



# Sustainability Report 2017



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# Sustainability

Tenaris is a leading global manufacturer and supplier of steel pipe products and related services for the world's energy industry and other industrial applications. Our customers include most of the world's leading oil and gas companies, and we operate an integrated network of steel pipe manufacturing, research, finishing and service facilities with industrial operations in the Americas, Europe, the Middle East, Asia and Africa. We have a direct presence in most major oil and gas markets.

Through an integrated global network of manufacturing, R&D and service facilities, and a team of over 20,000 people worldwide, we work with our customers to meet their needs in a timely manner, observing the highest levels of product performance and reliability.

Our core values of safety, health, environment, quality and transparency guide our daily activity. This report, now in its fourth edition, reflects how those values translate into concrete indicators of our performance. Its preceding publication, the Health Safety and Environment (HSE) report, was first published in 2009 presenting data dating back to 2004.

Tenaris is a long-term project that goes back over six decades. Since we opened our first mill on the banks of the Parana River in Campana, Argentina in the early 1950s, to the start-up of our new state-of-the-art mill in Bay City, Texas in December 2017, our prime objective has been to grow alongside the communities where we work and live, to give our employees opportunities for professional development, to minimize our environmental footprint and to be a reliable partner for our customers.

Tenaris is a signatory of the United Nations Global Compact, a commitment to translate Ten Principles deriving from the Universal Declaration of Human Rights into daily business activity. Tenaris's Human Rights Policy pledges to conduct all company operations in a manner that is consistent with human rights principles. Within the World Steel Association (worldsteel), Tenaris is a signatory of the Sustainability Policy and the Sustainability Charter.

We believe the steel industry can play an important role in addressing the planet's growing concerns about climate change. The industry is joining efforts to report and take action on reducing CO2 emissions, and Tenaris is well positioned as it uses the least CO2 intensive steel production route. In 2017, worldsteel named Tenaris a Sustainability Champion for "leading the way in creating a truly sustainable steel industry and society." Only six companies among the association's 160 members obtained this recognition.

Our Health, Safety and Environment, and our Quality Management systems are designed according to the latest versions of the ISO 14001, ISO 9001 and OHSAS 18001 standards.

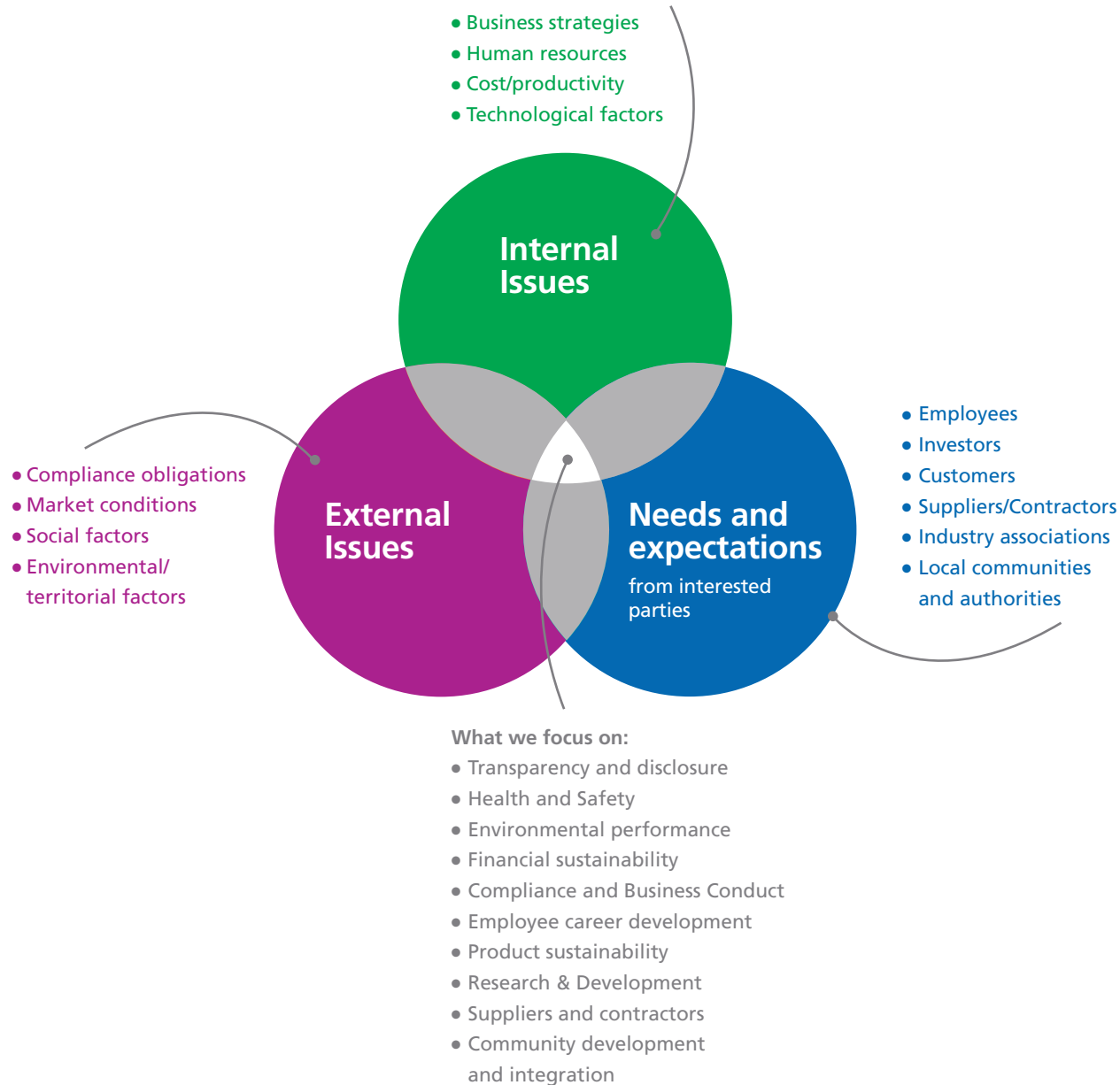
Today 92% of our production sites are working under management systems that are certified according to these standards. We obtained a multi-site certification for the safety, environmental and quality management system, and we are in the process of integrating our HSE and quality management systems to leverage on the possible synergies.

### Our reporting, in context

Tenaris is committed to strengthening a corporate culture of integrity, transparency and rational decision-making. We disclose and communicate all issues that can affect, either positively or negatively, our stakeholders, both internal and external to our organization.

We have developed a methodology based on risk assessment to identify, evaluate and prioritize those challenges that can impact our ability to achieve our objectives in a sustainable manner. The indicators we present in this report, and that we inform consistently every year, show our performance in the areas of Governance, Compliance and Economics; Safety and Health; Environment; Innovation; Human Resources and Community Relations.

The graph on this page shows the rationale that led us to inform on the issues listed in this report.

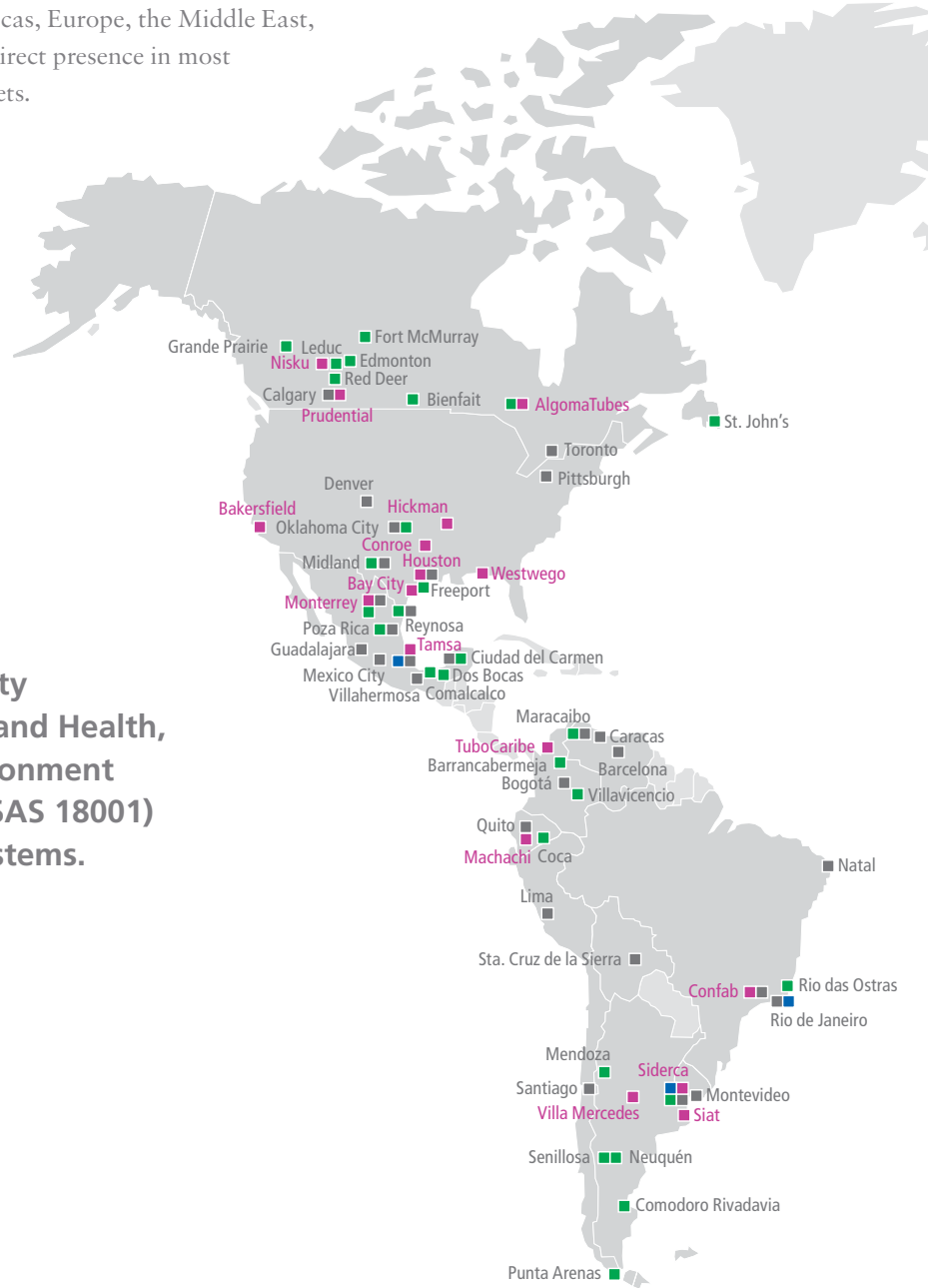


# Tenaris

Tenaris is a leading global manufacturer and supplier of steel pipe products and related services for the world's energy industry and other industrial applications.

