



Sustainability Report

2022

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Chairman's Letter

2022 was a record year for Tenaris. We were able to take advantage of favorable market conditions, particularly in North America, and the efficient deployment of our global industrial system to generate strong increases in sales and margins through the year.

Our sales grew 80% to USD 11.8 billion, our EBITDA rose to USD 3.6 billion, and our net income rose to USD 2.5 billion, or 22% of net sales. With a solid balance sheet and good prospects for an increase in cash flow in the year ahead, we are proposing to raise our dividend for the 2022 year by 24% to USD 0.51 per share.

We produced over 3.5 million tons of steel pipes worldwide, sustaining an ongoing ramp up of our facilities in the USA and high levels of production throughout our industrial system. Despite the use of longer and more complex production and logistics routes, we were able to maintain high standards for safety, product quality and consumption of materials.

During the year, we hired 6,500 new employees and, in our induction training routines, we paid close attention to the importance of having a safety mindset with awareness and behaviors suitable for the industrial environment of our shop floor. We empower all our employees to be proactive in always taking preventive safety actions. Our lost time injury frequency rate for the year declined by 10% to 0.9 per million man hours worked. We are grateful to our people working in the plant for their contribution to this result.

We increased the deployment of our Rig Direct® services. We are now serving over 500 rigs directly worldwide. Our unique service platform allows us to integrate our operations more closely with our customers, minimizing material production and flows, and provide digital and technical services that can further differentiate us from our competitors.

As we increased production, sales and service, our logistics operations have reached a substantial magnitude. To give an idea of the efforts involved, between inter-mill transportation and delivery to customers, we moved around 10 million tons of material all around the world. We are strengthening the reliability of our supply chain through the digitalization of our material flows.

2022 marked a turning point in our deployment in the United States. The country accounted for more than 40% of our total sales, most of which are now produced locally. We brought the Bay City mill to full production capacity and ramped up production in the rest of our US industrial system including the restart of production of welded pipes and of heat treatment and finishing at our Baytown and Koppel sites. We hired more than 1,500 new employees during the year and now employ 3,600 persons in the country.

The energy transition is progressing, but its pace will be gradual. The phasing out of fossil fuels needs to be balanced with considerations of energy security, access and affordability in a world which has distinct regional priorities. Our role is to support our customers with high quality, efficient tubular solutions so that current sources of energy can be delivered securely and affordably with the lowest impact possible on the environment. At the same time, we are developing products and solutions for cleaner sources of energy and carbon abatement systems, such as hydrogen, geothermal energy and carbon dioxide transportation and storage systems.

An essential part of our role is to reduce the carbon emissions from our operations as quickly as technology and market conditions allow. We are making good progress towards our initial target of reducing the carbon emissions intensity of our operations by 30% by 2030 compared to a 2018 baseline. Around 30% of our capex is now being directed to projects that will contribute to this target and other environmental objectives. In addition to our wind farm in Argentina, we will be making investments which will contribute to improving energy efficiency in Italy and Argentina and improving air quality at our Koppel steel shop in the United States.

As we look ahead, we view that the current balance in the oil market and high demand for LNG will support oil and gas prices and investment in the sector. We expect that the number of oil and gas wells drilled around the world in 2023 will increase and this will drive global OCTG demand to around 16 million tons to reach its highest level since 2014.

With the increase in activity, we expect further sales and cash flow growth with increases in sales to offshore developments, in the Middle East and in pipeline infrastructure in South America.

Our achievements over the past year that will support this growth include: our multi-year agreement with ExxonMobil to supply their offshore operations in Guyana; our agreements with Petrobras to supply their pre-salt operations; the renewal of our long-term worldwide agreement with ENI; the renewal of our long-term agreement with QatarGas and the consolidation of our long-term agreement with ADNOC. We also extended our long-term agreements with YPF and Pemex and were awarded supply agreements for major gas pipeline projects for the Vaca Muerta field in Argentina and the North Field expansion in Qatar.

The sustainability of our operations worldwide depends on the support and development of our local communities. Safety and care for the environment are paramount, as is support for employee and community development. Given its essential role in progress and development, we have put education at the core of our community activities.

Our efforts to strengthen technical education are increasingly recognized. The Roberto Rocca Technical School in Campana became the first school in Argentina to be qualified as a Technical Training Center providing certifications to members of the local community for Industry 4.0 -related technical training, in partnership with German automation and industrial companies, FESTO and Siemens.

In Cartagena, Colombia, through our Roberto Rocca Technical Gene program, we helped to redesign a technical school, introducing new technical study courses in partnership with the SENA national learning system and improving job opportunities with local industrial companies for young people in the community.

Over the past year, Tenaris has made good progress on many fronts and produced record financial results. We have been able to achieve this only thanks to the confidence our customers have placed in us and the constant efforts and outstanding performance of our diverse and united team of employees around the world in a volatile and fast-moving environment. We thank them together with our suppliers and shareholders for their continued support for our company.

Sincerely,



Paolo Rocca

March 31, 2023

Sustainability in 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, 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.

Although our operations focus on serving the oil and gas industry, we also supply pipes and tubular components for non-energy applications. We develop and supply products and services for low-carbon energy applications such as geothermal wells, waste-to-energy (bio-energy) power plants, hydrogen storage and transportation, and carbon capture and storage.

Through an integrated global network of R&D, manufacturing and service facilities, and a team of 25,000 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. They are clearly reflected in our QHSE policy (www.tenaris.com/en/sustainability/), and our Code of Conduct (www.tenaris.com/en/sustainability/governance-and-ethics/), and are embedded in all aspects of our business processes. This report, now in its ninth edition, shows how these values translate into concrete actions and are reflected in our performance indicators.

As a long-term project, Tenaris goes back over six decades. Since we opened our first mill on the banks of the Paraná River in Campana, Argentina, in the early 1950s, our prime objective has been to grow together with the communities where we work and live. We are equally committed to providing our employees with a safe working environment and opportunities for professional development; to minimizing our environmental footprint, and being a reliable partner for our customers.

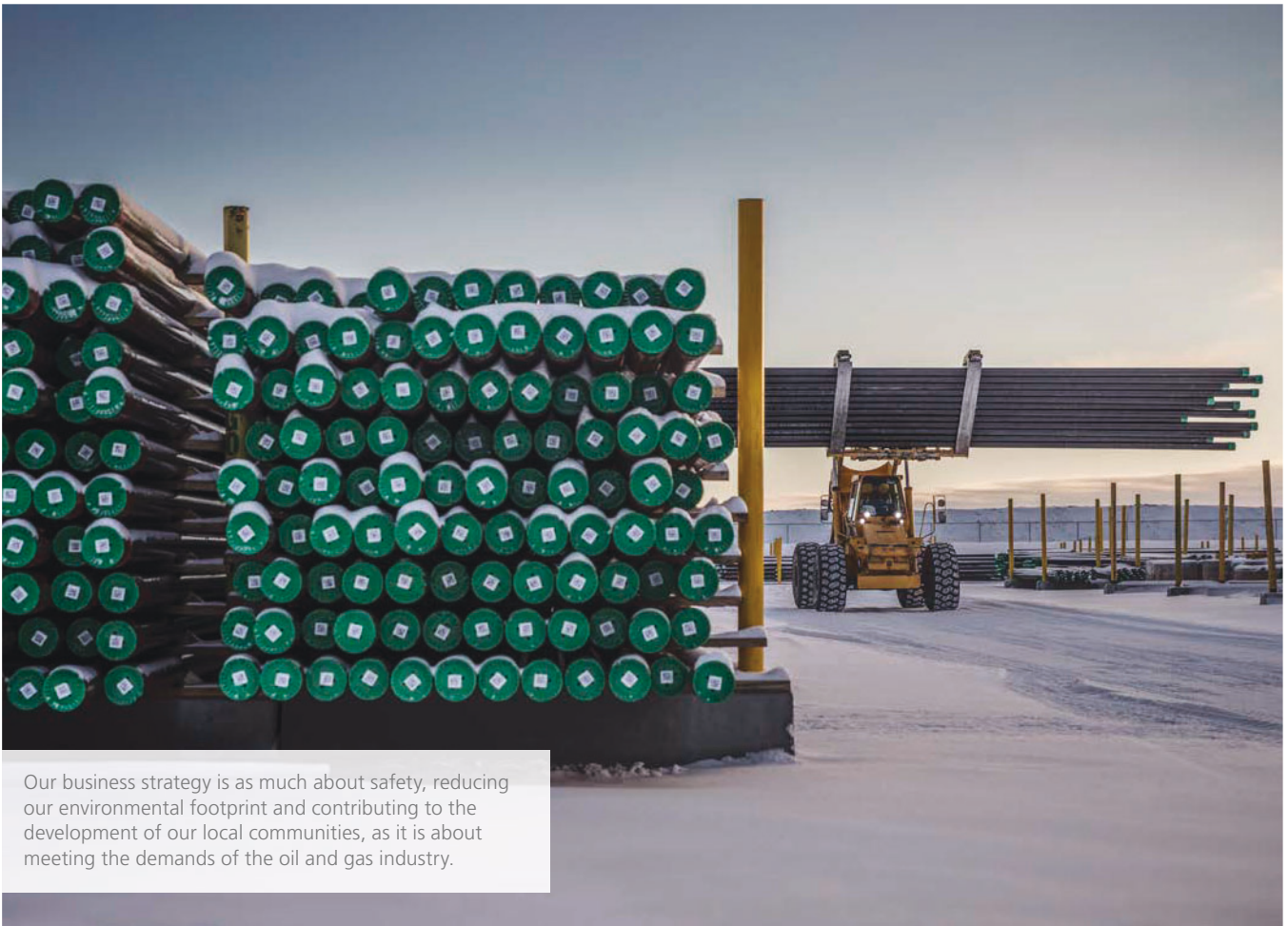
Tenaris is a signatory to the United Nations Global Compact, a commitment to translate the Ten Principles deriving from the Universal Declaration of Human Rights into daily business activity. Our Human Rights Policy is a pledge to conduct company operations commensurate with human rights principles.

