Health, Safety and Environment Report 2012

Tenaris

QHSE Policy

Tenaris aims to achieve the highest standards of Quality, Health, Safety and Environment, incorporating the principles of sustainable development throughout its operations.

Nothing is more important than the health and safety of everyone who works for us and uses our products

All injuries and work-related illness can and must be prevented
Management is responsible and accountable for health and safety performance
Employee engagement and training is essential
Working safely is a condition of employment
Excellence in health and safety supports excellent business results
Health and safety must be integrated in all business management processes

Quality is our main competitive advantage

The requirements and expectations of our customers must be satisfied
Quality management is integrated in all business processes
Management is responsible and accountable for quality performance
Quality performance must be assured throughout the supply chain system
Excellence in quality management is necessary for successful business results

We are committed to developing a long-term sustainable business

Minimizing the environmental impact of our operations
Making the most efficient use of natural resources and energy
Integrating environmental management in all business processes
Holding employees committed and responsible for environmental performance
Establishing an open and transparent dialogue with related stakeholders

Tenaris identifies the health and safety of its personnel, the satisfaction of its customers, the protection of the environment and the development of the communities with which it interacts as an absolute and integrated priority; the entire organization is oriented toward achieving these goals openly and transparently.

Tenaris strengthens its management through constant training and updating of professional and management skills, paying attention to the evaluation and motivation of its employees, adherence to the ethical principles established in its Code of Conduct and the maintenance of an adequate balance between their quality of life and its business needs.

Tenaris recognizes the importance of implementing this policy through its Quality, Health, Safety and Environment management systems, covering the entire supply chain from suppliers to customers and the proper and efficient use of its products in accordance with their agreed specifications. Tenaris commits to comply with applicable legal requirements and all other requirements relating to quality, health, safety and environment matters to which it subscribes.

Tenaris communicates this policy throughout its organization, engages and trains its employees in the appropriate use of its Quality, Health, Safety and Environment management systems and involves them in the regular setting, measuring and revision of objectives.

Tenaris undertakes to keep this policy updated, to implement and maintain its management system, and continuously improve its Quality, Health, Safety and Environment performance.

October 2008

Paolo Rocca
Chief Executive Officer

Index


Calarasi
Zalau
Aberdeen
Nisku
Prudential
Sabbio
Costa Volpino
Arcore
AlgomaTubes
Piombino
Dalmine
Hickman
Bakersfield
Louisville
Counce
Conroe
Cedar Springs
Coiled Tubes
(Donwhole and Subsea centers)
Westwego
McCarty
Texas Arai
Monterrey
Tamsa
TuboCaribe
Onne
Warri
Colmena
Confab
Siat VC
Villa Mercedes
Siderca
Siat VA


Campina
Damman
NKKTubes
Qingdao
Batam
SPIJ
Steel Making
Seamless Pipe Manufacturing Mill
Welded Pipe Manufacturing Mill
Threading Facilities & Service Yards
Others (*)
(*) Others Include: Sucker Rods, Couplings, Gas Cylinders, Fittings, Industrial Equipments, Coiled Tubes and Conduit Piping.

Chairman's Letter

Safety and environmental performance is an important indicator of industrial efficiency and an essential basis for sustainable development. We operate in an industry where our customers demand from us the highest standards in our safety and environmental performance and, in the same way, we demand this of our suppliers.

This report, which is published annually, sets out, in a transparent manner, the results of our safety and environmental performance over the past five years and the principal actions we are taking to improve this performance in the coming years.

In 2012, we increased our production of steel pipe products by 6% compared to 2011. In particular, we increased our output of specialized, high-end and heat treated products, which require more processing and handling than standard products. On the other hand, our production of steel bars was affected by delays and operational issues during a revamp of our Tamsa steel shop and decreased by 8% compared to 2011.

Our safety indicators improved across almost all of our facilities. Our injury frequency rate in 2012 declined 20% compared to 2011 and is 40% lower than five years ago. The Safe Hour program we launched at the end of 2011 is proving to be a valuable tool for strengthening dialogue and understanding working conditions within the mill, and also for identifying and correcting unsafe situations.

We will maintain our resolute focus on improving our safety performance at all levels. Safety is an increasingly important element of our competitive differentiation in the eyes of our customers and the communities where we operate.

To reduce our energy consumption and environmental footprint, we are investing in a large number of projects at our industrial facilities throughout the world. During the year, our new rolling mill in Mexico was awarded the LEED (Leadership in Energy and Environmental Design) certification from the US Green Building Council, becoming the first industrial facility of its type to achieve this recognition. We will build our new US seamless pipe mill in Bay City, Texas, following the same design and construction principles in order to have the minimal impact possible on the environment.

Our environmental indicators show the progress we are making in reducing our energy consumption and CO_2 emissions per unit of production notwithstanding significant changes in our product mix towards higher value products. Our other environmental indicators also indicate progress in recycling waste and byproducts and in operating with high levels of material efficiency.

