the environment through a global program of legal compliance. This program has been devised by the Group's Legal Department and is aimed at raising awareness of the laws and regulations applicable in these three areas among the Group managers concerned, with particular emphasis given to internal training. It is intended to respond effectively to the risks to which they could be exposed in their day-to-day activities, through precise recommendations and case studies. Introduced in France, Germany, Scotland and the United States in 2011, the program will continue to be deployed in 2012 in Brazil and China.	13

PERFORMANCE INDICATORS

DISCHARGED WATER QUALITY

INDICATOR		UNIT	LIMIT	2005	2006	2007	2008	2009	2010	2011
ENVIRONMENTAL PERFORMANCE	Suspended solids									
	Total volume	metric tons/year		30.44	40.72	45.02	34.97	41.90	41.08	45.15
	Relative values	g/metric ton processed		15.95	19.37	23.32	20.67	12.78	8.85	8.72
		mg/l water effluent	30.00 mg/l	9.05	12.34	9.80	9.43	11.95	11.28	11.06
	COD <sup>(1)</sup>									
	Total volume	metric tons/year		80.37	66.60	91.90	61.26	73.28	80.21	90.32
	Relative values	g/metric ton processed		42.11	31.68	47.60	36.20	22.36	17.28	17.45
		mg/l water effluent	100.00 mg/l	23.88	20.18	20.00	16.53	20.90	22.03	22.13
	THC <sup>(2)</sup>									
	Total volume	metric tons/year		2.00	1.55	3.29	1.79	2.30	2.14	3.40
	Relative values	g/metric ton processed		1.05	0.74	1.71	1.06	0.70	0.46	0.66
		mg/l water effluent	100.00 mg/l	0.59	0.47	0.72	0.48	0.66	0.59	0.83
	TOTAL METALS									
	Total volume	metric tons/year		2.26	1.42	1.72	1.86	3.98	4.14	4.53
	Relative values	g/metric ton processed		1.19	0.67	0.89	1.09	1.21	0.89	0.88
		mg/l water effluent	15.00 mg/l	0.67	0.43	0.37	0.50	1.14	1.14	1.11

(1) Chemical oxygen demand. (2) Hydrocarbon total.

ENVIRONMENTAL PERFORMANCE – V & M MINERAÇÃO

INDICATOR		UNIT	2005	2006	2007	2008	2009	2010	2011
ENVIRONMENTAL PERFORMANCE <sup>(1)</sup>	WATER CONSUMPTION								
	Surface/ground water	m³/year	3,094,266	2,945,222	4,107,344	3,317,045	3,549,906	4,023,776	2,365,979
	VOLUME OF WASTE								
	Non-hazardous waste	metric tons/year	n.m.	n.m.	n.m.	155	222	145	345
	Hazardous waste	metric tons/year	n.m.	n.m.	n.m.	257	145	85	118
	Total waste	metric tons/year	n.m.	n.m.	654	412	367	230	463
	ENERGY								
	Electricity	GWh/year	11.5	12.7	15.4	17.2	17.3	21.30	21.92
	CO <sub>2</sub>								
	Total emissions <sup>(2)</sup>	metric tons/year	27,430	29,014	35,851	26,785	18,420	17,206	333

n.m. = not measured  
(1) Municipal water and natural gas indicators are not applicable to V & M Mineração. No water is discharged. Safety indicators are merged with those of the Group.  
(2) Emissions corresponding to the handling vehicles' consumption.

PLANT	BLAST FURNACE				STEEL MILL							
	Iron Ore	Pellet	Charcoal	Charcoal Dust	Scrap				Pig Iron			
	Absolute Value (metric tons)	Absolute Value (metric tons)	Absolute Value (metric tons)	Absolute Value (metric tons)	Total Amount of Purchased External Scrap (metric tons)	Total Amount of Internal Recycled Scrap (metric tons)	% of internal Recycled Scrap (%)	Total Amount of Scrap (metric tons)	Total Amount of Purchased Pig Iron (metric tons)	Total Amount of Internal Pig Iron (metric tons)	Total Amount of Pig Iron (metric tons)	Total Amount Loaded in the Furnaces (metric tons)
V & M do Brasil Barreiro	471,231	393,008	243,622	85,730	–	95,886	100%	95,886	1,457	483,555	485,013	580,898
V & M France Saint-Saulve	–	–	–	–	359,423	149,057	29%	508,480	–	–	–	508,480
V & M Star Youngstown	–	–	–	–	548,435	20,449	4%	568,884	10,027	–	10,027	578,911
VALLOUREC TOTAL	471,231	393,008	243,622	85,730	907,858	265,392	23%	1,173,250	11,484	483,555	495,040	1,668,289