Our customers include most of the world's leading oil and gas companies. We operate an integrated network of steel pipe manufacturing, research, finishing and service facilities with industrial operations in the Americas, Europe, the Middle East, Asia and Africa and a direct presence in most major oil and gas markets.

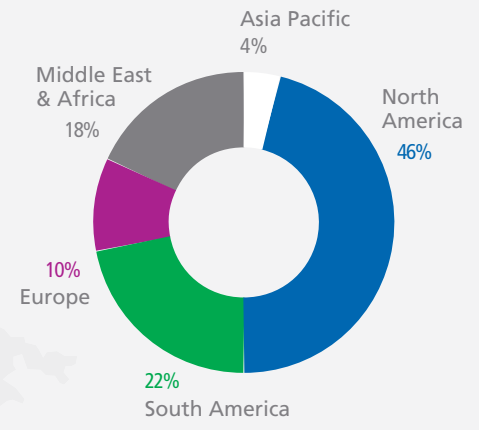
**Integrated Quality (ISO 9001:2008) and Health, Safety and Environment (ISO 14001 - OHSAS 18001) management systems.**





■ Manufacturing Centers      ■ Service Centers  
■ R&D Centers                      ■ Commercial Offices

## Sales by Region



## 30 Countries

Services and distribution network

## 4 Stock exchange listings

New York  
Buenos Aires  
Italy  
Mexico

## Top customers

- Aramco
- Chevron
- ConocoPhillips
- Continental
- Ecopetrol
- Eni
- Equinor
- Noble
- PAE
- Pemex
- Petrobras
- Pioneer
- Shell
- Tecpetrol
- YPF

# Chairman's Letter

For many years, we have integrated sustainability concepts into our management processes, embracing values that will help Tenaris to grow and prosper over the long run. We have also sought to encourage a sectoral approach through worldsteel, the steel industry's global trade association, and have participated actively in leading industry-wide reporting initiatives. We are, therefore, very pleased to be among the six companies nominated by worldsteel as inaugural steel sustainability champions.

For the facilities we have constructed in more recent years, we have prioritized sustainability criteria for safety and reducing environmental impact from the design stage. Our Bay City mill in Texas, exemplifies this with its design criteria for energy and water use and overall emissions. We are proud that Bay City is one of the most environmentally efficient mills of its kind anywhere in the world, and that its safety record during construction was among the best for a plant of this nature.

In Argentina and Mexico, where we have older facilities, we are carrying out a \$50 million investment program aimed at improving air quality in our steel shops through reducing emissions and reducing water intake through better treatment and more reuse. We are also focused on reducing the quantity of waste generated during our manufacturing operations, maximizing the reuse of materials in our processes and in other industries. In 2017, less than 10% of our residues were sent for disposal compared to 15% five years ago.

Our Rig Direct® value proposition also integrates sustainability criteria. We aim to reduce the overall consumption of raw materials and energy through shortening the supply chain from production to the point of use for our products, limiting inventories, material obsolescence and rework and employing rigorous quality and HSE management systems throughout the supply chain.

Constant investment in product and process technology enables us to offer customers the most efficient product solutions for evolving requirements and to improve the efficiency with which we can deliver them. Many of our product lines feature industry-leading technologies, such as our Wedge series of premium connections, our Dopeless® connection coatings, our BlueCoil® coiled tubing products and our AlphaRod® sucker rod products, all of which offer performance characteristics that can bring clear benefits to customer operations.

Our people are what makes the difference at Tenaris. Over the past year, we have worked hard to focus our human resources processes on strengthening the engagement of our employees and helping them develop their skills and experience in accordance with their potential and interests. We have introduced our renewed TenarisUniversity curriculum with the user-friendly Degreed platform and are encouraging a culture of continuous feedback in our performance management process. I was particularly heartened to see that 90% of our salaried employees participated in our recent employee opinion survey showing their willingness to contribute to improving the quality of the Tenaris workplace and that this was reflected in high scores recorded for the sense of belonging and recognition of Tenaris as a good place to work.



As well as its employees, Tenaris is sustained by the communities where it has its operations. We have focused community relation efforts on improving technical education and providing opportunities based on merit and excellence. Through establishing our own network of technical schools and providing support for existing technical schools we aim to improve the opportunities for industrial employment for community members and contribute to social mobility and inclusion. We also seek to bolster a sense of pride and engagement between our employees and their communities through channeling employee voluntary activities into projects which benefit the community and its institutions.

In all our activities, we insist on integrity and transparency. This report sets out a series of indicators against which our performance on sustainability criteria can be measured over time and describes the objectives and actions we are taking to improve them.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Paolo Rocca'.

Paolo Rocca  
June 28, 2018

# Quality, Health, Safety and Environment Policy

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

Tenaris identifies the health and safety of its employees, contractors and visitors, the satisfaction of its customers, the protection of the environment and the development of the communities where it has its operations as integrated key drivers of its business; the entire organization is oriented towards achieving these goals openly and transparently.

Quality, Health, Safety and Environment management and risk assessment fundamentals are integrated in all business processes.

Management is responsible and accountable for achieving excellence in Quality, Health, Safety and Environmental performance for successful business results.

Tenaris is committed to training all its employees in the appropriate use of its Quality, Health, Safety and Environment management systems, strengthening its management through updating of professional and managerial skills, fostering diversity, emphasizing employee evaluation and motivation and complying with the ethical principles established in its Code of Conduct.

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

All injuries and work-related illnesses can and must be prevented  
Working safely is a condition of employment

**Quality is our main competitive advantage**

Requirements and expectations of our customers must be satisfied  
Differentiation is achieved through operational excellence and development of innovative and reliable products and services

**We are committed to developing a long-term sustainable business**

Preventing pollution and minimizing the environmental impact of our operations  
Making the most efficient use of natural resources and energy



Tenaris recognizes the importance of implementing this policy throughout 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 issues to which it subscribes.

Tenaris communicates this policy throughout its organization, trains its employees in the appropriate use of its Quality, Health, Safety and Environmental management systems and engages 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.

July 2014



Paolo Rocca  
Chief Executive Officer





# Governance, Risk and Compliance





# Governance, Risk and Compliance

Our holding company's legal and commercial name is Tenaris S.A., a public limited liability company (*société anonyme*) organized under the laws of the Grand Duchy of Luxembourg, which holds, either directly or indirectly, controlling interests in various subsidiaries in the steel pipe manufacturing and distribution businesses and other related businesses.

Our shares trade on the Buenos Aires Stock Exchange, the Italian Stock Exchange and the Mexican Stock Exchange; in addition, Tenaris American Depositary Shares are traded on the New York Stock Exchange.

This report has been approved by our board of directors on June 28, 2018, and sets out the non-financial information required to be disclosed as part of the Company's reporting requirements in accordance with article 1730-1 of the Luxembourg law of August 10, 1915 on commercial companies, as amended, and article 68 and 68bis of the Luxembourg law of December 19, 2002 on the commercial and companies register and on the accounting records and annual accounts of undertakings, as amended. It should be read in conjunction with our 2017 Annual Report. The non-financial information included in this report covers the topics addressed under the Global Reporting Initiative (GRI) sustainability reporting framework. In addition, Tenaris is a member of the United Nations Global Compact and uses this report to fulfil its reporting obligations thereunder. This report, as well as other relevant information on sustainability, is publicly available on our website at <http://www.tenaris.com/en/Sustainability>

## Risk management

As part of our commitment to sound corporate governance, Tenaris has established a process of risk identification and management. At the helm of the process is our management-level Critical Risk Committee (CRC), which is tasked with assisting the board of directors, the audit

committee and the chief executive officer (CEO) with the oversight of risks to which Tenaris is exposed and in the monitoring and review of the risk management framework and processes, with a focus on those risks deemed to be critical.

In the performance of its functions, the CRC facilitates the identification and assessment of critical risks (including cybersecurity, environmental, health and safety, product liability, intellectual property, and regulatory risks), the development of mitigating actions, and the monitoring of action plans. The CRC periodically reports to the board of directors, the audit committee and the CEO on its activities.

For example, on climate change, we have adopted a series of actions to increase awareness and develop a broader industry response, which includes cooperating with local governments in order to implement rational policies that help achieve the United Nations Climate Conference goals, to generate business awareness and be proactive in efficient energy management and CO<sub>2</sub> mitigation and to continue to participate in global steel industry actions like the World Steel Association's Climate Action Program. For more information on our corporate governance and on the principal risks and uncertainties that we face, please refer to our 2017 Annual Report and our 2017 Report on Form 20-F filed with the U.S. Securities Exchange Commission, both of which are publicly available on our website at <http://ir.tenaris.com/reports>.

## Business Conduct: committed to Compliance

Tenaris is committed to building a corporate culture of transparency and integrity based on ethical behavior and compliance with law. We have adopted a Code of Conduct incorporating guidelines and standards of integrity and transparency applicable to all our directors, officers and employees. Our Code of Conduct establishes the

ethical principles that form the basis for relations between Tenaris, its employees and third parties and provides the means and instruments to give transparency to issues and problems that may have a bearing on the management of the company.

In addition, we have adopted a supplementary Code of Ethics, which applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions and which is intended to supplement Tenaris's Code of Conduct. The text of our Code of Conduct and Code of Ethics is posted on our Internet website at: [www.tenaris.com/en/aboutus/codeofconduct.aspx](http://www.tenaris.com/en/aboutus/codeofconduct.aspx).

Since it was first published in 2003, our Code of Conduct has been reviewed periodically to bring it up to date with the latest trends and introduced new provisions when necessary. The updated version of the Code, approved in February 2018, incorporates explicit language on the protection of data privacy, the promotion of fair and transparent economic competition and the strengthening of a respectful workplace environment, particularly expressing respect for human and labor rights and that no form of abuse, coercion, discrimination or slave labor are tolerated in our activities.

Besides the Code of Conduct, we have a Policy on Business Conduct and a Code of Conduct for Suppliers. They are available in ten languages: Arabic, Bahasa Indonesia, Chinese, English, Italian, Japanese, Portuguese, Romanian, Russian and Spanish. In 2010, Tenaris appointed a Business Conduct Compliance Officer (BCCO), who established a Business Conduct Compliance Program aimed at identifying and mitigating corruption risks and fostering the culture of ethical and transparent conduct.

Tenaris regularly issues, renews and validates its codes, policies, procedures and standards aimed at ensuring anti-bribery

compliance, in keeping with national laws against corruption and bribery, and other international laws such as the US Foreign Corrupt Practices Act (FCPA) and the UK Bribery Act. Tenaris's Business Conduct Compliance Program is a single approach to how the Company develops, structures and implements anti-bribery compliance and adherence to ethical business, inherent to the interaction with public officials, governmental entities, communities, other public and private corporations, business partners and third-party employees.