The quality and reliability of our products and the efficiency with which we can integrate them with the operations of our customers are at the core of our customer value proposition. We dedicate substantial resources to the development and testing of products which help to reduce the risks of operating in extreme conditions. Our premium connection and offshore line pipe products are widely recognized for their performance and reliability in the most complex operating environments and our Dopeless® technology is contributing to cleaner and safer drilling operations worldwide.

The health and safety of our employees and the protection of the environment are integrated priorities at Tenaris, along with the satisfaction of our customers and the development of the communities where we have our operations. I would like to thank our employees and contractors whose commitment and hard work have contributed to these results.

Sincerely,

Paolo Rocca

Tenaris is committed to the continuous improvement of its Health, Safety and Environmental performance. To achieve this goal, we rely on the implementation and improvement of an integrated HSE Management System.

Company presentation

Tenaris is a leading supplier of tubes and related services for the world's energy industry and other industrial applications. Our mission is to deliver value to our customers through product development, manufacturing excellence, and supply chain management. We seek to minimize risk for our customers and help them reduce costs, increase flexibility and improve time-to-market. Tenaris employees around the world are committed to continuous improvement by sharing knowledge across a single global organization.

We operate an integrated industrial system with manufacturing and service facilities around the world. Our entire industrial system operates under a single quality management system and a single Health, Safety and Environment (HSE) management system. Our Quality, Health, Safety and Environment Policy outlines our commitment to achieving the highest standards, and to continuously improving our performance.

1 DRI (Direct Reduction) mill
4 EAF (Electric Arc Furnace) steel shops
14 Seamless pipe rolling mills
30 Welded pipe mills
58 Heat treatment lines (25 in hot rolling mills)
99 Premium threading lines.

Our system comprises numerous sites around the world as indicated by the Tenaris industrial map. All locations named on the map are manufacturing facilities; unnamed sites are service yards.

Production

The following table shows our production of steel bars, seamless pipes and welded pipes for the past five years.

	2008	2009	2010	2011	2012
Steel	3,085	1,744	2,800	2963	2760
Seamless pipes	3,005	1,770	2,399	2683	2806
Welded pipes	1,547	540	1,002	1096	1188

Unit: thousand metric tons

Our products

Our main finished products are seamless and welded steel casing and tubing, line pipe and various other mechanical and structural steel pipes for different uses.

Casing and tubing are also known as Oil Country Tubular Goods or OCTG. We also produce welded steel pipes for oil and gas pipelines. We manufacture our steel pipe products in a wide range of specifications, which vary in diameter, length, thickness, finishing, steel grades, threading and coupling.

Casing: Steel casing is used to sustain the walls of oil and gas wells during and after drilling.

Tubing: Steel tubing is used to conduct crude oil and natural gas to the surface after drilling has been completed.

Line pipe: Steel line pipe is used to transport crude oil and natural gas from wells to refineries, storage tanks and loading and distribution centers.

Mechanical and structural pipes: Mechanical and structural pipes are used by general industry for various applications, with focus on segments such as automotive components, hydraulic cylinders, gas cylinders and architectural structures.

Cold-drawn pipe: The cold-drawing process permits the production of pipes with restricted tolerances as required for use in boilers, superheaters, condensers, heat exchangers, automobile production and several other industrial applications.

Premium joints and couplings: Premium joints and couplings are specially designed connections used to join lengths of steel casing and tubing for use in high temperature or high pressure environments. A significant portion of our steel casing and tubing products are supplied with premium joints and couplings.

Coiled tubing: Coiled tubing is used for oil and gas drilling and well work-overs and for subsea pipelines.

Other Products: We also manufacture sucker rods used in oil extraction activities, industrial equipment of various specifications and applications, including liquid and gas storage equipment, and welded steel pipes for electric conduits used in the construction industry.

Our strategy on Health, Safety and Environment

Tenaris is committed to the continuous improvement of its Health, Safety and Environmental performance. To achieve this goal, we rely on the implementation and improvement of an integrated Health, Safety and Environment (HSE) Management System.

Based on the principles of sustainable development, our management system follows the guidelines of international standards such as ISO 14000 and OHSAS 18000.

Our System is based on a set of corporate procedures providing the rules and guidelines for its implementation, maintenance and improvement in every one of our sites.

The program to certify all of our major facilities with ISO 14001 and OHSAS 18001 continues as planned. Our Italian sites certified in 2011 their Health & Safety management system, followed in 2012 by our Romanian sites and our main mill in Indonesia. Our Corporate HSE management System was also audited and we continue working for the expected certification, under both standards, of our most relevant sites during 2013.

We have defined a set of Best Available Technologies (BATs) to be applied for major new investments as a means of ensuring that, as we transform our industrial system, we will also improve the environmental performance of our mills.