GROUP PERFORMANCE

INDICATOR		UNIT	2005	2006	2007	2008	2009	2010	2011
PRODUCTION									
	metric tons processed	5,641,856	6,079,970	5,379,997	5,815,294	3,273,973	4,642,266	5,175,558	
	metric tons shipped			2,838,400	2,766,400	1,503,000	1,888,000	2,251,000	
SALES									
	€ million			6,141	6,437	4,464	4,491	5,296	
ENVIRONMENT	WATER CONSUMPTION								
	Municipal water	m³/year	1,943,894	2,142,429	2,075,217	3,939,111	2,816,353	3,413,161	3,425,196
	Surface/ground water	m³/year	8,312,177	8,636,050	7,479,055	5,504,920	4,509,957	4,665,643	5,203,667
	Total	m³/year	10,256,071	10,778,479	9,554,272	9,444,031	7,326,310	8,078,804	8,628,862
		m³/metric ton processed	1.8	1.8	1.8	1.6	2.2	1.74	1.67
		m³/metric ton shipped			3.4	3.4	4.9	4.28	3.83
	DISCHARGED WATER								
	Total discharge	m³/year	4,741,881	5,181,164	6,138,381	5,880,281	4,830,400	4,903,721	5,257,296
		m³/metric ton processed	0.8	0.9	1.1	1.0	1.5	1.06	1.02
		m³/metric ton shipped			2.2	2.1	3.2	2.60	2.34
	WASTE VOLUME								
	Non-hazardous waste	metric tons/year	362,401	486,677	570,644	606,597	465,047	568,614	616,828
	Hazardous waste	metric tons/year	157,320	182,877	150,675	75,773	47,745	59,904	48,985
	% reused waste	%						86	89
	Total waste <sup>(1)</sup>	metric tons/year	519,721	669,555	721,320	682,370	512,793	628,518	665,813
		kg/metric ton processed	92	110	134	117	157	135	129
		kg/metric ton shipped			254	247	341	333	296
	ENERGY								
	Natural gas	GWh/year	3,817	4,096	3,693	3,687	2,652	3,238	3,496
		kWh/metric ton processed	676	674	686	634	810	697	675
		kWh/metric ton shipped			1,301	1,333	1,764	1,715	1,553
	Electricity	GWh/year	1,713	1,787	1,668	1,680	1,197	1,521	1,598
		kWh/metric ton processed	304	294	310	289	366	328	309
		kWh/metric ton shipped			588	607	796	806	710
	CO <sub>2</sub>								
	Total emissions <sup>(2)</sup>	metric tons/year	791,414	849,148	828,468	976,209	739,807	961,264	1,050,778
		kg CO <sub>2</sub> eq/metric ton processed	140	140	174	168	226	207	203
		kg CO <sub>2</sub> eq/metric ton shipped			356	353	492	509	467
SAFETY	ACCIDENT FREQUENCY RATE (LTIR)								
	LTIR for Vallourec staff	-	7.66	6.53	8.08	7.79	4.88	2.90	2.55
	LTIR for Vallourec staff + temporary workers	-			10.04	9.28	5.27	3.16	2.79
	SEVERITY RATE (SR)								
	SR for Vallourec staff	-	0.42	0.29	0.40	0.38	0.33	0.20	0.11
SOCIAL	HUMAN RESOURCES								
	Staff <sup>(3)</sup>	N				18,561	18,567	20,561	22,204
	Number of employees who have attended a training course <sup>(3)</sup>	N						12,691	16,027
	Number of training hours <sup>(3)</sup>	N					520,000	650,346	677,931
	% of managerial staff members who have attended a performance interview	%						66	90
	Turnover	%				6	9	7	9

(1) Not counted in this total of exceptional waste from previous years: in 2010 = 26,057 metric tons of exceptional hazardous waste (V & M do BRASIL - 26,050 metric tons + VMD Mülheim - 7 metric tons).  
(2) From 2002 to 2006, CO<sub>2</sub> results only included combustion of natural gas and emissions from steel mill processes. 2007 incorporates all Vallourec data, including emissions caused by internal transportation but not the methane emissions from V & M Florestal, which were only reported on from 2008. It can be seen that the methane emission factor has been revised from 2010 on using official figures.  
(3) Indicators added to the scope of work in 2010, not verified by Statutory Auditors in previous years. The values from previous years are given for reference only.  
∅ : Indicators that have been verified by the Statutory Auditors (2010 and 2011).