The Business Conduct Compliance Program develops a variety of preventive actions within the following ten core compliance activities: Risk Assessment and Planning, Normative Framework, Advising and Guidance, Communications, Training, Certifications, Third Parties, Monitoring and Audit, Discipline and Remediation, and Benchmarking. These activities are based on regular risk evaluations to identify and focus on critical factors, and they are aimed at developing and applying them with special attention on education and risk prevention.

During 2017, Tenaris updated 4 anti-bribery related procedures, and trained 1,024 employees in person worldwide. We also trained 263 third parties employees based in high-risk countries. We have implemented internal procedures applicable to all our employees for the approval of corporate gifts, business trips and hospitality, such as accommodation and meals offered to public officials and/or private persons, and non-for profit or charitable contributions.

The Company regulates and standardizes the process of evaluating, selecting and hiring representatives or associated persons such as commercial intermediaries, customs agents, permitting assistants, advisors and/or law firms. Procedures include the regulation of due diligence processes, internal authorization controls and standard provisions to

ensure third parties' commitment to follow Tenaris's anticorruption policies.

Tenaris believes that the effective involvement and responsibility of each employee, every day, is critical in the pursuit of an ethical culture. As part of the Business Conduct Compliance Program, we promote awareness and communicate relevant guidelines, policies and procedures throughout the organization through newsletters, flyers, stories and notices in our intranet, management meetings and several other educational materials aligned with the industry's best practices. In 2017, we issued ninety Business Conduct Compliance communications items with a global reach within the company.

Regular monitoring and audit activities are performed to verify compliance and to gauge our response capacity worldwide. Tenaris has a Compliance Line available in nine languages to allow employees, customers, suppliers and other interested parties to report, on a confidential basis, any conduct contrary to the Code of Conduct or its principles. The Compliance Line operates according to the procedures designed by our Internal Audit function under the direct supervision of our Audit Committee. Online access to our Compliance Line is available at <http://ir.tenaris.com/corporate-governance/compliance-line>.

#### Human Rights

Tenaris is committed to conducting its operations in a manner that is consistent with human rights principles that are applicable to business and with the Universal Declaration of Human Rights. We have a Human Rights Policy that was introduced in 2009, which states that Tenaris acts in compliance with the principles established by the ILO (International Labor Organization) Declaration of Fundamental Principles and Rights at Work and all applicable laws concerning human rights. This policy is currently being updated to reflect the recent changes we made in our Code of Conduct concerning

our commitment to help eliminate all forms of discrimination, illegal, forced or compulsory labor, slavery or servitude, in particular child labor and our policy of no tolerance for any such practices among our suppliers, contractors and associated persons. Much of the information included in this report expresses our commitment to help our employees and business partners understand and carry out our activities in accordance with these principles.

#### Suppliers

Building lasting relationships with our suppliers and contractors is part of our values but also relevant to our performance. Tenaris purchases most of its supplies through Exiros, a specialized procurement company whose ownership we share with our sister company, Ternium. By December 2017, Exiros had a total of 43,547 registered suppliers, of which 7,939 were active during the year. Exiros has a quality system certified under ISO-9001 standards.

All suppliers undergo a rigorous selection process to ensure adequate standards are met, in line with applicable laws and regulations and in accordance with our QHSE policy and Code of Conduct. We have adopted a Code of Conduct for Suppliers governing to ethical behavior, compliance with law, health, safety and environment.

We have categorized our service suppliers, according to the HSE risk level of their activities. Since 2012, we audited around 51% of the 2,814 active service suppliers classified as high HSE risk suppliers before awarding the service contract award or during performance of their services, and another 500 not high risk suppliers were also audited on HSE risk. Audits are performed against the standard self-assessment required for any service supplier willing to provide services to Tenaris. During 2017, 496 new audits were performed, and improvement plans conducted when gaps were detected.



# Economic Indicators





# Economic Indicators

We report on our operational and financial performance in our annual report (<http://ir.tenaris.com/reports.cfm>). Here we have included our main economic indicators and the distribution of economic value generated.

Market conditions improved in 2017, and so did demand for our products and services. The efforts we made over the past years to strengthen our market positioning and our industrial and technical capabilities are beginning to be reflected in our economic results.

The recovery so far has been driven by the North American market and is now starting to extend to other regions. In 2017, we accomplished a major milestone in our company's history with the inauguration of our new seamless pipe mill in Bay City, Texas, designed to serve the country's shale production. The new mill will be the cornerstone of our Rig Direct® service strategy in the US, and transforms our local production capabilities in this most dynamic market.

Throughout the downturn, we used our solid financial position to continue with our strategic investment program aimed at strengthening our long-term competitiveness. With the ongoing market recovery, we continue to have an ambitious agenda, focused on the transformation and modernization of our industrial system; the expansion of our customer partnerships through service and technology development; and optimization of our working capital to improve our cash generation.

## Capital expenditure

During 2017, our capital expenditures, including investments at our plants and investments in information systems, amounted to \$558 million, compared to \$787 million in 2016 and \$1,132 million in 2015. Of these capital expenditures, investment at our plants amounted to \$525 million in 2017, compared to \$757 million in 2016 and \$1,066 million in 2015.

In 2017, in addition to capacity expansion in the United States with our mill in Bay City, we focused on improving our finishing capabilities, mainly heat treatment and threading facilities, including premium product lines and investments at our R&D centers, and establishing service centers to support our Rig Direct® strategy.

A large part of our capital spending during 2017 was dedicated to our Bay City mill, which was inaugurated in December 2017. Other projects included the completion of the construction of a new state-of-the-art threading line for premium products and new heat treatment line at our Tamsa facility in Mexico; the opening of service centers in Canada (Grande Prairie) and the United States (Midland and Oklahoma City); the beginning of the revamping and debottlenecking of our steel shop in Romania; the revamping of our heavy wall line pipe and coating capacity at our Confab mill in Brazil to supply the Zohr offshore gas project in Egypt; the increase in production capacity in our coupling shop in Colombia; and the beginning of the expansion of heat treatment capacity at our mill in Italy.



Our capital expenditure

**USD 4.3 Billion**

between 2013 and 2017

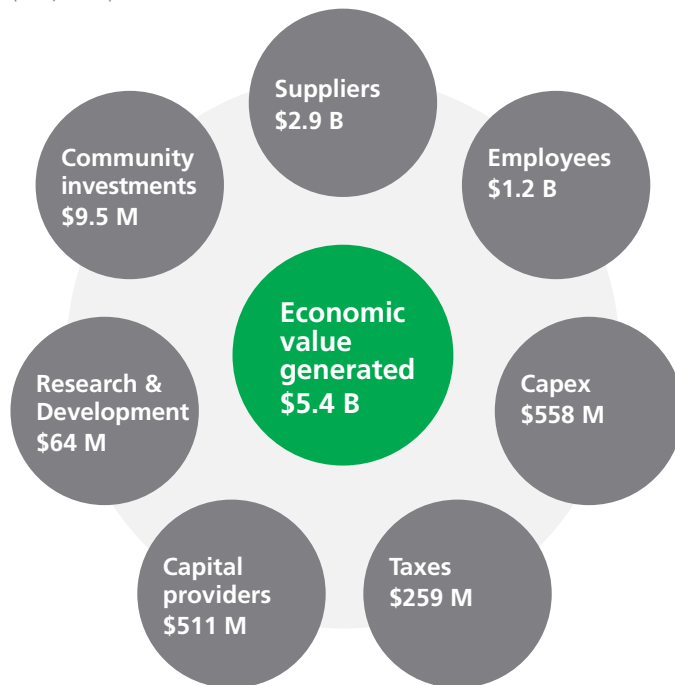
Economic value generated

**USD 5.4 Billion**

2017

### Economic value generated and distributed

(2017, in USD)



### Financial Indicators

	2013	2014	2015	2016	2017
<i>Millions USD</i> <i>(except otherwise stated)</i>					
Net sales	10,424	10,141	6,903	4,294	5,289
Operating income	2,176	1,881	166	(59)	335
EBITDA	2,780	2,696	1,219	598	943
Shareholders net income	1,551	1,159	(80)	55	545
Shareholders equity	12,290	12,654	11,713	11,287	11,482
Cash flow from operations	2,377	2,044	2,215	864	(22)
Dividends	508	531	531	484	484
Net cash/ (debt)	911	1,257	1,849	1,441	680
EBITDA margin %	27%	27%	18%	14%	18%
ROE %	13%	9%	-1%	0%	5%
ROCE %	19%	17%	2%	-1%	3%
FCF / Net income %	103%	81%	N/A	N/A	N/A

In addition to capital expenditures at our plants, we have invested in information systems for the integration of our production, commercial and managerial activities. These investments are intended to promote the further integration of our operating facilities and enhance our ability to provide value-added services to customers worldwide. Investments in information systems totaled \$28 million in 2017, compared to \$29 million in 2016 and \$65 million in 2015.

## Capital Expenditures



A photograph of two industrial workers in a factory setting. Both are wearing white hard hats and large grey earplugs. The worker on the left is wearing a yellow high-visibility vest over a grey long-sleeved shirt and an orange jacket. The worker on the right is wearing a grey high-visibility long-sleeved shirt and dark trousers. They are standing near a large metal structure, possibly a conveyor belt or part of a machine. The background shows industrial equipment and bright overhead lights.

# Safety and Health

# Safety and Health



**48,671**

Safe Hour routines  
in 2017

**92%**

of our production sites certified  
under OHSAS 18001

Hours of training on HSE

**176.124**

for hourly employees  
in 2017

## Our commitment

To improve safety performance, aiming to have no accidents.

## Our objectives

- Consolidate a strong safety oriented culture.
- Achieve a target of Lost Time Injury Frequency Rate below 1.
- Ensure that 100% of our employees, including contractors, are fully fit to carry out the tasks they are given.

## Our actions

Safety is our number one priority. As stated in our Quality, Health, Safety and Environment Policy, nothing is more important for Tenaris than the health and safety of the people who work in our facilities and use our products and services. The entire organization is oriented towards achieving the goal of zero accidents in a transparent manner.

We believe that all accidents and work-related injuries can and must be prevented. The way to achieve this is by building a strong safety oriented culture.

We continue to implement initiatives to strengthen awareness, achieve full compliance with our procedures, and to standardize practices and technologies in order to minimize exposure to safety risks. This year we launched a new initiative on Safety Leadership for Managers, including a safety skills-assessment with specific training.

Activity in our industrial facilities increased significantly during 2017, and we registered 10% more worked hours than in 2016. In that context, our benchmark indicators have remained flat or deteriorated slightly, an indication that despite all the effort we have put into our safety program over the years, we still have a long way to go.