Although steel can be reused and recycled indefinitely, playing a key role in the development of society and improving quality of life, the steel industry is a significant source of carbon emissions worldwide. The industry has joined forces to promote transparent reporting and take action to reduce emissions, with Tenaris playing a leading role in these initiatives. For the past five years, worldsteel has named Tenaris a Sustainability Champion for "leading the way in creating a truly sustainable steel industry and society."

We have integrated climate change risks into our governance and business strategy, and set a medium-term target to reduce the carbon intensity of our activities by 2030 as part of our longer-term carbon neutrality objective. As a leader in our industrial sector, we aim to be at the forefront of sector carbon performance and initiatives to reduce emissions.

A significant part of our investments goes to improving safety, reducing the environmental impact of our operations, and advancing educational standards and opportunities in our communities, considered critical to our long-term sustainability.

Our Health, Safety and Environment, and Quality Management systems are designed according to the latest versions of the ISO 14001, ISO 45001 and ISO 9001 standards. Today, 89% of our production sites are working under management systems certified according to these standards.



Our business strategy is as much about safety, reducing our environmental footprint and contributing to the development of our local communities, as it is about meeting the demands of the oil and gas industry.

Our reporting, in context

Tenaris is committed to strengthening a corporate culture of integrity, transparency and rational decision-making. We aim to transparently disclose and communicate all issues with a positive or negative effect on our internal and external stakeholders. This report has been prepared with reference to the Global Reporting Initiative (GRI) and is based on the guidelines established by worldsteel, the UN Global Compact, the Sustainability Accounting Standards Board (SASB) and the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Please see the GRI, SASB and TCFD content indices at the end of this report. We have identified, evaluated and prioritized topics that can materially impact our ability to sustainably achieve our objectives, taking into consideration these guidelines and our own risk assessment. These indicators were chosen to show the most relevant aspects of our execution in the areas of Economic Performance; Health and Safety; Environment; Innovation and the Value Chain; Human Capital; Community Relations; and Governance, Risk and Compliance.

The material topics selected cover our whole value chain, from sourcing, product manufacturing and services delivery, to the end use of our products. They take into account information from our stakeholders and reflect our internal strategy and objectives. In this report, we highlight how our actions contribute to achieving the Sustainable Development Goals defined by the UN in 2015. This report, which is part of our 2022 Annual Report, has been approved by the board of directors of Tenaris S.A. (the “Company”) on March 31, 2023, and includes the non-financial information required to be disclosed in accordance with Luxembourg law.⁽¹⁾ Certain selected information contained in this report has been reviewed under ISAE 3000 Limited Assurance by our external auditors, PwC Société cooperative. Please see the “Accounting policies” section for specifications on methodologies and criteria used to calculate the performance indicators included in the report.

⁽¹⁾ Article 1730-1 of the Luxembourg Law of August 10, 1915, on commercial companies, as amended, and Articles 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.

Climate Change

Tenaris recognizes that climate change presents significant risks to society in general and to its business in particular, taking into account the markets where we operate, the potential impact of government regulations on our operations and those of our customers, and the location of our physical assets. Tenaris also acknowledges that climate change offers strategic opportunities to consolidate its leading market position and diversify sales. Please see the “Risk factors” section of our 2022 Annual Report for further details of our climate change-related risks.

Given the relevance of climate change for Tenaris’s overall business and strategy, the Company’s board of directors reviews the development and implementation of our strategy to address climate change on a quarterly basis. The Company’s board of directors has appointed its Vice-Chairman, Germán Curá, to take responsibility for this topic and keep it informed of the progress made.

As part of our efforts to address climate change, we are investing in and adapting our operations to reduce their carbon intensity, and developing products and services for use in low-carbon energy applications. We regularly assess and track global progress towards the energy transition, monitoring the goals, policies, regulations, technologies and other global and national developments that may speed up or hinder the progress of this transition in the years ahead, or may present any risks to our operations.

We continue to strengthen our disclosure of climate change-related information in accordance with the most relevant international frameworks and standards that are being developed. This year, for example, we are reporting our carbon dioxide emissions using the Greenhouse Gas (GHG) Protocol methodology, which, despite differences with worldsteel’s methodology, does not materially alter past reported results.

We work closely with our customers as they seek to establish sustainable sourcing policies throughout their supply chain, thus requiring a more specific disclosure of climate change-related impacts. For this purpose, we have joined the Carbon Disclosure Project (CDP) and are using the Ecovadis and Open-es sustainability assessment platforms, among others.

We also encourage the use of sustainable practices among our suppliers and are introducing a Sustainable Sourcing Policy to strengthen our efforts in this area.

EAF producer

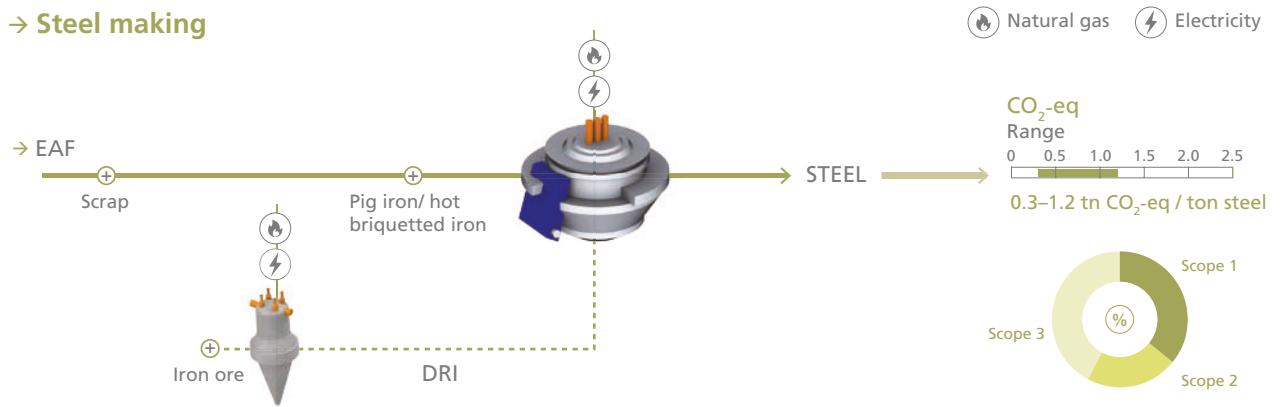
All the steel we manufacture is produced in electric arc furnaces using recycled steel scrap as the primary source of metallic feedstock. We supplement the use of steel scrap with metallic raw materials such as pig iron, direct reduced iron and ferroalloys to meet quality, productivity and materials specification requirements. In Argentina, where the availability of steel scrap is limited, we operate a facility to produce direct reduced iron using natural gas.

Steel produced in electric arc furnaces using a high proportion of scrap in the metallic charge generally has a substantially lower carbon intensity than steel produced using iron ore and metallurgical coal as the primary feedstock. The carbon emissions intensity for steel products produced at our steel manufacturing sites is around 40% below the average for the global steel industry (as reported by worldsteel).

We also purchase steel from third-party suppliers, primarily for the production of welded pipe products. As many of these suppliers produce steel products using iron ore and coal, the carbon emissions intensity of our pipes produced with this steel is often higher than that of those manufactured using our own steel.

Emissions by process

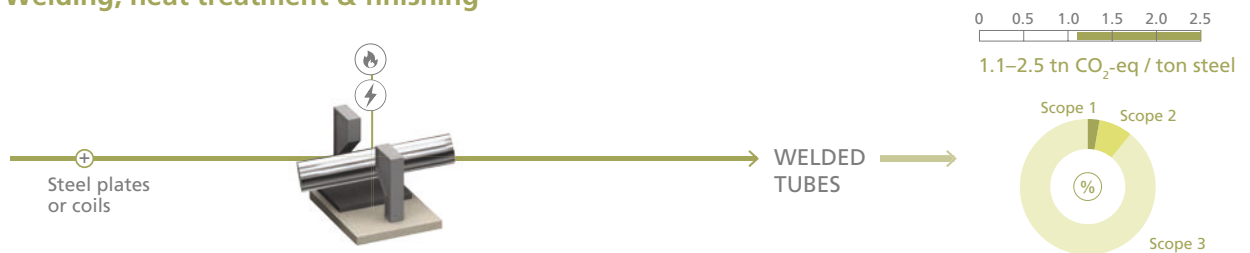
→ Steel making



→ Rolling, heat treatment & finishing



→ Welding, heat treatment & finishing



Average values of CO₂-eq intensity.