SOCIAL INDICATORS

EMPLOYEES REGISTERED

Employees registered at December 31, 2011 (permanent/temporary employment contracts)	2010	2011	Change 2010-2011	2010 Breakdown	2011 Breakdown
Europe	9,488	9,888	4%	46%	45%✓
Brazil	7,346	7,964	8%	36%	36%✓
NAFTA (The United States, Canada, Mexico)	2,299	2,765	20%	11%	12%✓
Asia	1,302	1,448	11%	6%	7%✓
Middle East	110	117	6%	1%	1%✓
Africa	16	22	37%	-	-
TOTAL	20,561✓	22,204✓	8%	100%	100%

% OF FEMALE EMPLOYEES (PERMANENT)

% of women (permanent)	Europe		Brazil		NAFTA		Asia		TOTAL	
	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011
Production staff	2%	2%	4%	5%	2%	1%	13%	16%	3%	4%
Technical and supervisory staff	31%	32%	25%	27%	34%	34%	23%	27%	29%	30%
Executives	19%	19%	21%	22%	17%	18%	18%	16%	19%	20%
TOTAL	10%	11%	9%	9%	11%	11%	17%	19%	10%	11%✓

BREAKDOWN OF NEW EMPLOYEES AND TRANSFERS BY PROFESSIONAL CATEGORY AND BY COUNTRY IN 2011

	Production staff		Technical and supervisory staff		Executives		TOTAL	
	In numbers	In %	In numbers	In %	In numbers	In %	In numbers	In %
Europe	467	51	223	25	214	24	904	28%
Brazil	1,049	79	143	11	134	10	1,326	41%
NAFTA	451	63	110	15	150	21	711	22%
Asia	130	52	73	29	49	19	252	6.6%
Others	11	NS	10	NS	6	NS	27	NS
TOTAL	2,108	65	559	17	553	17	3,220✓	100%

% OF WOMEN RECRUITED IN 2011

	As % of total number of new employees (excluding transfers)	Breakdown of new female employees and transfers by professional category			
		Production staff	Technical and supervisory staff	Executives	TOTAL
Europe	19%	2%	33%	23%	15%
Brazil	13%	8%	41%	22%	13%
NAFTA	11%	4%	25%	19%	10%
Asia	34%	28%	36%	14%	28%
TOTAL	15%	7%	33%	20%	14%✓

PERMANENT STAFF DEPARTURES (EXCLUDING TRANSFERS)

	Brazil	China	Europe	USA	TOTAL
2009	11%	10%	4%	24%	9%
2010	6%	11%	6%	18%	7%
2011	9%	10%	6%	15%	9%

REASONS FOR TERMINATING EMPLOYMENT CONTRACT IN 2011

	Brazil	USA	Europe	China	TOTAL
Retirement	12%	3%	28%	4%	14%
Resignation	16%	25%	25%	76%	24%
Redundancy	70%	39%	28%	19%	47%✓
Other reasons	1%	33%	19%	2%	14%

AVERAGE SALARIES INCLUDING PROFIT-SHARING AND SOCIAL SECURITY CHARGES

	% of total payroll costs	% of average workforce	Average 2010 salaries including profit-sharing (in euros)	Average 2011 salaries including profit-sharing (in euros)	% of 2010 social security charges	% of 2011 social security charges
Germany	24%	19%	61,510	63,060	28%	20%
Brazil	24%	35%	34,070	35,040	66%	67%
Canada	-	-	71,850	72,210	19%	16%
China	1%	2%	12,740	13,360	16%	20%
France	32%	24%	62,340	67,290	49%	53%
Mexico	1%	1%	25,120	29,990	16%	15%
United Kingdom	3%	2%	53,780	59,760	21%	18%
United States	14%	10%	80,650	74,710	30%	26%

WORKING TIME ORGANIZATION

	Number of hours worked in 2010	Number of hours worked in 2011	Of which average number of hours of overtime worked during the year	
			2010	2011
China	2,098	2,165	278	268
Mexico	2,336	2,527	88	124
Brazil	1,974	2,020	99	102
United States	2,225	2,098	328	292
United Kingdom	1,966	2,197	205	258
Germany	1,493	1,540	108	143
France	1,526	1,571	18	28