We regrettably suffered three fatalities in this period, in our Confab coating facility in Pindamonhangaba, Brazil; in Tamsa, Mexico; and in Silcotub, Romania.

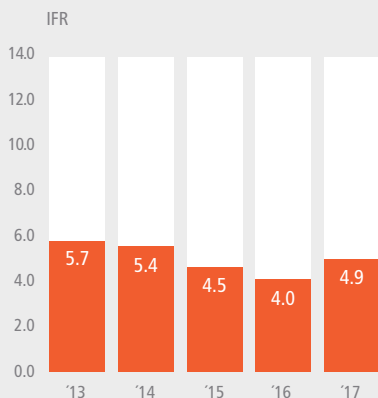
We participate, along with leading steel producing companies, in the World Steel Association's safety groups in order to define common guidelines on different topics concerning safety management. Some of the aspects under discussion include Process Safety management to reduce high-risk incidents and fatalities and Contractors' Management to improve performance.

The Process Safety Management project, along with another project on catastrophe risk analysis, seeks to detect and to prevent unexpected events that could have a serious effect on our people, our mills or the environment. Process Safety Management focuses on the design and engineering of facilities, equipment maintenance, effective alarms and control points, procedures and training. After the assessment stage of the project, we are focusing on implementing improvements.

One focus of our action is behavior management. After analyzing high-severity events in our sites over the last years, we concluded that 60% of events were related to behavior. We concluded that the improvement of the physical conditions of work needed to be complemented with a stronger focus on people's behavior. We also set up a program on internal certification for high-risk activities including: Work at Heights, Lock out – Tag out, Confined Spaces, Cranes and Vehicles.

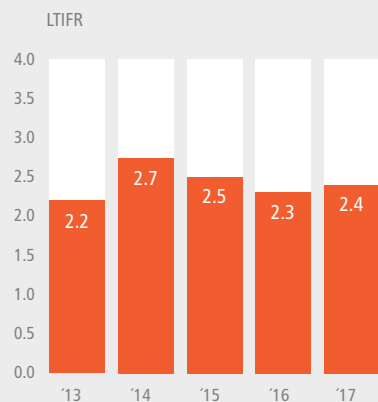
## Safety Indicators

### Injury Frequency Rate



**Methodology:** Number of accidents with and without lost days (not including First Aid) per million hours worked.

### Lost Time Injury Frequency Rate



**Methodology:** Number of accidents with lost days per million hours worked.

This focus on behavior builds on our Safe Hour program, introduced in 2012 throughout Tenaris. The Safe Hour establishes a routine one-hour walk twice a week through the mills by top and middle management of the operative areas. It seeks to engage workers in constructive dialogue on safety issues and discuss any safe or unsafe behavior and conditions. Five years after the program was launched, the Safe Hour continues to be an effective tool to achieve greater awareness and a safety-first culture in Tenaris. In 2017, a total 48,671 Safe Hour routines were performed, 7% more than the previous year. We have also implemented a Zero Tolerance program throughout the company, aimed at identifying and discouraging dangerous behaviors by establishing sanctions for serious deviations that could potentially lead to a fatal outcome.

In 2017, we developed new health, safety and environment corporate training courses for our main operative functions in order to strengthen their leadership and awareness on these issues. The courses are being delivered in the regions and cascading to the different levels in the organization. In the period, we delivered 176,124 hours of training on health, safety and environment among hourly employees, an average of 1.67 working days of training per employee.

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

## Health

Tenaris is committed to providing a healthy workplace, equipment and technologies through a comprehensive occupational health and hygiene program.

Our Health Management System seeks to assure through a pre-defined health protocol that all employees receive adequate and regular medical checkups, so that all employees and contractors are fully fit to carry out the tasks they are assigned.

We now have global procedures and guidelines in place related to in-door air quality, noise, vibrations and ergonomics. Noise studies have been performed in all our sites to identify the action required to reduce noise at the source.

Additionally, we also worked on chemicals by implementing a global procedure focused on chemical-management risk assessment, new products engineering, new plants and improved Safety Data Sheets management process.

In order to control and reduce the ergonomics risk, we qualified a technical team and launched new simple tools to provide all users with the criteria to apply risk-assessment methods and define appropriate actions. We have already assessed 60% of our positions in terms of ergonomic risk, and we are introducing ergonomic risk criteria as early as the engineering design phase.

We are committed to increasing knowledge and awareness on occupational health, and for that purpose we have designed dedicated training courses to strengthen our internal teams on these issues.



# Environment



# Environment



## Material efficiency

**98.3%**

in steel making sites

## Recycled scrap

**73%**

of our metallic charge

## Reduction of CO<sub>2</sub> intensity

**7%**

in steel making sites in 2017

## Air quality

### Our commitment

To minimize emissions in order to contribute to good air quality in the communities where we operate.

### Our objectives

- Comply with local and internal requirements on emissions, and monitor activities to oversee our performance.
- Avoid fugitive emissions in our steelmaking process.

### Our action

The steelmaking process is intensive in terms of emissions. We have established corporate procedures setting limits for dust stack emissions as well as monitoring requirements. Our internal limit was defined at a level according to European Union best available technologies to foster improvement beyond compliance, since not all countries where we produce steel have these values as a legal requirement.

Siderca and Tamsa are sites where control and capture of fugitive emissions need to be improved, so we are currently making investments of up to USD 17 million at each site to enhance their capture and treatment systems. Siderca has already initiated the project and modified the canopy of one of its furnaces.

We continue to evaluate the implementation of best available technologies in new lines, with the objective of improving our performance beyond local legal compliance regulations.

Our new rolling mill in Bay City started to operate in the last quarter of 2017. The plant, officially inaugurated on December 11, is the flagship of our company in terms of environmental performance, since it includes a number of technologies to minimize our footprint in the local community, including treatments to reduce NOx emissions from furnaces with continuous emissions monitoring equipment, bag filters to reduce dust emissions on the rolling mill, online monitoring, and other technologies to control less relevant sources. The mill is achieving the environmental performance levels we expected. The project is also seeking LEED certification both for the industrial building and administration campus, a process expected to be completed by the end of 2018.

## Energy and climate

### Our commitment

To decrease our CO<sub>2</sub> intensity and to make an efficient use of energy resources.

### Our objectives

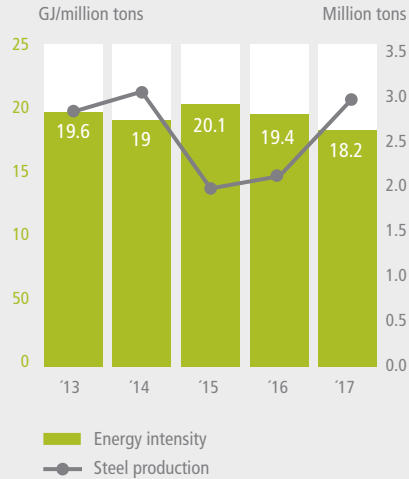
- Use energy sources efficiently.
- Decrease our CO<sub>2</sub> emissions intensity by implementing best available technologies in our developments.

### Our action

The world's steel production accounts for around 8% of GHG (Greenhouse Gas) man-made emissions. But steel, an essential material for our daily life and used everywhere, can also be part of the solution for the world's climate change challenge, as it is a versatile material that can be recycled infinitely.

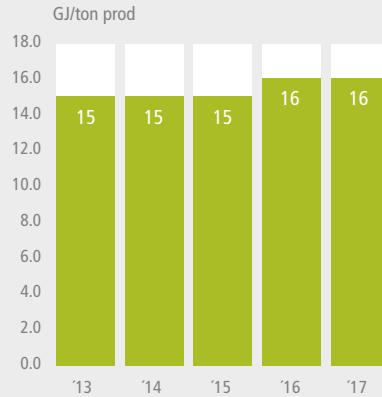
# Environmental Indicators

### Tenaris Steel Mills Energy Intensity



**Methodology:** measured in GJ/ ton steel worldsteel methodology.  
**Boundaries:** steelmaking mills, including all other processes on site.

### Tenaris Sites Energy Intensity



**Methodology:** measured in GJ/ ton product based on electricity and gas consumption at each site.  
**Boundaries:** Tenaris steel and pipe production sites.

### CO<sub>2</sub> Emissions Steel Mills



**Methodology:** measured in ton CO<sub>2</sub>/ ton steel worldsteel methodology.  
**Direct emissions:** CO<sub>2</sub> emissions related to steel production and other processes included at the site.  
**Purchased electricity:** upstream CO<sub>2</sub> emissions related to electricity production, using a world average emission factor of CO<sub>2</sub>/MWh generated.  
**Indirect emissions:** other upstream CO<sub>2</sub> emissions related to production of raw materials and fuels.  
**Boundaries:** steel mill and other processes on site, including power generation at steelmaking sites only.

### CO<sub>2</sub> Emissions Tenaris Sites



**Methodology:** measured in tn CO<sub>2</sub>/ tn product.  
**Direct emissions:** CO<sub>2</sub> emissions related to steel production and/or other processes included at the site.  
**Purchased electricity:** upstream CO<sub>2</sub> emissions related to electricity production, using a world average emission factor of CO<sub>2</sub>/MWh generated.  
**Boundaries:** All tube and steelmaking sites. For sites without steelmaking processes, gas and electricity consumption contributes to the indicator.

We track our emission levels, and we participate in international forums to identify areas in which we can improve and further reduce our emissions given the technology we have at our sites. Our steelmaking facilities run on electric arc furnaces, the least intensive CO<sub>2</sub> emission process in steelmaking, and we also have a Direct Reduction iron-making facility in Argentina based on natural gas. In 2017, CO<sub>2</sub> intensity for steelmaking sites and at Tenaris went down by 7% compared to the previous year. During 2015 and 2016, as a result of the market turndown, we experienced a relevant decrease in our production levels, which impacted on the overall efficiency of our industrial system. In 2017, with our production level approaching pre-downturn levels again, our emission performance, both in energy and CO<sub>2</sub>, has returned to a downward trend.

Looking at absolute numbers, steel production increased 35% in 2017, while emissions for the three scopes increased 27%, an indication that the actions we are taking delivered results. When looking at seamless and welded pipes, intensity is stable within statistical variation.

We have continued with changing lighting to LED-based systems in many of our mills. We continue to improve metering to allow consumption tracking and introducing other electricity and natural gas consumption improvements in different lines of our mills. In 2017 we renewed the certification of our Dalmine facility in Italy under the ISO 50001:2011 standard for its energy management system.

We participated in the construction of a new state-of-the-art power plant in Mexico, in a joint venture with our sister companies Ternium and Tecpetrol in the Techint Group. This 900-megawatt combined cycle power plant fueled with natural gas is located in Pesquería, state of Nuevo León, and supplies electricity using the best available technologies in terms of efficiency, water and emissions management.