Scopes: 1: Direct emissions from the site. 2: Indirect emissions related to electricity consumption. 3: Indirect emissions related to raw materials use.

Reducing the carbon intensity of our operations

In February 2021, we set a medium-term target to reduce the carbon emissions intensity of our operations by 30% by the year 2030, compared to a 2018 baseline, considering Scopes 1, 2 and 3 emissions. Within Scope 3 emissions, the target considers emissions related to raw materials and steel purchased from third parties, which represents the largest source of our Scope 3 emissions.

To achieve this target, we have increased the proportion of recycled steel scrap in the metallic mix used for the steel we produce, and we are investing in projects to continue improving energy efficiency and increasing the share of renewable or low carbon electricity, as well as investing to further improve scrap handling and collection in our operations.

In 2022, we invested USD 110 million in projects which are expected to help reduce the carbon intensity of our operations and improve their environmental performance. We expect investments in such projects to increase further, accounting for some 30% of our total capital expenditure in 2023.

We have already made good progress towards this strategic objective. By focusing on energy efficiency and increasing the proportion of steel scrap used in our electric furnaces, the carbon emissions intensity of our tubular operations has declined to 1.17 tons of CO₂ equivalent per ton of steel processed. This compares with the 1.43 tons of CO₂ equivalent per ton of steel processed in 2018. Our emissions refer to the GHG Protocol, and have been reviewed by our external auditors.

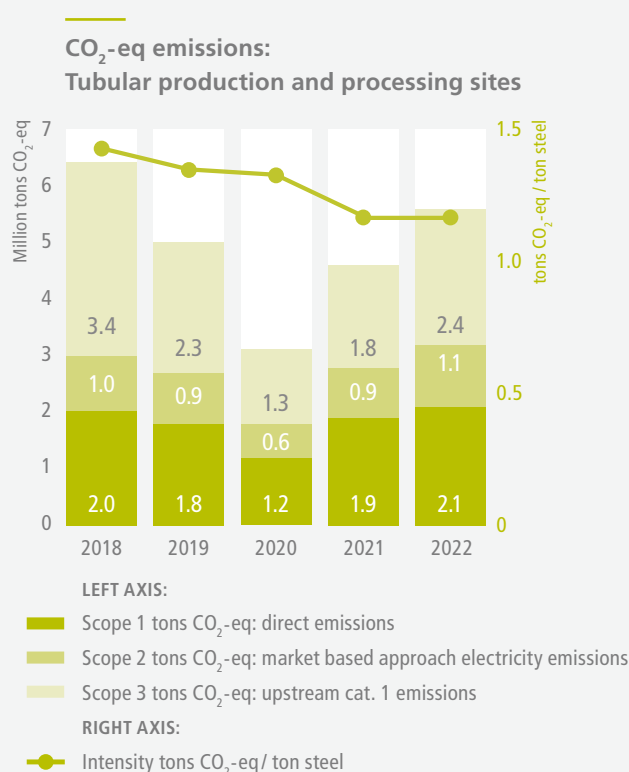
Much of the reduction in emissions intensity achieved to-date has been through increasing scrap use and reducing the use of purchased pig iron, thus reducing Scope 3 emissions. In 2022, however, Scope 3 emissions intensity rose as we increased the proportion of welded steel pipes in our mix to meet the strong demand for pipeline projects in Latin America and the Middle East. Both, the demand for pipeline projects and Scope 3 emissions are expected to rise further in 2023.

Nevertheless, we were able to reduce Scope 1 emissions intensity in 2022, largely through greater energy efficiency, and will continue investing in this area as well as in higher scrap use.

We are also investing in reducing Scope 2 emissions intensity by using renewable energy at our facilities around the world. We are building a wind farm in Argentina with an investment of approximately USD 200 million, due to come into operation in the second half of 2023. The wind farm project is expected to reduce our CO₂ emissions in Argentina by some 150,000 tons per year, supply close to 50% of the electricity requirements at our Siderca mill, and reduce our exposure to government-fixed electric power prices. In Europe, we are making some small renewable energy investments, seeking further opportunities to increase renewables use at our sites.

Our medium-term target to reduce the carbon intensity of our operations is the first step toward decarbonizing them to reach net zero carbon emissions. The timing for achieving this goal depends on different factors, such as emerging technologies as well as market and regulatory conditions, including carbon pricing and customer support. We are allocating substantial resources to our decarbonization strategy, which we also expect to boost our competitive positioning.

As we pursue our strategy of decarbonizing our operations, we are exploring a range of possibilities with our partners from around the world, knowing that there is no one solution and certain alternatives are better suited to specific sites or regions, depending on local infrastructure, resources, and conditions. As industry leaders, we seek to be competitive in offering our customers low-carbon products.



CO₂-eq emissions intensity (CO₂-eq ton/ ton steel cast or processed)

	2018	2019	2020	2021	2022
Scope 1	0.45	0.47	0.48	0.48	0.43
Scope 2	0.22	0.26	0.26	0.23	0.24
Scope 3	0.76	0.62	0.60	0.46	0.50
Total	1.43	1.35	1.33	1.17	1.17
Intensity variation vs. 2018		-6%	-6%	-18%	-18%



Rating 68/100
93rd percentile



Level reached: 9/12

Average benchmark: 5/12
Top benchmark: 9/12

Internal carbon price and financial considerations

To accelerate the fulfilment of our decarbonization targets and anticipate the future implementation of carbon pricing mechanisms around the world, we have introduced an internal carbon price at a minimum of USD 80/ton. This internal carbon price is primarily used to evaluate investments in projects that could contribute to lower carbon emissions and decarbonize our operations.

We constantly monitor the evolution of our main customer strategies and scenarios for future energy demand, considering the global objectives to address climate change by reducing carbon emissions as well as governments objectives to achieve a carbon-neutral economy. We also assess the future market outlook for our products with reference to the different scenarios for oil and gas demand published by our customers, international agencies such as the International Energy Agency (IEA), and expert energy market consultancies, such as Rystad.

We pay particular attention to the historical record and potential pace of change in the adoption of new technologies, regulations and behaviors which may affect future oil and gas demand. These scenarios and assessments provide fundamental input for formulating and evaluating our business strategy and how we address the risks and opportunities posed by climate change.

There are many potential outcomes and much uncertainty about the pace at which the transition may be accomplished as we move from today's use of fossil fuels, including oil and gas, to cleaner fuels, while overall energy demand is expected to rise.

Tenaris takes these risks into consideration when evaluating its investments in projects and the acquisition of equipment to produce steel pipes, factoring them into the accounting estimates and assumptions used to assess the carrying value of its assets.

Products for the energy transition

As suppliers of tubular products and services to the energy industry, we see in the energy transition an opportunity to develop new products and services for potentially fast-growing segments like hydrogen transportation and storage, carbon capture and sequestration (CCS), and geothermal installations. In the past two years, we have increased investments in R&D and our organizational focus in these areas, which are expected, eventually, to contribute a relevant revenue stream.

We have developed a range of materials technologies suitable for use in hydrogen storage and transportation, where there is growing demand for large, high-pressure vessels used in the build-out of hydrogen refueling stations for heavy-duty vehicles and buses, mostly in Europe and California. We are also seeing increasing interest from customers in developing CCS projects.

During 2022, we delivered the pipes for a pipeline for the Northern Lights CCS project in Norway. Following extensive product testing, we were awarded a contract to supply casing for CO₂ injection wells for the UK's Hynet project.



Our field-proven Dopeless® technology replaces the use of running compounds, increasing reliability for cleaner, safer and more sustainable operations.



Stakeholder Engagement & Materiality Analysis

Stakeholder Engagement

In 2022, we continued to track those sustainability issues in which our stakeholders show most interest through ongoing involvement and dialogue, enabling us to take the views and interests of our workforce, customers, investors and trade associations into account when determining the material factors considered in this sustainability report.

Employees

Our people are the foundations of our company's success, and thus attracting, developing and retaining the talent we need is a top priority. The backdrop of shifting workplace values as new hybrid working practices become the norm presents fresh challenges for engaging with our present and future talent.

To keep pace with these changes, we emphasize dialogue and exchange between managers and their teams through quarterly feedback check-ins, periodic Town Halls, Employee Opinion and Pulse Surveys, and performance reviews to address concerns and other issues.

In 2022, our CEO broadcast four Live Talks followed by Q&A sessions where employees from around the world were invited to ask any questions they wanted, and feedback was requested from the audience after the event.

Customers

We pursue active dialogue with our customers to understand their needs and priorities, and have formed long-term partnerships with many, leading to opportunities for supply chain, technological and digital integration.

Our customers regularly discuss with us the challenges and difficulties they encounter in the course of their business, fostering new opportunities to invest in technology, research and development, and to design and improve our range of products and services.

In 2022, some customers asked us to contribute to sustainability surveys of their supply chain, as well as provide data about Tenaris's performance for sustainability benchmarking and global disclosure systems such as the Carbon Disclosure Project (CDP) or EcoVadis, among others. This enabled us to ratify key sustainability topics of interest.

Suppliers

A key part of our drive to develop increasingly sustainable procurement practices involves inviting our suppliers to help us understand their sustainability risks and topics of interest.