% OF EMPLOYEES RECEIVING AT LEAST ONE DAY’S TRAINING PER YEAR

(cumulative)	Europe	Brazil	United States	Asia	TOTAL
Workers	32%	71%	37%	31%	47%
Administrative, technical, and supervisory staff	16%	10%	14%	26%	14%
Managerial staff	10%	12%	15%	7%	11%
TOTAL EMPLOYEES TRAINED	58%	94%	66%	64%	72%

TYPE OF TRAINING PROVIDED

(cumulative)	Europe	Brazil	United States	Asia	TOTAL
Average number of training hours per employee (on temporary or permanent contract)	29 hrs	36 hrs	30 hrs	21 hrs	31 hrs
% of technical and professional training	30%	24%	39%	36%	28%
% of training on Health, Safety and Environment	21%	20%	26%	19%	22%
% of other training (management, individual efficiency, IT, foreign languages)	49%	56%	35%	45%	50%

Statutory Auditors' report
providing limited assurance on a selection of sustainability information
and indicators of the Vallourec group for fiscal year 2011

As requested and in our capacity as Statutory Auditors of the Vallourec group, we performed a review in the aim of providing limited assurance on the following elements: the information ("the Information") highlighted in the text and identified by the symbol on pages 50 and 51 of the Sustainable Development Report for fiscal year 2011; the indicators<sup>(1)</sup> ("the Indicators") identified by the symbol in the tables presented on pages 52 to 55 of the Sustainable Development Report for fiscal year 2011.

This is a free translation into English of the original report issued in the French language and is provided solely for the convenience of English-speaking readers.

The conclusions expressed below relate solely to these Information and Indicators and not to the whole 2011 Sustainable Development Report. The Indicators were prepared in accordance with the Health Safety Environment, Social and CO2 inventory reporting procedures ("the Protocols") which are available for consultation at Vallourec's head office. The reporting methodology provided on pages 48 and 49 of the 2011 Sustainable Development Report specifies the data collection or calculation methodologies used to calculate the published performance Indicators. It is our responsibility, based on the work performed, to express a conclusion on the selected Information and Indicators.

The Information and Indicators were prepared under the responsibility of the Sustainable Development Department and the Human Resources Department of the Vallourec group.

Nature and scope of the review

We conducted our review in accordance with the ISAE 3000 standard, in compliance with applicable professional guidelines in France.

We planned and performed the assurance engagement described below to provide limited assurance that the selected Information and Indicators are free of material misstatement. A higher level of assurance would have required a more extensive review.

On the selected Information

For the selected Information, we have:

- reviewed the content of the assertions included in the Sustainable Development Report for fiscal year 2011 for a selection of themes<sup>(2)</sup> identified by the Group;
- interviewed the people in charge of these themes for the Vallourec group;
- verified on a sample basis, the supporting documentation, such as minutes of the Sustainable Development Committee, internal or external presentations, study or survey results enabling to support the assertions previously identified.

On the selected Indicators

For the selected Indicators, we have:

- assessed the Protocols with respect to their relevance, reliability, neutrality, understandability and completeness;
- interviewed the people in charge of the enforcement of the Protocols at the Holding company and at the ten selected sites<sup>(3)</sup>;

- carried out detailed work at the ten selected sites covering 12 to 58% of the Group's consolidated Indicators. The choice of this sample was carried out according to their contribution to the consolidated data, to their activities, to their locations and to the results of our work in previous years. For those sites, we ensured that the Protocols had been understood and implemented. We verified calculations on a sample basis, performed consistency controls and reconciled the Indicators with the supporting documentation;
- tested calculations on a sample basis and verified the Indicators' consolidation at Group level.

The environment and sustainability specialists of our organization assisted us in the completion of our work.

Comments

We would like to make the following comments regarding the procedures related to the reporting Protocols for sustainability Indicators:

- The reporting Protocol for social Indicators has been completed since last year, notably with the translation in French of the reporting procedure for contributors, and the writing of a procedure for the persons in charge of social reporting that clarifies the collection rules related to social Indicators.
- The indicators related to raw material consumption and remuneration have been added to the sustainability reporting in 2011. The reporting Protocols could better define these indicators.
- The internal control environment has been improved regarding the Group Indicators' consolidation, but should be further strengthened with a better enforcement of control procedures at site level.