In 2017 we certified an Environmental Product Declaration (EPD), which follows ISO 14025 standards, of an average of OCTG pipes produced at four sites: Siderca, Dalmine, Silcotub and Tamsa. The results of this and other two EPDs for line pipe and structural solutions show that more than 60% of our GHG emissions are related to upstream process and 30% are related to manufacturing of the pipe, while transportation has a more limited impact in the overall total. Our main actions are thus related to improving our consumption rates, efficiency and type of raw materials in steel making. Tenaris's is one of the first EPDs published for seamless OCTG pipes. In the last two years, we modified our internal procedures to replace the use of thread compounds containing lead and zinc in storage dopes for compounds without these metals. Having less metal content reduces risks in handling and also their impact in case of improper use. Our Dopeless® technology, which we feature in the Innovation chapter of this report, goes further by eliminating altogether the use of dope on pipe threads.



## Steel for biodiversity:

### The jaguar project

Tobuna and Nahuel were the first jaguars or “yaguaretés” to settle down in the Iberá Natural Reserve in 2015 and 2016. In January 2017, another male, Chique, joined the breeding center, and a new female, Tania, followed in May. The family will hopefully continue to grow.

The four are part of the “yaguareté” project at the Iberá reserve, a natural wetland area in the province of Corrientes. The jaguar is an endangered species: in Argentina there are only 200 adult jaguars in the wild, secluded in very specific pockets of the northern section of the country. Although it is a native species in this section of Argentina, the yaguareté had become extinct from the Esteros del Iberá in northeastern Argentine wetlands decades ago.



The project seeks to bring them back to the Iberá, where they originally belong, as the cornerstone of what experts call “restoration of the ecosystem.” The first jaguars to arrive come from zoos. Their offspring will be retrained so that they can hunt and be reintroduced into their natural habitat.

Tenaris and its sister companies Ternium and Tecpetrol in the Techint Group joined the drive in 2013, when the Flora and Fauna Environmental Foundation asked us to donate the steel needed to build the pens for the animals to live, breed and grow safely. The pens cover 30 hectares and a perimeter of four kilometers. Tenaris and Tecpetrol provided seamless steel tubes to serve as posts, and Ternium Siderar donated flat galvanized sheets for the fences. ArcelorMittal donated wire and wire mesh to tie the fences together. The steel pens provide important advantages to the project: they are safe, durable and can be recycled once the project’s objectives are achieved.



As part of the World Steel Association's Climate Action Program, we have been recognized for the last 10 years for complying with CO<sub>2</sub> emissions reporting requirements, including submission of information and verification. The data collection program is a key part of the steel industry's global sectorial approach to climate change.

## Material efficiency

### Our commitment

To implement circular economy concepts in our system.

### Our objectives

- Maximize recycling rates at our facilities.
- Maximize availability and use of scrap.
- Reduce the amount of materials sent to landfill by recycling, reusing and appraisal of materials.

### Our actions

Steel can be recycled infinitely without losing any of its properties, and it is the most recycled material in the world. By recycling steel we also save iron, energy, coal and other materials, produce less CO<sub>2</sub> emissions and prevent useful material from ending up in landfill as waste.

Scrap use rate in our steel making process has remained at a similar level above 70% over the last years. The rate increased in 2016 due to a special market situation in Siderca that led to a higher use of scrap, but returned to previous levels this year. Around two million tons of scrap are recycled per year at our sites: all scrap from steel and downstream pipe production is collected and used, as well as post-consumer scrap.

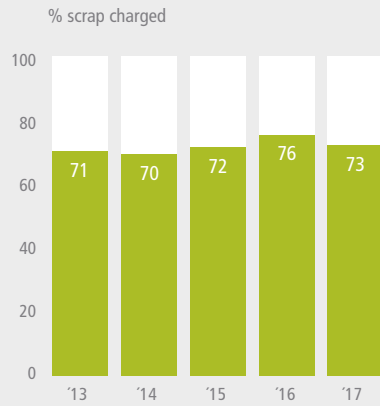
Scrap recycling is one way to minimize the environmental footprint of our operations and is recognized as one of the main opportunities the steel industry has to rein in emissions. We also need the support of governments to allow less bureaucratic pathways to recycle this material and mainly to recognize the benefits of its use, avoiding its classification as a waste stream.

Many residues and byproducts are reused and recycled in our industry and also in other processes. In 2017, less than 10% of residues and by-products were disposed as waste. The rest was reused and recycled, both internally or in other industries or activities. The percentage of material disposed as waste is gradually going down following a number of activities and initiatives that each region applies to reduce generation and avoid landfills. Slags, which are the most relevant by-product, are reused and recycled for a number of applications and products such as roads, cement, asphalt and coast-consolidation. Scale is used in the cement industry, mostly with residues from the direct reduction plant. Research continues for internal and external recycling for different waste streams. Some are already being implemented thanks to the results obtained and others are being tested.

Other residues with lower production volume such as woods, plastics, etc., are also being recycled.

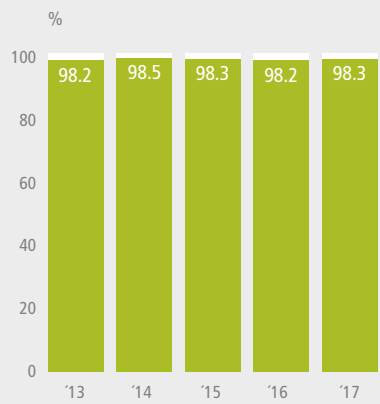
## Environmental Indicators

### Tenaris recycled steel use



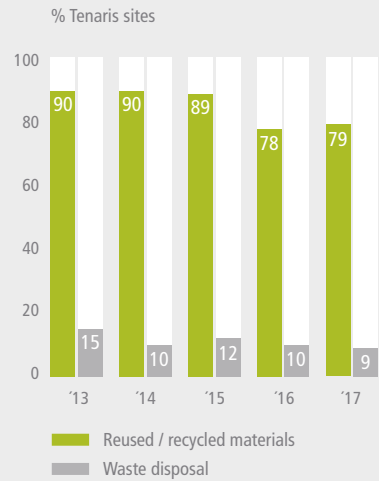
**Methodology:** Values are calculated as tons of scrap present in the metallic load.

### Tenaris steel sites 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 processes on site including power plants.

### Waste & by-product management



# Water Management

## Our commitment

To ensure a responsible use of water.

## Our objectives

- Minimize water intake in areas of water scarcity where we have operations that are water intensive.
- Meet water discharge quality targets.
- Implement the best water-management technologies for new lines.

## Our actions

We have evaluated the water-stress level of the areas where we have operations. Our efforts focus on those facilities where the activities involve high rates of water use as steelmaking, rolling and heat treatment for seamless pipes. Both welded pipe and finishing plant processes require less water.

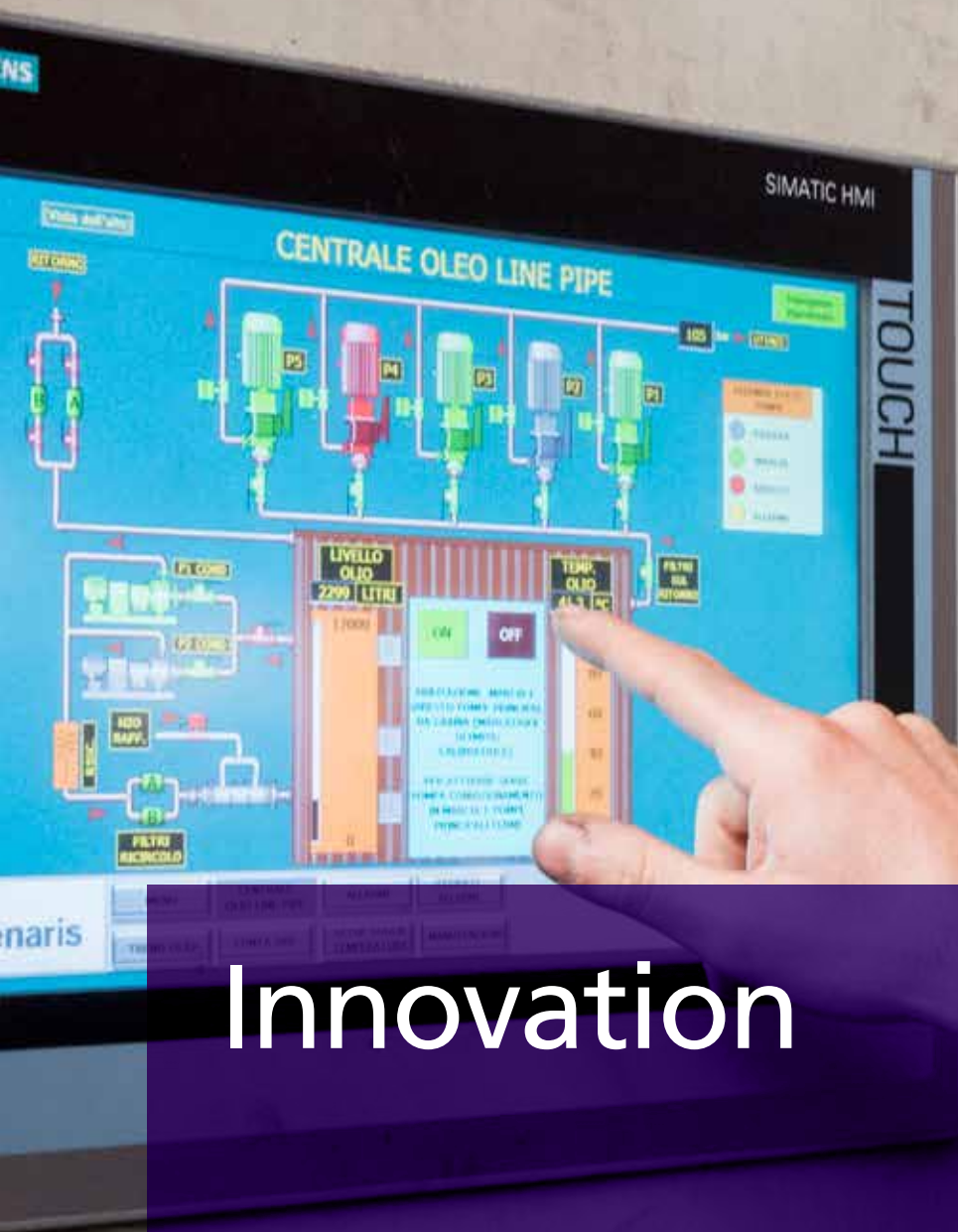
Most of our more intensive water-use facilities are in areas of medium water-stress risk. In all these cases, our sites have recycling water systems able to recycle high percentages of water. We monitor water discharges following local and also corporate references to make sure we meet quality requirements.