We work with our suppliers to strengthen our supply chains, sharing know-how through various different training and assistance programs. Through Exiros, our specialized procurement company, whose ownership we share with our sister company Ternium, we receive feedback about the sustainability issues of greatest interest to suppliers.

Communities

We maintain constant dialogue with the communities surrounding our major plants through specific social media channels developed for each one. We use these channels to alert our communities about specific issues that could affect them, and encourage them to express their concerns.

Further engagement with our communities comes through our actions to support education and students in our communities, working with students and teachers as well as school authorities, on the basis of a constant assessment of needs and results, identified through dialogue and exchange.

Investors

We maintain fluent communication with our shareholders through quarterly conference calls, in-person meetings and quarterly requests for anonymous feedback. These occasions present opportunities for us to exchange information and track trends.

Based on the ratings sponsored by investors, such as MSCI and Sustainalytics, as well as investor feedback in general, we have been able to establish key areas of interest.

Government

We give great importance to the critical role played by government agencies in protecting the environment, the economy and social welfare. We work closely with government officials and regulatory agencies to ensure we comply with applicable laws and regulations. In addition, we exchange information and points of view aimed at articulating actions to benefit all stakeholders.

Industry Associations

As members of several industrial associations, we work alongside our peers in the industry to address common challenges, sharing best practices to create a truly sustainable steel industry and society, as demonstrated in our commitment to sustainable development and the circular economy. We focus on contributing to sustainable sourcing, manufacturing practices and integrated supply chain management in efforts to reduce the industry's footprint as a whole. We play an active role in worldsteel, and have taken into consideration its latest materiality assessment as a basis for our analysis, with nine sustainability topics relevant to the steel industry and its stakeholders, including climate action, circular economy, environmental care, safety & health, our people, local communities, responsible value chain, ethical & transparent operations, and innovation & prosperity.

Materiality Analysis

Our definition of material topics has taken into account a combination of internal and external factors, topics which may reasonably be considered to be relevant inasmuch as they reflect our economic, environmental and social impacts, or have an influence on the decisions of our stakeholders.

These factors include Tenaris's own considerations and strategy, concerns expressed by stakeholders, and aspects covered by the different guidelines used to prepare this report: worldsteel, UN Global Compact, GRI, SASB, and TCFD. Additionally, we also take into account expert investigations and a raft of broader economic, environmental and interests raised by stakeholders, as well as the sustainability risks identified in the risk management roadmap prepared by our Critical Risk Committee (CRC).

Our impacts

In this section, we cover the impacts our actions may have on society and the environment, occurring during the course of our daily activities.

We take an holistic approach to the impacts, risks and opportunities related to Tenaris's activities and its financial impact, considering both potential and actual effects on Tenaris, and potential and actual impacts generated by Tenaris.

Positive impacts are those where we contribute to society and sustainable development through our activities. For instance, we manufacture high-quality pipes that are used to meet a significant proportion of the world's energy requirements. We foster socio-economic development by providing jobs, training and development for our 25,000 employees and our 8,600 suppliers. We are also a relevant taxpayer in the societies where we operate, and provide educational, health and cultural support for the communities where we work. Please see our "Economic value generated and distributed in 2022" graph in the Economic Overview section.

At the same time, we recognize that our actions can lead to negative impacts, particularly on the environment: through emissions, spills, waste, and effluents discharged into water, soil and air. Additionally, we recognize that our activities could, potentially, represent a risk to the health, safety and well-being of our employees, contractors and suppliers, or affect their human rights.

To reduce and minimize those risks, we have implemented several policies and management processes, while taking action to minimize or mitigate negative effects.

Each chapter in this report describes the challenges that we face and the policies developed or commitments made, as well as the actions taken to address each topic in particular and to manage related impacts.

People

- Employee health & safety
- Employee training, development, retention and engagement
- Diversity, inclusion and equal opportunities
- Human rights and freedom of association
- Community relations and development

Planet

- Climate change: greenhouse gas emission reduction and energy efficiency
- Environment aspects: air emissions, water and waste management and material efficiency

Prosperity

- Energy transition: development of low-carbon product portfolio
- Economic performance and distribution
- Innovation
- Customer relationships / satisfaction
- Supply chain sustainability

Governance

- Corporate governance, business ethics and transparency
- Risk management



We ensure continuing engagement with our employees, by prioritizing dialogue and exchange through regular opinion surveys as part of our drive to foster a culture of transparency and dialogue in the workplace.

EU taxonomy

The following information is provided in accordance with Article 8 of Regulation (EU) 2020/852 of the European Parliament and of the Council, supplemented by Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021 and Commission Delegated Regulation (EU) 2021/2178 of 6 July 2021 (both as amended by Commission Delegated Regulation (EU) 2022/1214 of 9 March 2022), (collectively, the “Taxonomy Regulation”).

Tenaris’s Tubes segment includes the production and sale of both seamless and welded steel tubular products and related services mainly for the energy industry, particularly casing and tubing, or OCTG, used in oil and gas drilling operations and line pipe used in the transportation and processing of oil and gas, but also for other industrial applications. Our processes include steel manufacturing and its transformation into tubular products.

Business activities included in this segment are largely dependent on the oil and gas industry worldwide, as this industry is a major consumer of steel pipe products.

Major oil and gas companies are beginning to adapt their strategies and increase their investments in renewable energies to address the energy transition while maintaining their capability to meet market demand and reduce the emissions from their operations.

As the energy transition advances, demand for our products and services for low-carbon energy applications, such as geothermal, hydrogen and carbon capture and storage, is expected to increase, while demand for oil and gas applications may decrease.

Additionally, as part of our efforts to address climate change, we are investing in adapting our operations in line with our target to reduce their carbon emissions intensity rate by 30% by the year 2030, compared to a 2018 baseline.

All the steel we manufacture is produced in electric arc furnaces (EAF) using recycled steel scrap as the primary source of metallic feedstock. Steel produced in EAF using a high proportion of scrap in the metallic charge has a substantially lower carbon intensity than steel produced using iron ore and metallurgical coal as the primary feedstock.

IDENTIFICATION AND ASSESSMENT OF ECONOMIC ACTIVITIES

Taxonomy eligibility

We have examined all economic activities carried out by Tenaris and we have identified the following two activities as taxonomy-eligible economic activities in accordance with the Taxonomy Regulation:

- 1) 3.9 Manufacture of iron and steel, Nace Code C24.20 Manufacture of tubes, pipes, hollow profiles and related fittings, of steel (“steel tubes manufacturing”); and
- 2) 4.3 Electricity generation from wind power, Nace Code D35.11 Production of electricity (“wind power electricity generation”).

Taxonomy alignment

Substantial contribution

An economic activity is taxonomy-aligned if it complies with the first requirement described in the Taxonomy Regulation by contributing substantially to one or more of the environmental objectives.

For fiscal year 2022, we have concluded that both taxonomy-eligible activities performed by Tenaris—steel tubes manufacturing and wind power electricity generation—substantially contribute to climate change mitigation (CCM) based on the technical screening criteria for substantial contributions to CCM, set forth in the Taxonomy Regulation, as described below:

Steel tubes manufacturing: Tenaris has considered that its steel tubes manufacturing activity contributes to CCM when, at a facility level:

- GHG emissions applied to electric arc furnace (EAF) high alloy steel do not exceed = 0.266116 t CO₂-eq product (Scopes 1 + 2); and/or
- Steel scrap input relative to product output is not lower than 70% for the production of high alloy steel.

Wind power electricity generation: the activity generates electricity from wind power and contributes to the reduction of Scope 2 emissions.

Do No Significant Harm (DNSH)

We have then analyzed the DNSH criteria for both taxonomy-eligible activities that contribute substantially to CCM by assessing the relevant sites where we perform those economic activities.

For fiscal year 2022, we have concluded that both activities comply with DNSH criteria for all other environmental objectives.

With respect to DNSH to climate change adaptation, a physical climate risk assessment is performed in accordance with the Taxonomy Regulation. As further explained in the “Corporate, Risk and Compliance” chapter of this report, the Company’s Critical Risk Committee focuses on risks considered to be critical and that may have a material effect on Tenaris’s assets, operations or reputation. Risks are evaluated according to the area that may be potentially impacted, the likelihood of their occurrence and the materiality of their effects. Environmental, health and safety, and regulatory risks are considered to be critical risks and monitored by the CRC, which periodically reports to the board of directors. For further information on physical risks resulting from climate change, please see “*The physical risks resulting from climate change, including extreme weather conditions and shifts in weather patterns, have in the past and may in the future adversely affect our operations and financial results*” in our “Risk Factors” section of our 2022 Annual Report.

EU Taxonomy KPIs:

	FY 2022 in USD million	FY 2022 Share %
Total sales (turnover)	11,763	100%
of which taxonomy-eligible	11,133	95%
of which taxonomy-aligned	7,131	61%
Total investment expenses (CapEx)	378	100%
of which taxonomy-eligible	375	99%
of which taxonomy-aligned	222	59%
Total operating expenses (OpEx)	318	100%
of which taxonomy-eligible	299	94%
of which taxonomy-aligned	185	58%

Similarly, both taxonomy-eligible economic activities performed by Tenaris meet the DNSH criteria to sustainable use and protection of water and marine resources, pollution prevention and control and biodiversity protection, as further explained in the “Environment” chapter of this report.