On the path of achieving our goal of zero accidents in our entire operations, the safety plan is showing positive results. This year, we have made important progress in the implementation of a number of safety initiatives to obtain a noticeable improvement in our performance, of which the Safe Hour Program is the most relevant one. Most of these initiatives are intended to increase awareness, a proactive and positive attitude and a behavioral change to achieve a safer work environment.

Despite global and/or regional economic crises, investments in Safety, Environment, Energy, and Occupational Health were sustained in order to reaffirm the commitments expressed in our policies. Many of our R&D initiatives are also focused on finding solutions to environmental issues at our mills, mostly related to source reduction in steel production, combustion processes, waste and water management.

In terms of the international steel industry agenda, we continue our engagement in multiple institutional activities at a local, regional and global level.

Within the World Steel Association (worldsteel), Tenaris is a signatory of the Sustainability Policy and worldsteel's Sustainability Charter.

We also continue our active participation in the Climate Action Program. The company has been recognized for its five-year participation within worldsteel's Climate Action Program for complying with the CO_2 emission reporting. The Data Collection program is a key part of the steel's industry global sectorial approach to climate change.

Tenaris, together with its sister company, Ternium, and the Argentine Steel Association, hosted worldsteel's Environmental Policy Committee (EPCO) meeting in Buenos Aires in September 2012. Around 60 steel industry representatives and local authorities shared views on common environmental issues of interest.

Tenaris is also a member of worldsteel's Health & Safety Committee and has an active participation in different specific task forces.

The Tenaris Code of Conduct, which is regularly updated, provides means and instruments that grant the transparency of how the company is managed. It defines the guidelines and standards of integrity and transparency for all employees, giving them the framework to build the reputation of our business daily. We consider it a source of value for our customers and the communities where we operate. Its principles highlight the key elements of community relations, the responsible use of physical assets and compliance with environmental legislation.

Greenfield pipe mill in Texas, US

Tenaris has announced the project to build a new greenfield seamless pipe mill in Texas, US.

The mill is being conceived to minimize the environmental footprint by using best available technologies.

Nitrogen oxides emissions will be minimized by using selective catalyst reduction systems, while at the same time applying the most advanced technology on burners in order to maximize energy efficiency; low volatile organic compounds water based varnish to be used for coating operations with add-on controls to reduce remaining organic compounds emissions; a closed loop water system designed to have the lowest impact on local water resources, are just some examples of a full environmentally-oriented design of a plant.

This facility will be built to achieve certification under LEED (Leadership in Energy and Environmental Design) construction specifications.


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Safety.

We have seen a considerable improvement in our indicators this year, a sign that activities implemented such as the Safe Hour program are having a positive impact on our safety performance.

Safety

Safety, our first priority

This year we have worked on strengthening a number of initiatives launched in recent years, and we are proud to see improvements in our performance indicators.

In 2012, we completed 80% of risk analysis from all of our sites, understanding that a complete knowledge of activity risks is the most important way to keep our people safe. We continued to raise awareness through all the company of the 12 safety basic rules as defined standards for our activities. A strong communication campaign was implemented using different media including posters, dedicated magazines and cartoons. Tailor-made videos were used in a monthly communications package to reinforce the safety messages. In order to share our safety culture, we have established standardized meetings with our contractors, which have been implemented in most of the regions where we operate. A video "Safety at the office" was developed highlighting the main risks an employee faces when working at an office and showing the best practices to implement for each case. Finally, we have fully deployed one of the most relevant initiatives in terms of our Health and Safety strategy: the Safe Hour program.

Our internal IT tool called TSE (Tenaris Safety and Environment) continues to be improved: this year we have implemented the recording of Safe Hour and a module to grant access to all factory employees for entering observations and for accessing the risk analysis related to their activities.

We held our first Safety in the Steel Shop Convention at our Italian mill with the aim of benchmarking risk analysis performed at each mill according to particular technology settings and to share best practices. These meetings will continue during 2013 for the rest of our main industrial activities.

We have seen a considerable improvement in our indicators this year, a sign that all the activities implemented are having a sound and positive impact on our safety performance. Our Injury Frequency Rate decreased in 20% and the Lost Time Injury Frequency Rate showed a 6% reduction, both compared to 2011 results.

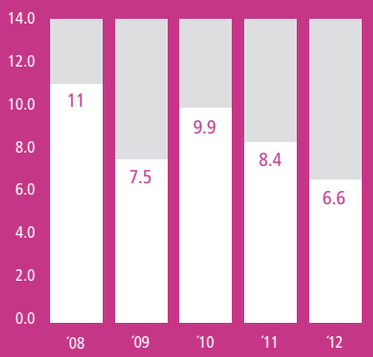
Nevertheless, we regret the death of one of our employees this year in our mill in Mexico, due to an explosion in the melting furnace after a cooling panel broke down.