The Bay City mill in the United States is working with a system designed to recycle 95% of the water, while blow down is further treated in the local wastewater treatment facility. The same concept was applied in our new seamless facility in Colombia that was designed to recycle all the water, even wastewater from sanitary services is used, after treatment, to water green areas of the new site. For a new coupling phosphate line, also in Colombia, a new wastewater treatment facility is being designed with processes to allow for water recycling.

Siderca, our mill in Argentina, is finalizing the construction of a new treatment facility for the rolling mills water circuit to allow water recycling and reduce intake. Even if this is not an area with water stress and the mill was designed with an open water system, we decided on this investment to reduce its high water-intake rates. The USD 20-million project expected to be operative in mid-2018 will reduce intake by up to 20% in Siderca's industrial site.

Our Dopeless® connections also contribute to a responsible use of water. A Dopeless® product does not need to be cleaned during running in the field, which a standard dope thread requires between 10 to 20 liters of water per connection.





Innovation



# Innovation

## Our commitment

To offer the energy industry product and service solutions to enhance safety, efficiency and minimize its environmental footprint.

## Our objectives

- Develop and expand our product portfolio to meet the needs of the oil and gas industry with reliable technology and sustainable manufacturing.
- Deploy our service proposal to streamline the way in which the energy industry's supply chain works.

## Our action

Tenaris has established over the years a solid reputation for the quality of its products and services, which are the result of our commitment to innovate and contribute to the solutions that the global oil and gas industry needs to be more efficient and meet the specific requirements of different operating environments.

Our value proposition relies on industrial excellence, product development to consolidate a comprehensive portfolio of high-quality products, plus strong pipe management and technical and operational assistance. Through the years, we have introduced several new products through a solid Research and Development network and based on our close relationship with our customers and their needs.

We operate all the facilities in our global industrial system under a single quality management system, which guarantees that all the products that come out of our mills have the same standard of quality. Our quality management system follows ISO 9001 and API Q1 specifications, designed to ensure the reliability and constant improvement of both our products and processes. This year, our mill in Argentina, Siderca, received the National Quality Award (Premio Nacional a la Calidad) for its quality oriented management system.

Our new mill in Bay City, Texas, inaugurated in December 2017, is the world's most advanced seamless pipe mill, and represents much of the best of Tenaris in terms of planning, innovation in design and use of technology. Thanks to the extensive application of automation, robotics and state-of-the-art cruise control systems, this plant enhances its rate of productivity to make it competitive with any other in the world.

We carry out Research and Development activities with a global team of 360 people in R&D centers in Argentina, Italy, Japan and Mexico. Our product developers and researchers work closely with our technical sales teams, who know first-hand the reality and needs of our customers on the ground. In 2017, we invested USD 64 million in R&D, totaling USD 435 million over the last five years. Over the last year, we have also managed to find industrial applications for many innovations developed internally, including the non-destructive controls for full-length pipes and couplings, applications for visual recognition of defects and innovative systems for process control.



We invested in Research & Development

# USD 435 Million

over the last five years

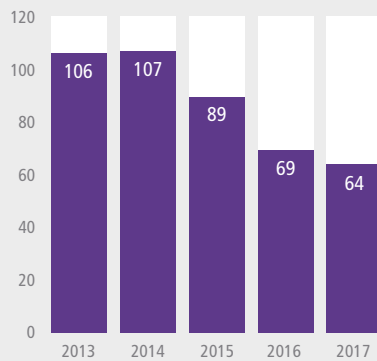
# 25%

time saved running pipes with our Dopeless® technology

## Research and Development

### Investment in R&D

(in million USD)



Last year was the 10<sup>th</sup> anniversary of the integration of Hydril into our system. The launch of our TenarisHydril Wedge Series 35 years ago set the bar for all wedge-like connections to come. Since then, our product portfolio has expanded to provide shale and offshore operators around the world what they need: best-in-class torque performance, shorter running times with reduced risk of rejects, and the support of our global industrial and service network. The Wedge Series includes more than 10 premium connections, available in four types: threaded & coupled, integral semi-flush, integral flush and integral upset.

Over the last years, we have made a contribution to the development of unconventional resources in shale plays around the world, most notably in the United States. We have been at the forefront of developing new products to accompany these advances, such as our TenarisHydril Wedge XP™ 2.0 connection for shale applications, the TenarisHydril Wedge 625® for extreme shale operations, BlueCoil® coiled tubing products and AlphaRod® Series of sucker rod products.

Our portfolio includes Dopeless® technology – a dry, multifunctional coating that can be applied to TenarisHydril premium connections in the mill. Dopeless® technology not only brings quantifiable benefits in terms of reducing up to 25% the time it takes to run the pipes at the well, but it also reduces compound discharge to zero, which decreases the environmental footprint of the oil and gas operations of our customers.

**Rig Direct®: Innovation to streamline the supply chain**

Our drive for innovation goes beyond product technology. We are working to transform the tubular supply chain through our Rig Direct® service, a fully integrated approach that feeds materials from the mill or yard to rigs in real-time, making sure that all operations are conducted with the highest QHSE standards under one single system. By December 2017, Tenaris served 360 rigs worldwide with Rig Direct®, up 50 percent from a year earlier and covering 150 customers.

Based on the three pillars of pipe management, technical consulting and field services, Rig Direct® saves customers time and money, reduces total costs and significantly cuts on-site inventories by synchronizing the supply chain. The reduction of inventories means less material is handled, which improves overall safety in our customers operations; and also that less material is wasted.





# Human Resources

# Human Resources



84

Annual training hours  
per hourly employee

Response rate

90%

2018 employee opinion survey

82

nationalities represented  
in our team

## Our commitment

To foster an attractive working environment through motivation and engagement, aligning our people's career development with business goals.

## Our objectives

- Establish transparent and effective processes to help employees grow in their professional careers.
- Encourage continuous learning and feedback through concrete tools.
- Respect and promote diversity in all its forms, with a special focus on gender, generations and culture.

## General Principles

Tenaris embraces diversity in all its forms, on the understanding that diverse points of view and perspectives contribute to the rational solution of problems and the effective accomplishment of goals. Diversity based on ethnicity, gender, creed, race and nationality is part of Tenaris's DNA and constitutes an important differentiation aspect of our uniqueness as a global enterprise. Tenaris, as a global organization that draws its workforce from diverse cultures and backgrounds, values cultural and geographic adaptability among its employees.

The Company's Code of Conduct prohibits unlawful discrimination in employment relationship and grants all persons the right to apply for a position in Tenaris or to be considered for a new position in accordance with opening requirements and merit criteria, without any arbitrary discrimination. All employees, at every level, must cooperate to maintain a respectful environment should there be personal differences.

Similarly, the Company's Human Resources Policy promotes equal opportunity and provides that hiring, promotion, transfer and other employment decisions will be adopted without regard to race, color, religion, gender, age, disability, national

origin, immigration status or sexual orientation. Compensation in Tenaris is strictly based on each employee's duties and personal performance, competencies and behavior. In addition, Tenaris conducts periodic employees' opinion surveys on diversity for purposes of testing employees' views on equal gender opportunities for promotion, and management's commitment with diversity and respect for the value of human, cultural and lifestyle differences. Tenaris has organized local diversity committees in certain regions working on specific regional objectives on diversity.

## Our action

Tenaris has grown to become a global leader thanks to the hard work, commitment, performance and innovative nature of our people, who are our main asset. The talent and determination of our teams will continue to be defining factors for our activity worldwide. In 2017, as the market downturn that affected our sector in the previous two years subsided, we continued to work on the design and implementation of a vision for Human Resources that places people at the center. The new model we are adopting for TenarisUniversity, our corporate university, is a prime example of this.

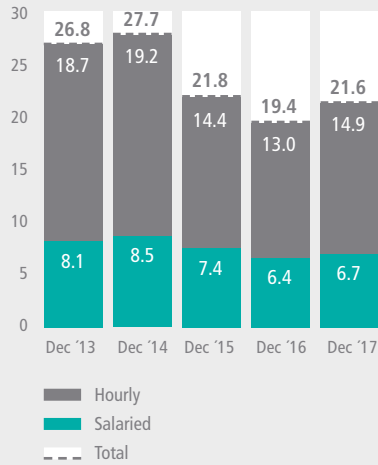
In the aftermath of the downturn, the oil and gas market is more competitive and increasingly driven by efficiency. Our people's motivation and creativity to innovate in the way we do things is the main component of our differentiation strategy, from product design to supply chain management and as we seek to integrate further with the operations of our customers through digital tools.

In 2017 our team grew 13% after two consecutive years of downsizing. The number of employees had reached 21,605 by December 2017. As we began to grow again, we continued to introduce changes and upgrades in our tools to help employees

# Human Resources Indicators

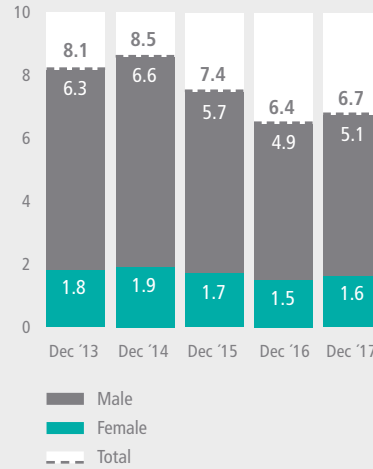
## Total hourly and salaried employees

In thousands of people



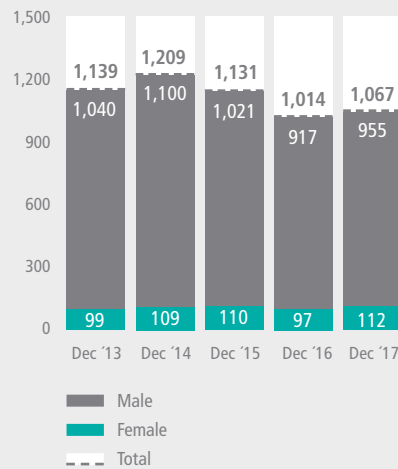
## Salaried employees by gender

In thousands of people



## Managers by gender

In number of people



develop and be the owners of their careers, both through traditional and new training tools and programs, performance management processes with continuous feedback and career development.

#### **A new, employee-centered model for our corporate university**

Created in 2005, TenarisUniversity is a cornerstone of the integration, alignment and consolidation of the knowledge that our company generates worldwide. It has for more than a decade provided a common curriculum and base training for employees at all levels. Its 15 regional centers around the world and six schools have delivered over 1.2 million hours of training per year.