Minimum Safeguards (MS)

The final step to taxonomy-alignment is compliance with the MS, which include human rights, corruption and bribery, taxation and fair competition. Adequate and effective processes have been implemented to ensure that both taxonomy-eligible activities comply with the MS.

We understand that the behavior of our employees, officers and directors, as well as other participants along our value chain, plays a central role in complying with MS. Our Code of Conduct covers, among others, all four topics of the MS. Throughout this report and, in particular, in our “Governance, Risk and Compliance” chapter, we described our commitment, objectives and actions to ensure a corporate culture of transparency and integrity, based on ethical behavior and compliance with the law.

Key performance indicators (KPIs)

See below a summary of EU Taxonomy KPIs for our taxonomy-aligned and taxonomy-eligible economic activities. The complete disclosures of KPIs relating to these activities can be found in Annex V.

Definition and calculation of KPIs

KPIs required to be disclosed in connection with taxonomy-eligible and taxonomy-aligned activities have been calculated based on the accounting policies applied in the consolidated financial statements, prepared in accordance with International Financial Reporting Standards (IFRS).

Total turnover

The turnover KPIs represent the proportion of net turnover derived from products or services that are taxonomy-eligible, and the proportion of net turnover derived from products or services that are taxonomy-aligned.

Taxonomy eligibility: all sales derived from our Tubes segment have been considered as taxonomy-eligible:

- numerator: sales derived from the Tubes segment.
- denominator: total sales as disclosed in the consolidated income statement.

Taxonomy alignment: revenues derived from the sale of seamless tubular products have been considered taxonomy-aligned (based on the applicable technical screening criteria). We have excluded revenues derived from sales of welded tubular products because we lack information with respect to the steel purchased from third parties for the production of welded pipes, for the purposes of ensuring taxonomy alignment.

- numerator: sales of seamless tubular products produced in taxonomy-aligned steel shops.
- denominator: total sales as disclosed in the consolidated income statement.

For further information on our turnover calculations, please refer to note II. S “Accounting policy – Revenue Recognition” in our consolidated financial statements for the year ended December 31, 2022.

Capital expenditures

The CapEx KPIs represent the proportion of capital expenditures in taxonomy-eligible activities and the proportion of capital expenditures in taxonomy-aligned activities. CapEx includes taxonomy-eligible investment which is part of a plan to upgrade a taxonomy-eligible activity into a taxonomy-aligned activity; for example, the construction of our wind farm in Argentina.



We work closely with our customers to develop sustainable solutions, shortening the supply chain between the mill and the rig.

Taxonomy eligibility:

- numerator: capital expenditures for the Tubes segment.
- denominator: aggregate capital expenditures disclosed in the consolidated statement of cash flow.

Taxonomy alignment:

- numerator: capital expenditures in our seamless tubular products production facilities, which use taxonomy-aligned steel billets plus capital expenditures for the construction of our wind farm in Argentina, plus other investments in environmental and energy saving projects.
- denominator: aggregate capital expenditures disclosed in the consolidated statement of cash flow.

For further information about our CapEx calculations, please refer to “Capital Expenditure Program” in our Annual Report for the year ended December 31, 2022.

Operating expenditures

The OpEx KPIs represent the proportion of operating expenditures in taxonomy-eligible activities and the proportion of operating expenditures in taxonomy-aligned activities.

The OpEx KPIs are calculated as follows:

Taxonomy eligibility:

- numerator: maintenance expenses plus research and development expenditures corresponding to the Tubes segment cost of sales.
- denominator: maintenance expenses plus research and development expenditures on a consolidated basis.

Taxonomy alignment:

- numerator: maintenance expenses plus research and development expenditures made at our seamless tubular products production facilities which use taxonomy-aligned steel billets.
- denominator: maintenance expenses plus research and development expenditures on a consolidated basis.

For further information about our OpEx calculations, please refer to note II. T “Accounting policy – Cost of sales and other selling expenses” in our consolidated financial statements for the year ended December 31, 2022.

Our actions for a more sustainable business

Health and Safety

→ Commitment

- To take care of our employees, looking after their safety, health and well-being, with healthy and safe workplaces throughout our facilities

→ Objectives

- Consolidate a strong health and safety-oriented culture within the Company
- Intensify preventive activities with emphasis on high-risk tasks
- Promote awareness and behaviors that enhance physical and mental well-being among all employees
- Establish a workplace free from fatalities and severe injuries

→ Actions

- Reinforce prevention and safety training for new hires
- Shift in focus from blaming to learning, adopting new approach to positive learning opportunities instead of behavior observations, and encouraging engagement
- Health care program: focus on physical and mental health at individual level
- Roll-out of digital tools to monitor improvement in preventive activities
- Safety leadership training programs and continuous communication
- Process safety management program for own and contractor personnel
- Launch of comprehensive health care plan: annual medical check-ups and statistical data gathering

Environment

→ Commitment

- To reduce our environmental footprint and contribute to global and regional goals for addressing climate change risks along our value chain

→ Objectives

- Reduce the CO₂-eq intensity of our operations by 30% from 2018 levels by 2030
- Implement CO₂-eq reduction opportunities along our value chain
- Minimize particulate emissions at our sites
- Foster the circular economy by maximizing scrap recycling and minimizing waste to landfill
- Ensure responsible water management

→ Actions

- Advance and update plans according to Tenaris's strategy to reduce its carbon and environmental footprint
- Implement investments to reduce Tenaris's carbon footprint and carbon emissions, and improve material efficiency and water management
- Engage with our suppliers and customers to find CO₂-eq reduction opportunities along our value chain

Innovation and Supply Chain

→ Commitment

- To develop integrated product and service solutions that meet customer requirements while enhancing safety, efficiency and reliability, and minimizing environmental impact through the supply chain

→ Objectives

- Develop products and services to match evolving customer needs and enter new markets
- Promote supply chain efficiency through process simplification, digital integration and minimization of waste
- Develop reliable and competitive value chains in the countries where we operate

→ Actions

- Develop safer and more efficient connection technology solutions for the oil and gas industry
- R&D initiatives to develop materials and connections for CCS applications
- Expand Rig Direct® service model enhanced with digital integration initiatives
- Digital integration, automation and artificial intelligence initiatives to enhance production management and improve quality, processes and lead times
- Adopt Sustainable Sourcing Policy to enhance sustainability throughout value chain

SUSTAINABLE DEVELOPMENT GOALS

Tenaris supports the United Nations Sustainable Development Goals



Human Capital

→ Commitment

- To lead with care, providing a safe working environment built upon well-being, accountability, inclusion and trust, to enable employees to develop their skills and careers while contributing to the Company's goals

→ Objectives

- Foster trust and empower employees to manage and promote change
- Embed sustainability values through transparent and effective processes
- Respect and promote diversity and inclusion in all its forms

→ Actions

- Employee value proposition to improve talent offer
- Follow up to engagement surveys
- Empower employees to drive digital transformation
- Prioritize gender, generational and cultural diversity for recruitment and promotion
- New Way of Working strategy, based on renovating office space worldwide to underscore the importance of personal interaction in a hybrid work scenario

Community Relations

→ Commitment

- To drive inclusive growth and development in the communities where we work and live, and support them during crisis

→ Objectives

- Contribute to improving all levels of education, particularly technical
- Help preserve our communities' well-being, identity and heritage, supporting healthcare
- Foster creativity through cultural exchange and integration through voluntary work
- Support our communities during crisis

→ Actions

- Support for return to in-person education by upgrading facilities, reinforcing content and leveraging latest teaching and learning methodologies.
- Our Argentine technical school (ETRR) was certified as a community technical training center
- Restructuring and strengthening of our global education programs
- Emphasis on developing Industry 4.0 skills

Governance, Risk and Compliance

→ Commitment

- To build a corporate culture of transparency and integrity based on ethical behavior and compliance with the law

→ Objectives

- Develop and oversee the company's strategy and management of risk, taking into account financial, social, environmental and ethical considerations and the long-term sustainability of the company

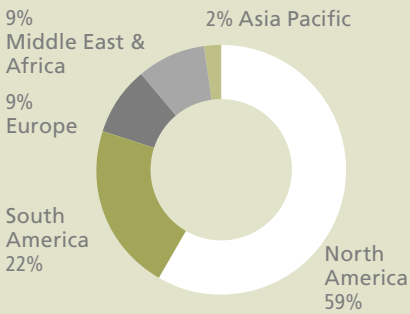
→ Actions

- Board oversees implementation and development of strategy for climate change through quarterly board discussions scheduled on this subject
- CEO variable compensation linked to financial and non-financial indicators
- Prompt disciplinary actions taken in response to breaches of Code of Conduct