We will continue to focus on safety, convinced that the measures we are implementing, added to the increased awareness of our employees, will be reflected in continuing improvements in our indicators and allow us to consolidate a safety first culture in our company.

Indicators

Injury Frequency Rate

IFR



Methodology: Number of accidents with and without lost days (not including First Aid) multiplied by 1,000,000 divided by man hours worked.
Values refer to own personnel plus contractors from 2007 onwards.

Lost Time Injury Frequency rate

LTIFR

Methodology: Number of accidents with lost days multiplied by 1,000,000 divided by man hours worked.
Values refer to own personnel plus contractors from 2007 onwards.

Safe Hour Program: minimizing safety risks through behavioral change

Since its full launch in February 2012, the Safe Hour program has become part of the company's industrial culture. While several of its short-term objectives have been achieved, the true success of the Safe Hour relies on the day-to-day awareness and commitment to Safety.

The program, which has been implemented in all Tenaris facilities, formalizes a routine one-hour walk twice a week through the mills by top and middle management of the operative areas. It has the aim of engaging in dialogue with workers on safety issues and discussing with them any safe or unsafe behavior and conditions that might exist in the workplace.

A "Positive Approach" technique is used based on active listening in order to promote an exchange of ideas that can result in a shared understanding of safety issues and the commitment to correct and improve them.

During 2012 more than 35,000 "Safe Hour" routines have been conducted and through the on-site dialogues almost 7,000 observations were detected, 42% of them related to behavioral issues. More than 4,000 corrective actions were defined, 76% of them already executed, and 2,463 commitments for behavioral changes were recorded.

The health of our employees

The main objective of our occupational health and hygiene program is to maintain and promote the physical and mental wellbeing of our employees; we believe that providing a healthy working environment and encouraging our employees to keep themselves healthy throughout their careers is not only a duty but also a value for the company.

During 2012, we started to define the necessary basis and tools to implement a new Health Management System, which is more focused on prevention activities. Confab, our mill in Brazil, hosted our first Health and Hygiene Convention in July 2012 to define principles and design the pillars of the system with the help of physicians and hygienists.

Our process to identify, evaluate and control health risks was redefined, and a new procedure for reporting and investigating health anomalies was designed and integrated with those for Safety and Environment. A sanitary protocol was also revised to determine the minimum requirements for check-ups to guarantee the same level of clinical tests for all Job Positions, in compliance with international standards.

We have also defined common standards for noise and vibration monitoring and the criteria for workers exposure evaluation. An on-line course is now available to increase employee awareness in detection of any material that could contain asbestos.

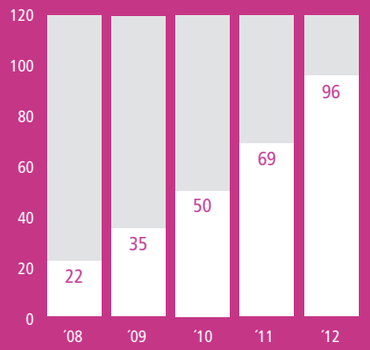
An “Ergonomics” project was launched since this issue is relevant for minimizing worker impairment and disability. The objective is to qualify a team of experts for assessing and designing comfortable and healthy work stations according to international principles and rules. These activities will allow us to reduce and control the risks related to biomechanical diseases.

We have performed regional surveys to help the definition of standardized best practices in terms of industrial hygiene. Guidelines are being developed to define common ways for managing similar issues we face in most of our sites and for the design of new investment projects.

Indicators

Observations evolution

10^3 Observations



Source: TSE reported HSE observations.
TSE deployment at our facilities:
2003 Dalmine | 2005 Siat | 2006 Confab
2007 AlgomaTubes, Siderca, Tamsa, Silcotub |
2008 TuboCaribe | 2009 all USA sites, Prudential, Metalmecánica | 2010 Some regional yards | 2011 Threading sites in Saudi Arabia and Scotland; Indonesia sites.

Inspections evolution

10^3 Inspections

Source: TSE HSE inspections.
Safe Hour is not included.

Tenaris Basic Safety Rules

Tenaris has launched these 12 Basic Safety Rules "to keep you on the safe side." They are universal rules for our activities, defined on the basis of our own experience in the field and the best practices identified in the industry.

1 Make sure you are in an appropriate mental and physical condition when at work.

2 Make sure you are adequately trained before performing any activity.

3 Think about possible risks before starting any activity. Stop the work and seek your supervisor's advice if you notice an unforeseen or unacceptable risk.

4 Follow the procedures and never take short-cuts.

5 Wear the required PPE and never modify them.

6 Use a fall protection system when working at height.

7 Use correctly the appropriate tools and safety devices. Never modify or remove them.

8 Use lock-outs and de-energize the machinery before working on equipment or entering restricted areas.

9 Operate equipment and vehicles only if you hold the proper license and follow the traffic rules.

10 Maintain a safe distance from moving vehicles.

11 Never stand under or near a suspended load. When operating cranes, keep your eye on the load.

12 Report all accidents, incidents, near-misses and unsafe behavior/conditions.


Paris

Environment.