TenarisUniversity has been at the forefront of innovation in corporate training, introducing new methodologies both in the classroom and online learning, and new and more interactive and open forms of training, such as Massive Open Online Courses (MOOCs) or Small Private Online Courses (SPOCs) through platforms like edX.

Now TenarisUniversity is moving on the adoption of a new model, which seeks to place the employee's interests and training needs at the center of the system. Developed with the Degreed learning platform, the new model establishes the minimum mandatory training required for employees to perform their job, but opens a broad and flexible array of options for training, using material from both inside and outside the company. The new model grew as a pilot during 2017 and is being fully implemented starting early 2018.

The new model seeks to better align the interests of each employee with the company's goals, and to give employees more empowerment in the design of their career and training development in a more social, people-oriented experience. The fixed curricula will be gradually replaced by a new culture of training that understands

that learning habits are no longer passive and individuals learn at their own pace and sharing their knowledge with peers. We are moving from a "just-in-case" to a "just-in-time" model of training. TenarisUniversity continues to deliver its core management and leadership programs, which include an induction camp (the TUIC) for young professionals, the Management Development Program (MDP) for managers, the Advanced Management Program (AMP) for senior managers and a Leadership Program (LP) for top managers. In 2017 all four programs picked up their normal steam.

#### **Performance management and job titling**

Our performance management process is an important aspect of our Human Resources policy, and we work continuously to make it more transparent and accountable in order to enhance the relationship between employees and supervisors to better align objectives. The process includes the definition of individual and group goals.

In 2017, we continued to encourage permanent performance feedback. Our traditional mid-year review was renamed to become a midway checkpoint, in order to clearly signal that feedback is a day-to-day responsibility of both supervisor and employee. Since 2012, our performance process includes an upward feedback stage that, combined with opinions from client-suppliers and supervisor evaluations, created a 360-degree vision of the employees' performance. The upward feedback has consolidated as a credible tool for employees to evaluate supervisors: in 2017, 96% of our supervisors received upward feedback.

This period we also concluded a revision of job titles throughout our organization. More than 80% of our employees were impacted by the change in titles, as we sought to streamline our organization to better match with the most recent trends in the market. As part of our drive to enhance employee



# Human Resources Indicators

## Employee participation in TUIC, MDP and AMP courses

Participants per course

Year	AMP	MDP	TUIC
2013	81	176	241
2014	79	255	233
2015	52	56	180
2016	-	123	145
2017	104	54	65

AMP: Advanced Management Program  
 MDP: Management Development Program  
 TUIC: TenarisUniversity Induction Camp

## Upward Feedback

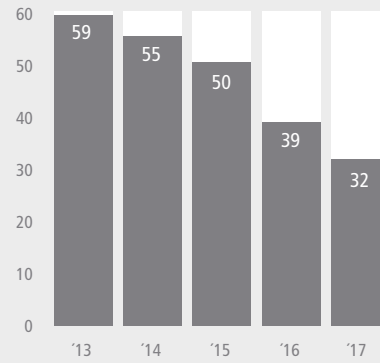
Year	% of supervisors that received UF	% of employees who provided UF
2013	76	53
2014	81	56
2015	96	90
2016	96	89
2017	96	89

## Employee Opinion Survey Participation

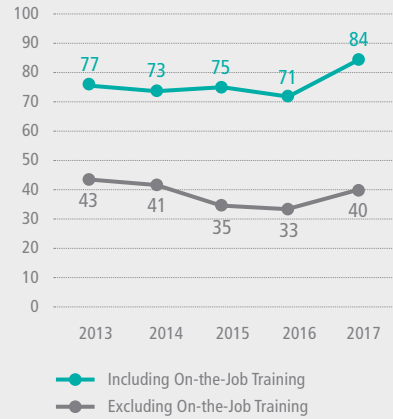
Year	Target population	Rate of participation (%)
2008	6,817	80
2010	6,892	76
2012	7,646	80
2014*	7,903	74
2015	7,534	85
2018	6,850	90

\* Mid-Cycle Survey

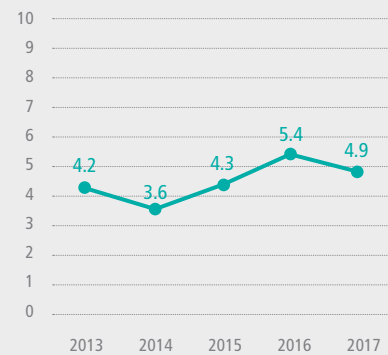
## Total training hours per salaried employee



## Total training hours per hourly employee



## Resignation Rate



Percentage of employees resigning from the company in previous 12-month period.

experience, we also updated our system to post internal vacancies. The new Career Opportunities Portal not only lists the positions open but gives employees the chance to complete their profiles and areas of interests so that they can better match with the opportunities available.

**A continuous drive for diversity**

Tenaris is an equal opportunity employer and aims to foster a work environment that attracts and develops talents across all genders, nationalities, generations, cultures and backgrounds. Diversity is a major driver of our Human Resources policy. Born in the early 2000s from an alliance of three companies in Argentina, Italy and Mexico, Tenaris has grown to become a truly global company, with 82 nationalities represented among our staff. Our managers also continue to grow in diversity, with 33 nationalities among them.

We launched a specific program in 2008 to improve the level of diversity within the company with a focus on gender. Over the years, it has expanded its scope to include cultural and other forms of diversity (Diversity+). In order to consolidate this approach, in 2016 we created the Diversity & Inclusion corporate area under the Human Resources department.

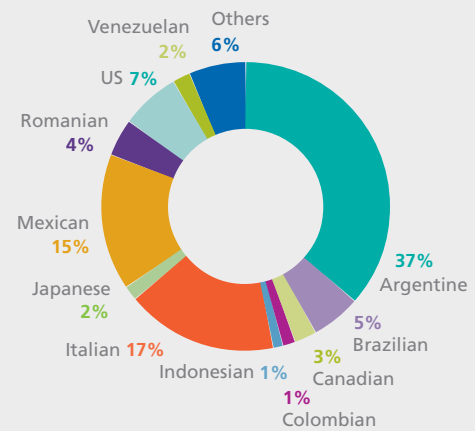
TenarisUniversity courses are one of the tools we use to encourage employee commitment to diversity. We have a series of courses, seminars and inclusive nudges designed to better manage cultural, age and gender mix and to promote inclusion and mitigate unconscious biases. The new TenarisUniversity model also has a path dedicated to our Diversity+ program, and we have reinforced our internal communications campaign to highlight diversity stories and feature positive role models.

## Human Resources Indicators

Employees by nationality

Argentina	5,394
Brazil	1,378
Canada	838
Colombia	995
Indonesia	505
Italy	2,091
Japan	410
Mexico	5,317
Romania	1,874
United States	1,555
Others	1,248

Managers by nationality





# Community Relations

# Community Relations

## Our commitment

- To be a growth factor in the communities where we work and live, and to promote a culture that rewards merit.

## Our objectives

- Improve technical education in our immediate and broader communities.
- Help preserve our community's identity and heritage, and encourage creativity and innovation through culture.

## Our action

Our community program follows the values and heritage of our parent organization, the Techint Group, which has more than seven decades of industrial tradition worldwide, with a special focus in Latin America. The fundamental principle that guides our work is that an industrial project like ours can only succeed if it has the support and benefits the communities around it.

Over the last years we have concentrated our community work on two areas: education and culture. And since 2011 we have focused on eight global initiatives to cover these areas. In 2017, our total investment in community programs remained stable at USD 9.5 million, but our allocation to education went up by USD 1 million to reach 64% of our total community budget. Culture remains as our second priority and we allocated USD 2.8 million in 2017 to programs in this area.

## Our technical school network

Our education programs cover the entire school cycle, from elementary to higher education. Our industry employs skilled employees that need solid education, both at elementary, middle and higher levels. We promote technical education as a tool for personal and community growth; and seek to contribute to the development of an education system that adapts to the changes technology is bringing to our industry and society at large. We also work to bridge an education gap that exists in many of the communities where we work.

In 2013 we began our most ambitious project yet in the area of education with the inauguration of the Roberto Rocca Technical Schools network (ETRR, in its acronym in Spanish), where we seek to educate high-school students using innovative teaching methods and the latest technology in the classroom. Tenaris opened the first school in Campana, Argentina in 2013, and our sister company Ternium opened the second in Pesquería, Mexico in 2016. Last year these schools had 279 and 248 students, respectively, and in 2019 the first cohorts will be graduating after seven years of study in Argentina and three in Mexico.

Over the past year we began including some items from the PISA standardized tests to measure the quality of learning in the schools. The results showed that students at the ETRRs perform better in comparison to their country averages, and in some cases, higher than the OECD countries average (see graph). We also compare their performance with control groups formed by children attending high-performing schools in the region. The control tests to measure skills in maths and reading in the first and fourth grade in Campana and in first grade in Pesquería showed students in Campana doing better than their peers in both areas and students in Pesquería still lagging behind, but given it is the first test taken in the school in Mexico we are taking those results as the base line for the first cohort.

To develop new skills and approach learning comprehensively, the schools incorporate cross-curricular projects that foster innovation. During this period, students from the Campana school, for instance, built a drone commanded by cellphone, a thermoformed table and a robotic arm, among other projects. The students also benefit from the fact that the schools are located close to our plants: our experts teach classes at the ETRR and students get the chance of gaining experience at the plant.



Investment  
in Education projects

## USD 31 Million

over the last five years

Investment in community projects

## USD 9.5 Million

in 2017

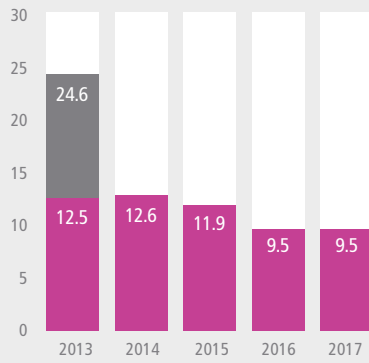
## 64%

of our community budget  
devoted to education

# Community Indicators

## Investment in the Community

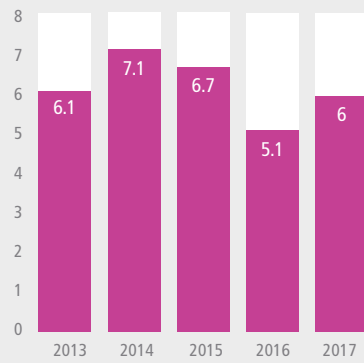
(in million USD)



Note: 2013 includes the one-time investment of USD 12.1 million that year during the construction of the Roberto Rocca Technical School in Campana, Argentina.