Conclusion

Based on our review, we did not identify any material misstatements which could call into question:

- the fact that the Information highlighted and identified by the symbol is sincere in all material respects;
- the fact that the selected Indicators mentioned in pages 52 to 55 of the 2011 Sustainable Development Report and identified by the symbol, have, in all material respects, been prepared in accordance with the above-mentioned Protocols.

The Statutory Auditors

Paris-La Défense, 4 May 2012		Neuilly-sur-Seine, 4 May 2012
KPMG Audit		Deloitte & Associés
A department of KPMG S.A.		
Jean-Paul Vellutini	Philippe Grandclerc	Jean-Marc Lumet
Partner	Partner	Partner

(1) Environmental performance indicators: Electricity consumption; Natural gas consumption; CO2 emissions (scopes 1 and 2)\*; Municipal water consumption; Surface/groundwater consumption; Discharged water; Suspended solids; Chemical oxygen demand; Total hydrocarbons; Total metals in water; Hazardous waste quantities; Non hazardous waste quantities; Percentage of recovered waste (including recycled waste); Volume of ore/coal/metal scrap. Social performance indicators: Headcount as at 31/12; Number of employees who received training; Total number of training hours; Percentage of managers who received a performance interview; Turnover; Distribution of employees by gender; age and geographical area; Remuneration; Distribution of the recruitment by gender; Dismissals. Safety performance indicators: Accident frequency rate; Severity rate. \*Scope 1: emissions associated with natural gas combustion, internal transport, charcoal and steel production processes; Scope 2: emissions associated with electricity consumption. (2) Recruitments and redundancies; Summary of collective agreements; Policies implemented regarding training; Measures implemented to promote gender equality; Measures implemented to promote employment and integration of disabled people; Promotion and compliance with ILO fundamental conventions; Organization of the company to integrate environmental issues; Assessment and certification processes regarding environmental issues; Energy consumption; Measures implemented to improve energy efficiency and renewable energy use; Conditions of the dialogue with the persons or organizations interested in the company's activity; Actions of partnership and sponsorship; Importance of subcontracting and recognition, in the relationship with subcontractors and suppliers, of their social and environmental responsibility; Actions implemented to prevent corruption. (3) Valinox Montbard, VAM Drilling Cosne, VAM Drilling Villechaud, SERIMAX France, V & M France Saint-Saulve – Tube and V & M France Saint-Saulve – Steel in France, VAM Changzhou in China, PTCT Batam in Indonesia, V & M Mineração and V & M do Brasil – Barreiro in Brazil.

SUSTAINABLE DEVELOPMENT CHARTER

Vallourec Group is a world leader in premium tubular solutions primarily serving the energy markets, as well as other industrial applications. Therefore its mission is to build long term relations with its customers and design reliable solutions in order to be worthy of the trust of its customers and of all its partners.

Vallourec will therefore align with its customers expectations and will participate in taking up the challenge of managing and exploiting the Earth's resources as best possible, while at the same time reducing the environmental footprint of industrial activity. The Group will also foster a fair relation with its partners and create internal working conditions based on the fundamental values and principles which have been compiled in the "Vallourec Way" as the Group's Code of Ethics.

In order to address these stakes, Vallourec commits to act as a responsible company to achieve the following targets:

Ensure the sustainability of our business with competitive and innovative products

- contribute to the safety and performance of our customers' business operations;
- work with our customers to meet their expectations and facilitate their actions regarding sustainable development;
- innovate and invest in Research & Development to deliver efficient, reliable, competitive and environmentally friendly products;
- achieve operational excellence;
- conquer new markets.

Maintain sustainable relations with our stakeholders

- ensure the safety and protect the health of our employees; provide each of them with good working conditions;
- train and motivate our employees by developing skills, recognizing expertise, promoting talents and developing careers;
- provide employees with satisfactory and fair compensation taking into account their contribution to the Company's performance;
- meet our shareholders' expectations over time;
- understand the expectations of local communities and stakeholders and take into account their interests in our actions toward them;
- establish a network of reliable and responsible suppliers;
- communicate about our activities to all stakeholders.

Protect our environment and use our resources judiciously

- respect our environment and protect biodiversity by preventing all pollution, reducing water consumption, recovering waste and reducing disturbances;
- limit the use of natural resources and implement clean and safe technologies;
- improve the energy efficiency of our equipment and reduce the carbon emissions of our production processes.

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