The quality and reliability of our products are at the core of our customer value proposition. Our dope-free Dopeless® technology connections are making a difference to the industry we serve.

Environment

Our objective is to develop a sustainable business over the long term, as is clearly stated in our QHSE Policy, through the minimization of the environmental impact of our operations and products and by making the most efficient use of natural resources and energy.

To reduce our energy consumption and environmental footprint, we are investing in a large number of projects at our industrial facilities throughout the world. Progress is being made, but changes in our production mix towards complex and proprietary products which require more processing than standard products affects some of our indicators.

We are also investing in research and development projects oriented to improve our environmental performance; some of these are related to switching to materials with lower environmental and CO_2 footprint, others to finding new and innovative ways to handle wastes looking for recycling alternatives, to the study of our combustion process for energy efficiency enhancement and to finding specific solutions for waste water treatment and consumption.

This year, our new rolling mill in Mexico was awarded the LEED (Leadership in Energy and Environmental Design) certification from the US Green Building Council. The new rolling mill to be built in the United States will seek to obtain the same certification by following the required principles for design and construction.

Climate change

Climate change and steel industry-related emissions are one of the environmental challenges we face. Many of our strategic projects are devoted to reducing our emissions: our energy actions, efficiency improvements in the use of resources, raw materials and the reduction of waste generation are tackled in different but integrated ways.

We continue participating in worldsteel's Climate Action Program, and have been recognized for our involvement in the project, submittal of information and verification.

Regarding the EU - ETS Scheme, during phase I (2005 – 2007) and II (2008 – 2012) our European sites received CO_2 quotas without the need to buy them in the financial market. We continue with the implementation of plans aiming to reduce our CO_2 emissions as well as looking for new reduction opportunities.

During 2012, CO_2 emissions from our steel making sites based on worldsteel methodology have shown a slight increase, mostly due to the influence of decreased steel production with a higher pipe production when compared to previous years. Also Tamsa started to fully operate a new rolling mill and steel production was affected by a revamping of the steel mill during this period.

The overall account of Tenaris CO_2 emissions, values reflect a decrease compared to 2011 values, maintaining the reduction trend of recent years.

Energy Management

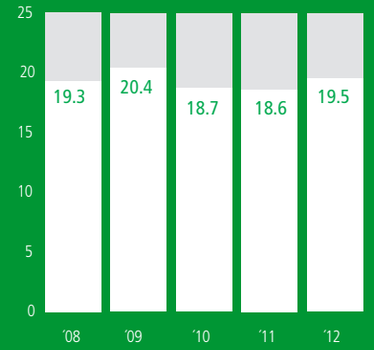
Our Energy Saving Project continues to advance with its implementation. Projects focus on process and equipment changes, training and communications programs and standardization of practices.

To reach the objectives set, investments totalizing USD 18 million have been recently implemented or are in execution. This is equivalent in terms of resource use savings to an estimation of 70,000 MWh/year on electricity consumption and 7 million Nm^3 of natural gas, and resulting in more than 50,000 tons of CO_2 emissions saved per year.

Indicators

Energy Intensity Steel Mills

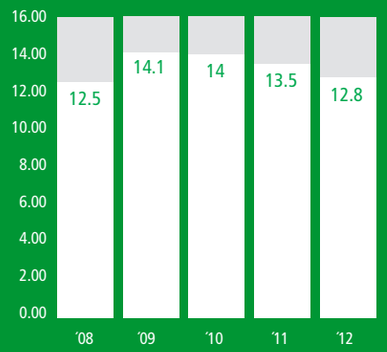
GJ/ton lq steel



Methodology: measured in GJ/ ton steel worldsteel methodology.
Boundaries: steel making mills, including all other processes on site.
Facilities included: Siderca, Silcotub Steel Shop, Tamsa, Dalmine.

Energy Intensity Tenaris sites

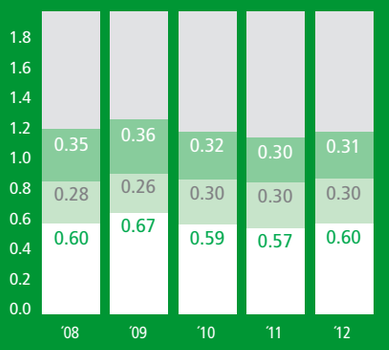
GJ/ton prod



Methodology: measured in GJ/ ton product based on electricity and gas consumption at each site.
Boundaries: Tenaris steel and pipe production sites.
Facilities included: Siderca, Silcotub Steel Shop, Tamsa, Dalmine. Siat VA; Siat VC; Confab tubes, Hickman, Conroe, Republic Conduit, Algoma, Prudential, Tubocaribe, Nkk Tubes, Arcore, Costa Volpino, Sabbio, Piombino, Silcotub