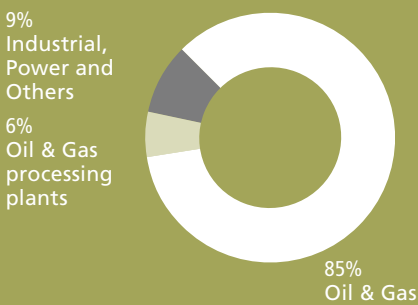
Global Organization

At December 31, 2022

SALES BY REGION



SALES BY MARKET



TOP CUSTOMERS

- ADNOC
- BP
- Chevron
- ConocoPhillips
- Continental Resources
- Diamondback Energy
- Ecopetrol
- Eni
- EOG Resources
- ExxonMobil
- Oxy
- Pan American Energy
- Pemex
- Petrobras
- Pioneer Natural Resources
- Saudi Aramco
- Shell
- Tap Rock Resources
- Tecpetrol
- YPF

SERVICE AND DISTRIBUTION NETWORK IN

23 COUNTRIES

MANAGEMENT SYSTEMS

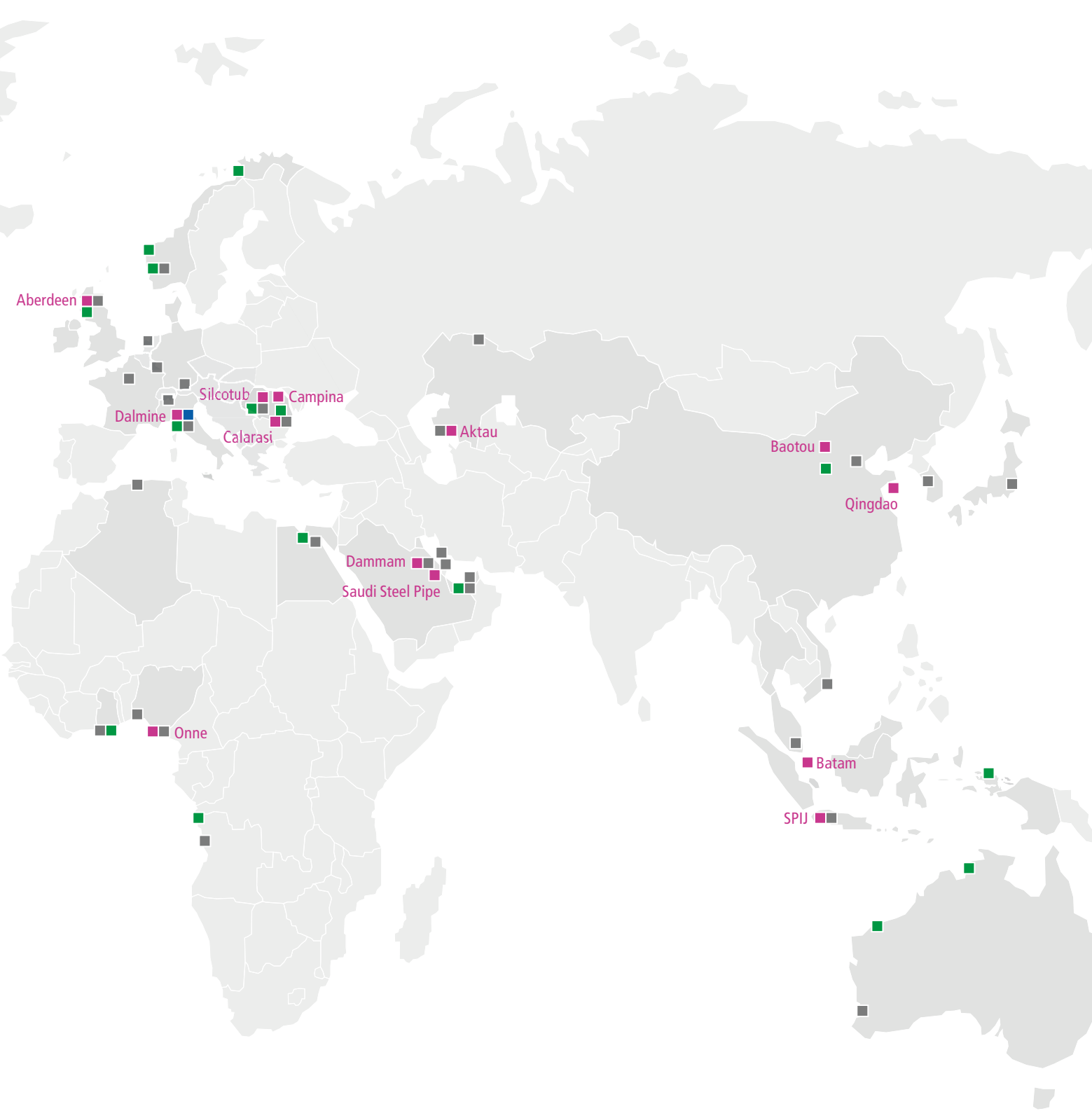
Integrated Quality

ISO 9001

Health, Safety and Environment

ISO 14001 / ISO 45001





■ Manufacturing Centers

■ R&D Centers

■ Service Centers

■ Commercial/Administrative Offices

Economic Overview

We report on our operational and financial performance in the rest of our annual report (<https://ir.tenaris.com/financial-and-sustainability-reports/reports>).

Here, we include our main financial indicators and the distribution of economic value generated.

In 2022, our net income reached a record high while our net sales and EBITDA were close to the all-time highs of 2008 prior to the global financial crisis.

Our results rose strongly throughout the year and reached record quarterly levels in the fourth quarter.

Operating margins expanded, reflecting the higher prices realized on the sales of most of our products that have more than compensated for higher raw material and energy costs, and a good industrial performance with increased levels of activity and utilization of production capacity.

Net income more than doubled compared to 2021, despite a much lower contribution from our non-consolidated companies and higher income taxes. Operating cash flow for the year amounted to USD 1,167 million after accounting for a USD 2,131 million build up in working capital to support the higher level of sales and the ramp up of our industrial system.

Financial indicators

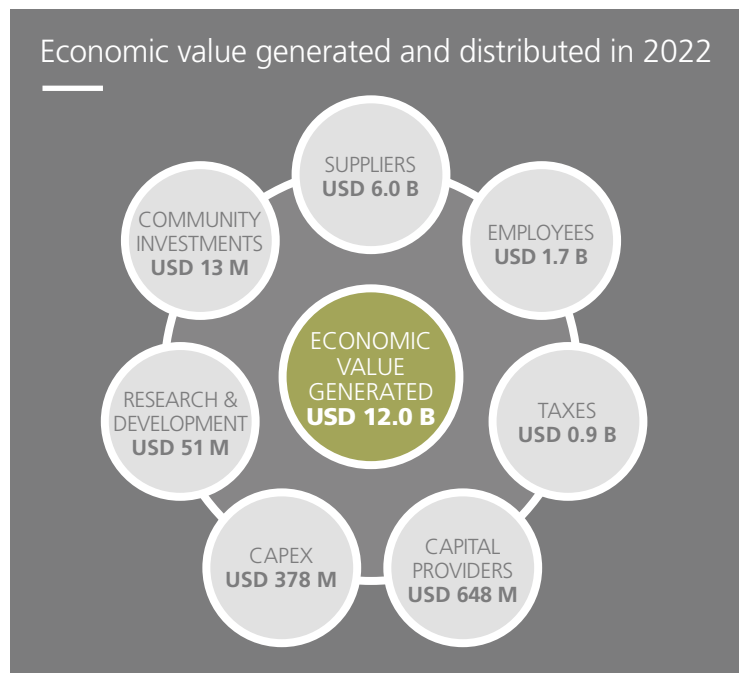
	2018	2019	2020	2021	2022
In USD millions (except otherwise stated)					
Net sales	7,659	7,294	5,147	6,521	11,763
Operating income	872	832	(663)	708	2,963
EBITDA	1,536	1,372	638	1,359	3,648
EBITDA margin - %	20%	19%	12%	21%	31%
Net income attributable to shareholders' equity	876	743	(634)	1,100	2,553
Equity attributable to shareholders' equity	11,783	11,989	11,263	11,961	13,906
Cash flow from operations	611	1,528	1,520	119	1,167
Capital expenditures	349	350	193	240	378
Research and development expenditures	63	61	42	45	51
Dividends	484	153	248	484	602
Net cash position	485	980	1,085	700	921
Return on equity - %	8%	6%	-5%	9%	20%
Return on capital employed - %	8%	7%	-6%	7%	24%
FCF Margin - % of net sales	3%	16%	26%	-2%	7%

This report includes non-IFRS alternative financial performance measures e.g., EBITDA and Net cash position. See the "Accounting policies" section for specifications on methodologies and criteria used to calculate the performance indicators included in the report.



After capital expenditures of USD 378 million and dividend payments of USD 531 million during the year, our net cash position increased to USD 921 million (USD 1.6 billion of liquid assets less USD 0.7 billion of debt) at the end of the year.

The Company's board of directors proposed, for the approval of the annual general shareholders' meeting to be held on May 3, 2023, payment of an annual dividend of USD 0.51 per share (USD 1.02 per ADS), or approximately USD 602 million, which includes the interim dividend of USD 0.17 per share (USD 0.34 per ADS), or approximately USD 201 million, paid in November 2022. If the annual dividend is approved by the shareholders, a dividend of USD 0.34 per share (USD 0.68 per ADS), or approximately USD 401 million will be paid on May 24, 2023, with an ex-dividend date of May 22, 2023.





Training, rigorous procedures and employee involvement at all levels are the cornerstone of our safety prevention strategies aimed at keeping the workplace free from fatalities and severe injuries.