## Investment in Education

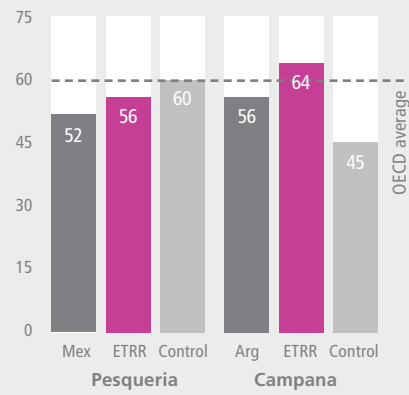
(in million USD)



## Roberto Rocca Technical School (ETRR) performance

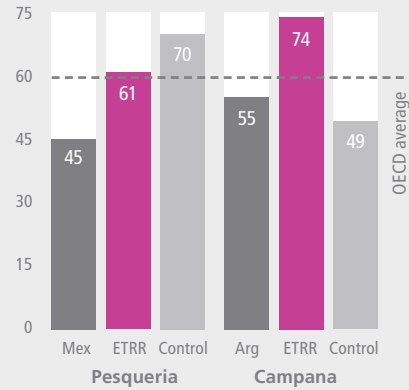
### PISA tests

% Language



### PISA tests

% Maths





Students also participated in different activities, including the National Academic Olympics, with outstanding results in mathematics, robotics and technology; TecnoAventura, an activity in which ETRR students and 300 students from other technical schools in Campana built aerogenerators for rural public schools; and the TED-Ed Ideas Club, where students developed skills in communications, strategic synthesis and oral presentation.

The Technical Gene program is another initiative that seeks to contribute to the development of technical secondary education. The program provides support for infrastructure and equipment, as well as teacher training, school management and on-the-job training internships for high-school students. After being introduced in Colombia in 2017, it now runs in nine countries.

Last year, 2,279 people participated in this program: 2,138 students and 141 teachers and 67,759 of training hours were delivered. Teachers worked in technical knowledge update and students in technical skills with internships and visits to our mills and soft skills such as team building, leadership and safety orientation. After the introduction of the Project-Based Learning (PBL) methodology as a pilot in Veracruz in 2016, 300 students presented projects this year for the first time on the environment, innovation and social responsibility. This methodology will gradually be applied in other communities and in the ETRR network. In Campana, students in the Technical Gene program participated in the production of a solar-powered car at our Siderca plant, and in Romania and Brazil they did internships at our Silcotub and Confab plants.

#### **Support at all levels of schooling**

The AfterSchool program offers three extra hours of non-formal education, four days a week, in addition to the four hours of formal schooling most children have. Children

have to attend at least 70% of the classes to be considered regular students. During 2017, 749 students participated in the seven communities where the program was active. Keeping the children committed to learning is one of the main goals of this program, as we work in communities with a high level of school dropout rates. Attendance in the AfterSchool program has grown consistently since 2014 to reach 65% in 2017. Impact assessments show that students who participate in the program make progress in interpersonal relations and positive emotions, in addition to increasing their reading comprehension.

Launched in 1976, the Merit Award is the oldest of our community programs. Initially designed to benefit the children of our employees, since 2007 it has been open to the entire community and focuses on encouraging good academic performance of high-school students. In 2017 we gave 1,429 awards as part of this program.

We also continued to award fellowships and scholarships under the Roberto Rocca Education Program, which started in 2005 and seeks to promote the study of engineering and the applied sciences at undergraduate and graduate level in the countries where we have a major presence. In 2017, the program funded 18 fellowships for students pursuing PhDs and 432 scholarships for undergraduate students.

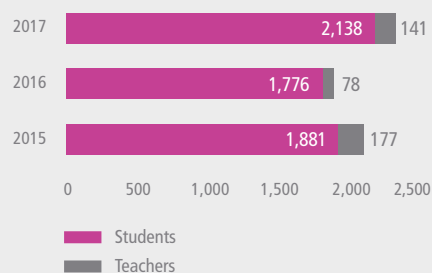
#### **Volunteers in action**

Participation in volunteer activities is a fundamental part of the long-term ties the company seeks to establish with the communities where it lives and works. In 2017, a total of 900 employees and 941 people from the community (1,841 in total) participated with their time and work in 103 volunteering actions, putting in 10,875 hours of volunteer time. The activities range from painting and repairing schools to cleaning and improving public spaces and mentoring school children.

## Community Indicators

### Technical Gene

Students and teachers involved



### Technical Gene, students and teachers involved\*

Community	2015	2016	2017
Bay City	1	7	10
Bergamo	89	-	-
Blytheville	-	8	393
Cartagena	-	-	169
Pindamonhangaba	262	377	332
Sault Saint Marie	-	-	60
Veracruz	893	145	365
Zalau	580	775	549
Zárate/Campana	233	542	401
<b>Total</b>	<b>2,058</b>	<b>1,854</b>	<b>2,279</b>

\* The number of participants reported in previous years has been revised to inform by school year.

### AfterSchool program, students involved\*

Community	2015	2016	2017
Blytheville/ Bay City/Houston	-	-	100
Cartagena	61	126	205
Montevideo	-	46	87
Pindamonhangaba	59	47	47
Veracruz	151	234	234
Zalau	92	131	-
Zárate/Campana	42	91	76
<b>Total</b>	<b>405</b>	<b>675</b>	<b>749</b>

\*\* The number of participants reported in previous years has been revised to inform by school year.

### Roberto Rocca Education Program Active scholarships by country

Country	2015	2016	2017
Argentina	182	157	129
Brazil	27	20	24
Canada	11	5	3
China	19	10	10
Colombia	32	16	17
Ecuador	5	1	0
Guatemala	5	4	5
Indonesia	6	0	6
Italy	45	32	32
Japan	8	8	8
Mexico	173	139	136
Romania	41	40	40
UK	2	1	0
Uruguay	6	4	4
USA	34	31	18
<b>Total</b>	<b>596</b>	<b>468</b>	<b>432</b>

### Merit Awards by country

Country	2015	2016	2017
Argentina	296	230	215
Brazil	200	200	200
Canada	54	54	54
Colombia	50	-	-
Indonesia	198	207	219
Italy	68	80	85
Mexico	101	140	150
Nigeria	20	24	30
Romania	495	423	456
USA	25	24	25
<b>Total</b>	<b>1,491</b>	<b>1,381</b>	<b>1,429</b>

More communities continue to join the volunteering program. For the first time, an action was carried out by our team in Pindamonhangaba, Brazil, where employees worked to renovate the María Aparecida School.

In 2017, serious natural disasters affected two of the countries where Tenaris has important presence. Hurricane Harvey flooded southwestern Texas, and a 7.1-scale earthquake affected southern Mexico. The company and employees responded by raising funds for the victims and with special volunteer actions to distribute help.

#### **Culture and diversity for integration**

In 2017, we allocated 30 percent of our community budget to cultural activities. We seek the promotion of identity and diversity with a focus on excellence and creativity.

We have two global programs in the field of culture, which we try to replicate in all our locations: the film festivals and the photo libraries. Their aim is to encourage cultural integration and identity, and preserve our communities' heritage.

In this period, we organized seven Latin American film festivals in four countries: Argentina, Italy, Romania and the United States. A total of 8,470 people attended and 37 films were screened.

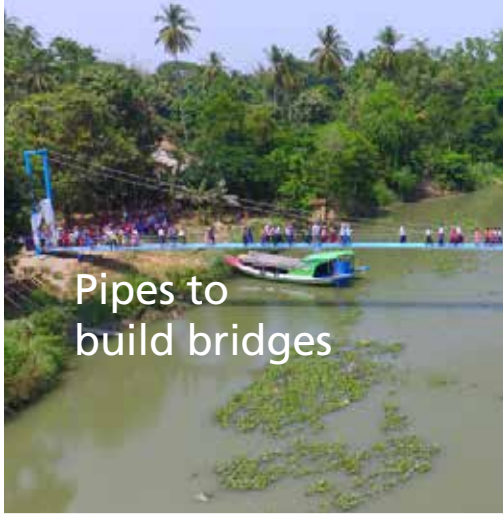
We continued to expand the Photo Library program, an initiative that collects and preserves the photographic memory of the locations where we operate. Under the guidance of the PROA Foundation (see below), we run libraries in Campana, Veracruz, and Montevideo, Uruguay. In 2017, we carried out 49 exhibitions. Over 2016 and 2017, 10,000 new photos were digitalized in Campana and Veracruz. The Campana photo library has an online archive ([www.fototecacampana.org](http://www.fototecacampana.org)) in order to make these resources easily available for the public.

The Fondazione Dalmine (Dalmine Foundation), which opened in 1999 next to our mill in Bergamo, Italy, is tasked with compiling and preserving the historic heritage of our industrial facilities and our organization around the world. The Fondazione's archive keeps some 120,000 documents, 80,000 photographs, 500 films, 5,000 drawings and 900 other objects depicting the centennial-plus industrial history of our industry in the region. It regularly opens the Foundation's premises for photo exhibitions and other cultural events.

The Foundation also engages the community via its program for schools ("Fondazione Dalmine per le scuole"), which delivers hands-on workshops on the past and present of the region's history for elementary and high school students. In 2017 over 4,500 students participated in these workshops. Fondazione Dalmine offers high-school students training experience in the foundation and at our industrial plant in Italy, Dalmine.

Tenaris and its sister companies in the Techint Group sponsor PROA Foundation, and art gallery in the neighborhood of La Boca in Buenos Aires, Argentina; and Galleria d'Arte Moderna e Contemporanea (GAMEC) in Bergamo, Italy. PROA has become a major hub for contemporary and modern art in Buenos Aires. Its exhibits of international excellence seek to encourage critical thinking and creativity. Last year PROA welcomed 112,000 visitors and held three major international exhibitions: the presentation of the French artist, Yves Klein; the audiovisual installation Manifest by Julian Rosefeldt; and an exhibition by Chinese artist Ai WeiWei, Inoculación.





## Pipes to build bridges

For almost three decades, Toni Ruttiman, has brought together the lives of more than two million people in Latin America and in South East Asia with suspension bridges he builds with the collaboration of the people that will benefit from them. Tenaris supports his work donating the pipes used to build them.

Mr. Ruttiman is a Swiss national who started his bridge-building mission after visiting Ecuador in the aftermath of the 1987 earthquake that left tens of villages incommunicado. Since then, he has led the construction of 308 bridges in the country, but also expanded his mission to the rest of Latin America and to the South East Asia. In total, he has built 779 bridges in 13 countries.



“Building bridges with the communities is a way of expressing love, creating harmony. It is beautiful to solve a problem working together with those who are interested and willing to contribute with their own effort in helping our their communities,” Mr. Ruttiman says.

Tenaris has donated through the years 1,700 tons of material to Mr. Ruttiman’s mission: 64% of his bridges stand on Tenaris’s pipes.

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