CO_2 Emission steel mills

ton CO_2/ton lq steel



Methodology: measured in ton CO_2/ ton steel worldsteel methodology.
Direct emissions: CO_2 emissions related to steel production and other processes included at the site.
Purchased electricity: upstream CO_2 emissions related to electricity production, using a world average emission factor of CO_2/MWh generated.
Indirect emissions: other upstream CO_2 emissions related to production of raw materials and fuels.
Boundaries: steel mill and other processes on site, including power generation at steel making sites only.
Facilities included: Siderca, Silcotub Steel Shop, Tamsa, Dalmine.

Among our main investments, an Expert Furnace System Optimization Process for one of the steel making furnaces was completed in Siderca, along with the installation of auto-recuperative burners in one of its heat treatment facilities. Improvements on compressors were conducted in Silcotub and AlgomaTubes. A revamping of Silcotub's rotary furnace recuperator was also completed.

Best Available Practices for combustion furnaces, compressed air management, and shutdown procedures were also issued in 2012 aiming to standardize operational control on routine activities as well as a second update of our internal Best Available Energy Technologies.

Energy Intensity rates from various sites such as Algoma, Dalmine, and Silcotub have shown a decrease in their index of more than 10%. Our sites' performance is affected by a changing production mix, which influences their specific rates.

The energy project was defined using 2008-2009 as the baseline. Overall, Tenaris energy intensity rate is showing a decreasing trend, which is also aligned with a similar variation in CO_2 emissions. These results were obtained despite the change in our production mix, which saw an increase in the percentage of heat-treated pipes both on seamless and welded products. In 2012, 66% of our seamless pipes and 40% of our welded pipes were heat treated compared to 57% and 31% respectively five years previously. Manufacturing products with more value added means higher energy consumptions, both in terms of electricity and gas.

Dalmine was the first Tenaris mill to certify its Energy Management System under ISO 50001. Our pipe mill in Romania and one of our Conduit mills in US are following this path, working to implement the management system in the same way.

Tenaris is also an active participant in worldsteel's Expert Group on Energy Use in the Steel Industry. This group is focused on benchmarking energy performances and reviewing energy best available technologies and practices.

Air emissions

Reducing air emissions is a top priority for our Environmental Management System, as its potential impacts are a main environmental concern for our communities. Projects for reducing and controlling air emissions continue to be deployed.

From all our activities, steelmaking is one of the most relevant processes in terms of air emissions, especially concerning particulate material. By February 2012, a new bag house for secondary emission control at the Siderca steel shop became fully operational, completing a four-year plan that involved an investment of more than USD 33 million.

In Tamsa, Mexico, we expanded the capacity of the steel shop. The project also included the revamping of the off-gas control system, which was completed by the end of 2012.

In Silcotub, the first step of the project for improving the emissions capture and treatment system in the steel shop was completed. The second step is now being defined as the next investment in the mill in this area.

A project to standardize our pipe coating process is on-going, defining equipment and products to use. Its environmental objective is to minimize organic compounds related to these activities and reducing waste generation.

Recycling steel

Electric arc furnaces and gas-based direct reduction processes, which are the process routes selected by Tenaris, are considered efficient ways of producing steel with lower levels of CO_2 emissions.

Scrap use rate represents around 70% of metallic charge in our furnaces in 2012; similar values as those reached on previous years.

As scrap recycling is one of our ways to minimize the environmental footprint of our operations, we support policies that promote increasing scrap recycling rates where we operate.

Waste, by-product and materials management

The steel industry produces large amounts of waste and by-products. Our goal is to recycle internally or externally as much of our by-products and waste as possible, and to seek new ways of reducing the generation and disposal of waste. Recycling helps to reduce land disposal and CO_2 emissions, bringing about a more sustainable use of natural resources.

We use the material efficiency indicator calculated using worldsteel methodology, which is applied to steelmaking sites. When considering these mills we can see that the recycling rate is very close to 100% as by-products in steelmaking processes are predominantly reused or recycled in different processes. Even if maximizing efficiency is a clear objective and we have many projects to continue in this direction, we also recognize that this is highly dependent on local conditions in each region. Our recycling rates in 2012 for all Tenaris sites by-products maintained their optimized level of over 90%, and waste reuse increased from 50% to 54% in this period.

We continue investing in R&D projects, focusing on finding opportunities to reduce the waste we generate or to implement recycling practices to allow decreasing rates of off-site treatment, particularly landfilling.

Specific consumption of oil and lubricants – widely used in operations and a source of potential environmental risks, if not properly managed – continue the downward trend of recent years.