Health and Safety

→ Our commitment

To take care of our employees, looking after their safety, health and well-being, with healthy and safe workplaces throughout our industrial and office facilities.

→ Our objectives

- Consolidate a strong health and safety-oriented culture within the Company
- Intensify preventive activities, particularly regarding high-risk tasks
- Promote awareness and behaviors that enhance physical and mental well-being among all employees
- Establish a workplace free from fatalities and severe injuries

→ Our actions

Our core values of safety, health, well-being and care for the environment are embedded in our mission to achieve sustainable processes throughout our daily activities. This is reflected in a constant rethinking of our processes and the implementation of investment projects to improve our performance in those areas.

After achieving the target established several years ago to reduce our lost time injury frequency rate to less than 1.0 lost-time injuries per million labor-hours worked, our focus is changing in line with the new approach being taken by various steel companies regarding safety management. The emphasis is now on creating the right conditions to prevent the occurrence of fatalities and severe injuries, as discussed at the worldsteel 2022 annual health and safety meeting, hosted by Tenaris at its Dalmine mill.

The rise in new hires in the context of the post-pandemic ramp-up, particularly in the U.S., led us to focus continuously on preventive activities, reinforcing safety training for new recruits. We shifted to a new cultural approach centered on sharing positive “learning opportunities” rather than issuing “behavior observations”.

USD

20

MILLION
INVESTED IN
HEALTH AND SAFETY
IN 2022

47%

RISK REDUCTION
THROUGH INVESTMENTS
AND IMPROVEMENT ACTIONS
IN 2022

~70,000

PREVENTIVE
ACTIONS
IMPLEMENTED
DURING 2022

20,500

EMPLOYEES
RECEIVED MEDICAL
CHECK-UPS IN 2022



It is essential to involve everybody working in the industrial systems and recognize their contribution, especially when it comes to health and safety.”



Antonio Caprera
Chief Industrial Officer

Foundational priorities

The safety and well-being of our employees is our top priority, essential to our success and continuity as a sustainable organization over time, and intrinsic to the relationships we develop with our communities of neighbors, suppliers, customers, and investors. As stated in our Quality, Health, Safety and Environment Policy (www.tenaris.com/qhse), Tenaris is oriented towards taking care of its employees by creating and sustaining a safety culture capable of safeguarding their well-being and delivering a workplace free from fatalities and severe injuries.

We are constantly implementing initiatives to reduce the risks of complex activities by moving towards “error proof” solutions and “fail to safe” processes.

Leading a positive safety culture

Upholding a positive safety culture in the workplace means continuously encouraging everyone to understand and believe in the high importance of safety principles, values and attitudes. There is abundant evidence to suggest that workplace health and safety performance radically improves when leaders demonstrate a positive and caring attitude toward safety.

We believe that the quality of our leadership is pivotal to improving our health and safety performance, mindset and results and reinforcing a resilient safety culture.

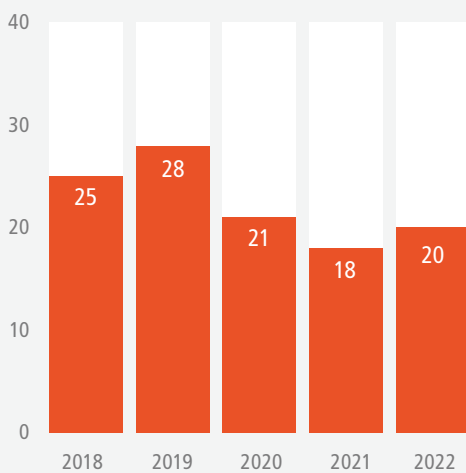
We continue to deploy initiatives to train and develop our leaders to empower them to transform people’s attitudes and behavior.

During 2022, we developed a new strategy to respond to human error by changing language and shifting focus from blaming to learning.

We overhauled our approach to the role played by leaders on the shop-floor by encouraging them to move from behavior observations to learning opportunities with their teams. The idea is to shift the focus from people to processes, changing their mindset from “who failed” to “what failed”.

Investment in Health and Safety

In USD million





The progressive increase of the level of preventive activities and the implementation of key initiatives has enhanced our health and safety culture, and overall performance has improved significantly with respect to the previous year.

We are reformatting our “Safe Hour” program, our regular manager-led meetings with shop-floor employees, to encourage positive dialogue and comments about “work as done” versus “work as imagined”. The shift in our taxonomy from observations to opportunities is intrinsic to this idea.

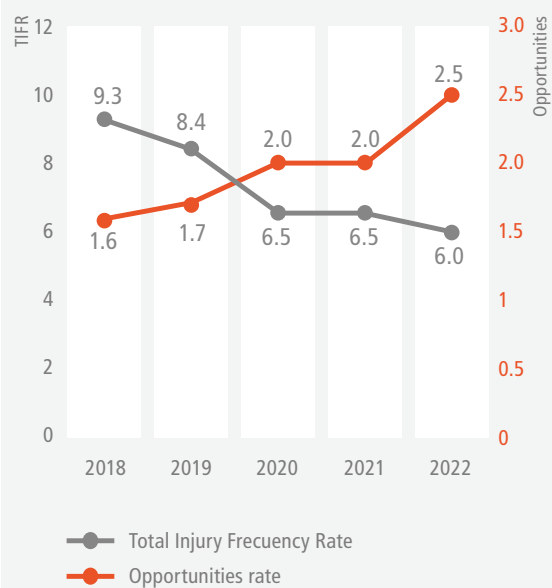
At the same time, operators are invited to come forward and talk about ways of improving working conditions that they identify.

We have also rolled out an initiative called “Recognition on the floor”, a way of increasing people’s motivation and engagement, where workers are congratulated while performing their tasks or during our Communication Routines.

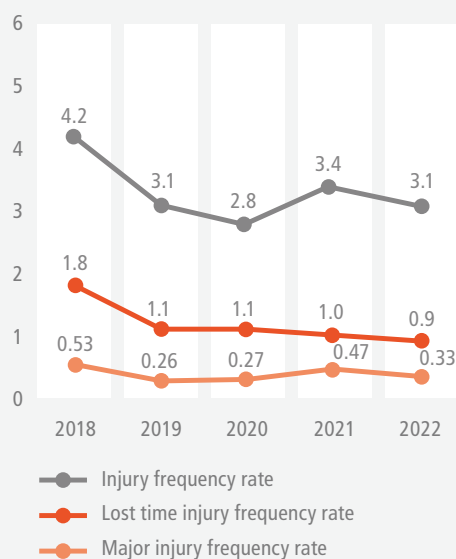
Active participation in prevention is included in individual employee objectives at all levels, and continuous monitoring is carried out using online tools to support people and encourage improvement in this direction.

We are also using a cross-site approach to disseminate lessons learned from critical events aimed at preventing recurrence.

TIFR and Opportunities



Injury frequency rates



Methodology: Number of injuries per million hours worked.

NO INDUSTRIAL EXCELLENCE WITHOUT SAFETY

In September, Tenaris mills and service centers across the U.S. made a coordinated pause in activities for two hours to discuss current safety challenges and reinforce the importance of routines and prevention.

Referred to as the Safety Stand Down, this event was held as the region is under pressure to meet the increase in demand from customers, onboarding hundreds of new hires where the priority is to train them in safe procedures.

Talks were given by leaders at each location who shared the risks of working with vehicles and cranes as well as carrying out manual tasks, and emphasized the importance of focusing on the job at hand, wearing the right PPE and using tools properly to avoid incidents and accidents.

The purpose of the Safety Stand Down was to encourage employees to act in the understanding that safety involves everybody, focusing on preventive behavior.

Leveraging training and communications

Putting safety at the heart of industrial growth and transformation involves substantial investment in training and communications. We are targeting shift leaders through advanced training programs because we believe their role is essential on the shop floor, as they are in a position to transfer knowledge to shop-floor employees and set an example of correct behaviors.