Water Management

In our steelmaking and seamless tube production facilities, water management is a significant issue in terms of intake and discharge. Water is mainly used for cooling processes in the steelmaking mills and seamless tube steel mills; welded pipe facilities have a much lower consumption of water.

Tenaris sites have different industrial water systems, which result in noticeable differences in the amount of water consumed per ton of product produced, absolute cubic meters consumed and also the source of the water used. The situation of each site depends on the amount and quality of water available and on local regulations.

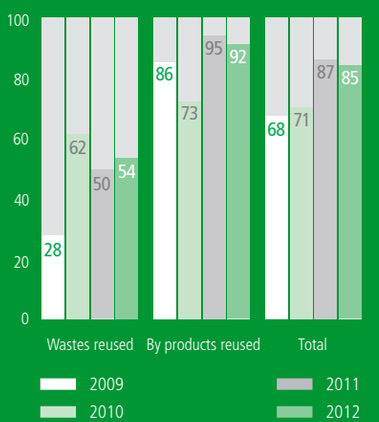
Indicators

Tenaris CO_2 emissions

ton CO_2 / ton product

Methodology: measured in ton CO_2/ ton product.
Direct emissions: CO_2 emissions related to steel production and/or other processes included at the site.
Purchased electricity: upstream CO_2 emissions related to electricity production, using a world average emission factor of CO_2/MWh generated.
Boundaries: All tube and steel producing sites
For sites without steel making processes, gas and electricity consumption contributes to the indicator.
Facilities included: Siderca, Silcotub Steel Shop, Tamsa, Dalmine. Siat VA; Siat VC; Confab tubes, Hickman, Conroe, Republic Conduit, Algoma, Prudential, Tubocaribe, Nkk Tubes, Arcore, Costa Volpino, Sabbio, Piombino, Silcotub

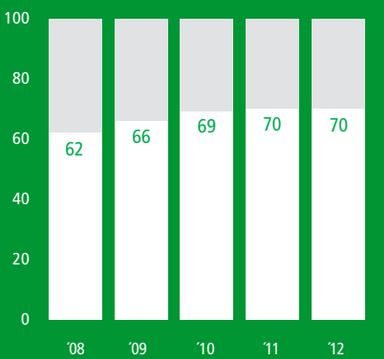
Wastes and By-products reused-recycled



Methodology: Waste: includes all waste produced at the site, including hazardous waste. For reused/recycled, we include any internal or external process for reusing or recycling the material.
By-products: includes scale mill, slag, DRI fines and sludge and electric arc furnace dusts. Internal scrap is not included.
All percentages are calculated comparing tons reused/ recycled to generated ones in the same categories and sites.
Facilities included: Siderca, Silcotub Steel Shop, Tamsa, Dalmine Siat VA, Siat VC, Confab, Hickman, Conroe, Republic Conduit, Mc Carty, Texas Arai, Algoma, Prudential, Tubocaribe, NKKTubes.

Tenaris Recycled Steel Use

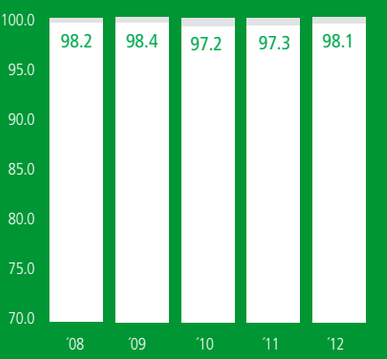
% scrap charged



Methodology: Values are calculated as tons of scrap present in the metallic charge.
Facilities included: Siderca, Silcotub Steel Shop, Tamsa, Dalmine.

Tenaris Material Efficiency

%



Methodology: (liquid steel produced + by-products) / (liquid steel produced + by-products + waste). worldsteel methodology.
Waste: all material sent to landfill and incineration.
By-product: all material sent to reuse or recycling processes.
Boundaries: steel mill and other process on site including power plants.
Facilities included: Siderca, Silcotub Steel Shop, Tamsa, Dalmine.

We understand that water availability is a key issue and another of our challenges for the future. Our main mill in Argentina has, by far, the largest abstraction rate of surface water since it was designed based on abundant local water availability, with an open water system, which is used mainly for cooling purposes in the steel and rolling processes. Water used is discharged after treatment to Parana de las Palmas River in compliance with local requirements. Consumption rate is very low as it is due mainly to evaporation on cooling processes. We are redesigning the water management system at Siderca, which will be implemented over the next years.

In 2012, the average rate of water intake for our main mills – excluding Siderca – is 3.6 m^3 per ton of product produced. This value reaches an average of 16.8 m^3/ ton product if Siderca is included, a value very similar to that of the previous year.

Our products and services: looking downstream with a life-cycle approach

The quality and reliability of our products, and the efficiency with which we can integrate them with the operations of our customers, are at the core of our customer value proposition. We aim to develop products that can make a measurable difference to customer operations through their performance in complex environments.

R&D activities are carried out primarily at our specialized research facilities located at our mill sites in Campana (Argentina), Veracruz (Mexico), Dalmine (Italy), at the product testing facilities of NKKTubes in Japan and at the research facilities of the Centro Sviluppo Materiali S.p.A, or CSM, in Rome.

To expand this international network, we are building a new R&D center at Ilha do Fundao, Rio de Janeiro, Brazil, which we expect to start operations in 2013. We strive to engage some of the world's leading industrial research institutions to address the problems posed by the complexities of oil and gas projects with innovative applications.

Product development and research currently being undertaken are focused on the needs of increasingly challenging energy markets. We continuously study opportunities to optimize our manufacturing processes in order to improve the quality and productivity of our facilities.

Dopeless® technology – Tubular products and environmental life-cycle thinking for a sustainable future

Tenaris pioneered the manufacturing of dope-free connections when it introduced its Dopeless® technology in the North Sea in 2003. Today, Dopeless® technology is field-proven in many different sensitive environmental conditions including offshore, arctic, jungle and desert areas and in operations where operating efficiency is critical.

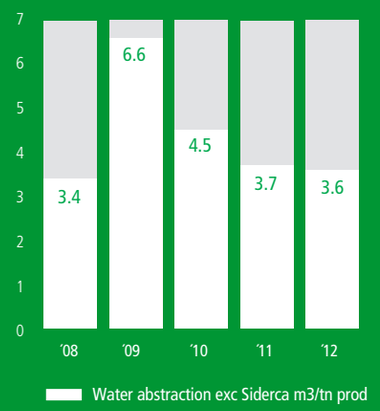
Dopeless® technology is a dry, multifunctional coating, applied to TenarisHydril premium connections in the controlled industrial environment of our mills and providing significant health, safety and environmental benefits, particularly in complex and ecologically sensitive operating environments.

With this solution, connections become rig-ready, avoiding the possibility of operational problems associated with over-running compound, providing ease of handling, preparation and installation to reduce risks and costs. It also guarantees the appropriate amount of lubricant and ensures the consistency of the coating and connection performance, lasting throughout the string's entire lifecycle.

Indicators

Water abstraction

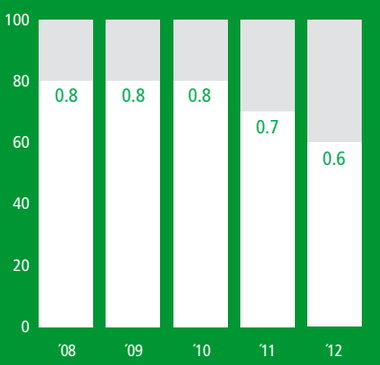
m³/ton prod



Methodology: water abstraction measured in m³ used from any source per ton of product produced.
Mills considered may not be the same in all years. Siderca is not included
Facilities included: Silcotub Steel Shop, Tamsa, Dalmine. Tubocaribe, Siat VA, Siat VC, Confab Tubos, NKK tubes, Algoma, Prudential, Hickman, Conroe, Republic Conduit, Silcotub.

Oil Consumption

lts / ton product



Methodology: Lubricant and Hydraulic oil used in liters per ton of product.
Mills considered may not be the same in all years.
Facilities included: Dalmine, Siderca, Silcotub steel mill, Tamsa Arcore, Sabbio, Costa Volpino, Piombino, Siat VA, Siat VC, Tubocaribe, Silcotub, Confab tubes, Prudential, Algoma, Conroe, Hickman, Republic Conduit

Without thread compounds, the rig site is cleaner and safer while the operation's environmental footprint is significantly reduced, avoiding discharges and minimizing safety risks. Additionally, the plastic thread protectors are already clean, dry and ready to be recycled or reused after pipe installation.

Nearly zero re-makeups and rejects; increased reliability of installation; more than 25% running time gains; and 10% savings on total pipe costs are some of the additional operational advantages that results from using Dopeless® technology.

Tenaris currently participates in the Environmental Friendly Drilling (EFD) program, led by the Houston Advanced Research Centre (HARC), which identifies, develops and tests innovative technologies that reduce the environmental impact of oil and gas activities in sensitive areas which have not yet been opened up for development. Dopeless® technology has been adopted in HARC's portfolio of recommended products within the framework of the EFD initiative. Within the Technical Exchange Session of the aforementioned worldsteel Environmental Policy Committee meeting in Buenos Aires, updates on Tenaris Dopeless® technology were one of the main topics of interest among the audience of industry environmental experts.

Supported by an integrated global network of field services, repair shops and technical support teams, Dopeless® technology is currently the leading dope-free solution for demanding onshore and offshore oil and gas operations. With more than nine years of field experience and over eight million feet of pipes installed around the world with successful performance, Dopeless® technology is making a difference to the industry we serve.

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