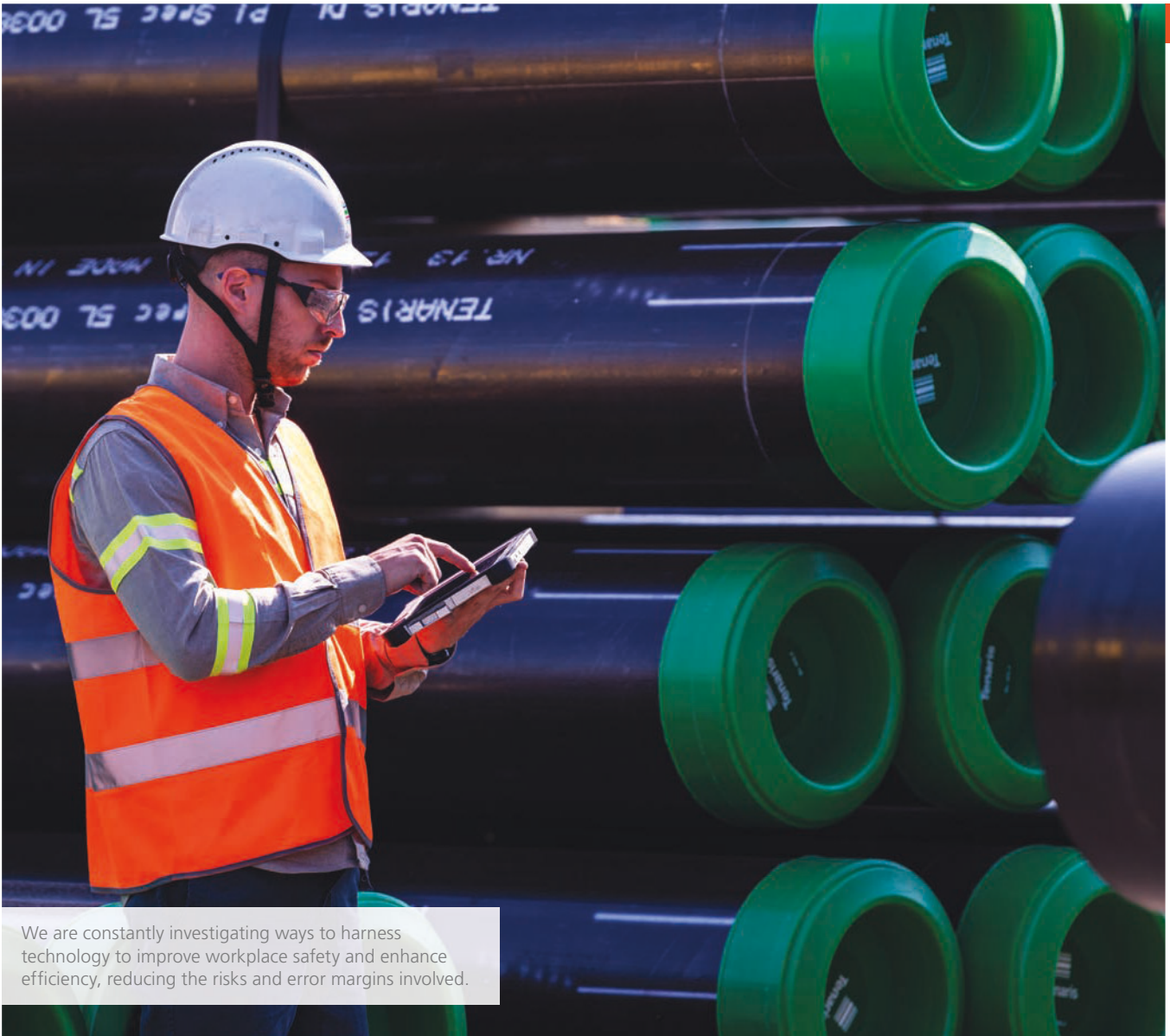
Our TenarisUniversity curriculum has enabled us to take advantage of a full portfolio of classroom health and safety courses for technical leaders, revisited in the context of the definition of a new three-year plan to be delivered to the full population, from those newly appointed, to refresher sessions for more senior leaders.

Our technical leaders are also constantly receiving training in the latest developments in HSE, enabling them to be close to the latest indicators on the subject.

In 2022, we launched a global initiative to recognize the efforts made at our sites around the world to achieve excellence in health and safety, inspired by worldsteel's awards program for HSE excellence at corporate level.

The Initiatives Recognition scheme formally acknowledges the safety initiatives developed by each site, taking into account innovation and contributions to occupational health and safety that can serve the industry as a whole.





We are constantly investigating ways to harness technology to improve workplace safety and enhance efficiency, reducing the risks and error margins involved.

We are deploying Communications Routines by shift leaders and managers, our process for structural interaction with shop-floor employees, throughout Tenaris.

Thanks to a series of surveys on effectiveness and intensive training sessions, we have been able to enhance the quality of the process, giving shop-floor employees more room by inviting them to report opportunities for improvement.

This includes the introduction of a critical event lessons feature as a cross-site opportunity to discuss lessons learned to prevent recurrence.

Campaigns to foster the prevention of unsafe behaviors and promote the adoption of good practices at all levels among all employees are regularly held throughout the company, with posters and pieces on social networks.

In 2022, these initiatives were further supported by a range of online tools developed in our Management System to benchmark progress.

We are producing a continuous series of digital reports for managers, leaders and supervisors with actionable indicators enabling them to monitor and improve prevention.



After the pandemic, we reviewed our priorities and started to give greater impetus to actions that could have a direct positive impact on our people's health.”



Riccardo Dovera
Tenaris Health & Safety
Senior Director

Achieving better all-around health

Tenaris's comprehensive occupational health program enshrines the company's commitment to providing a healthy workplace, whether in the office, mill or at home when remote working.

We are emphasizing wellness programs to encourage employees to adopt healthier lifestyles, as unhealthy employees tend to use more medical services, take more time off and burden their colleagues with extra responsibilities. Through innovative technology and equipment, we can help to improve people's quality of life, health and personal well-being.

ENCOURAGING HEALTH AND WELL-BEING

Working closely with the Techint Group's Research Hospital Humanitas in Italy, in 2022 we launched a series of global and local wellness campaigns which included coordinated communications, such as a series of TenarisToday articles approved by Humanitas encouraging readers to adopt a healthier lifestyle and enhance their well-being.

In particular, we are tackling cardiovascular risks, one of the most prominent health problems in almost all the countries where Tenaris is present, with the launch of a program designed to improve these risk indicators and health in general. Another company-wide communications program is also being prepared to educate people about mental health care.





Our critical element pre-use checklists are part of a comprehensive program designed to increase operator involvement in our risk analyzes.

The Health Care Project

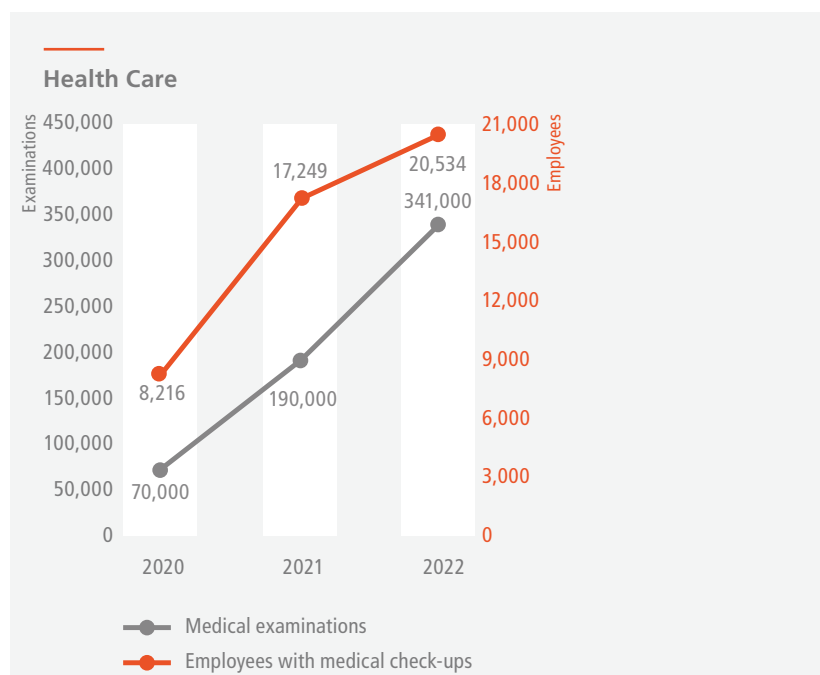
A far-sighted program launched at the beginning of 2021 and directly sponsored by the company's CEO, the Health Care Project is a preventive strategy to ensure that the population is in as good health as possible.

In the last two years, company-wide medical check-ups and follow-up were held to encourage employees to take responsibility for their own physical and mental well-being, achieving a better quality of life, as well as better quality of work at the company.

These check-ups are also the source of a rich amount of data enabling Tenaris to identify and improve problems statistically common to a certain majority, as well as to detect patterns for specific pathologies at regional level.

This data analysis also means that medical teams can identify the most relevant physical examinations for each person and help to develop a personalized health monitoring program.

We are also investing in IT data analytics to upgrade the Company's health module and related data management systems, so that we can design specific actions for different health procedure protocols.



81% of our employees completed their medical check-up during the year.



The Communications Routines led by shift leaders are an opportunity to enhance interaction with shop-floor employees, encouraging them to raise issues for improvement and share lessons learned.



Benchmarking prevention strategies

We are firmly committed to achieving a reduction in the occurrence of high severity incidents, including the deployment of cross-site action plans following relevant events, and a comprehensive preventive program aimed at leveraging the hierarchy of risk controls. The most severe hazards are those involved in handling materials, using overhead cranes and heavy vehicles.

We continuously review our risk analyses all over the world, increasing operator involvement and adding new features such as critical element pre-use checklists.

We have targeted initiatives regarding high impact areas, and our series of safety objectives are supported by detailed plans for implementation at each of our sites, as well as by training and communication initiatives.

Consolidating routines

As part of this approach, we have set up special task forces to define the appropriate preventive safety activities, such as preventive maintenance routines, shift checklists and an employee certification program, particularly in the following areas where there are significant hazards: cranes, vehicles, moving machinery, manual tasks & tools, and housekeeping.

Through our Process Safety Management Program, we keep pace with the latest developments in safety, looking at ways to introduce improvements in a range of sectors. These include design and engineering at facilities, equipment maintenance, ensuring effective alarms and control points, and reinforcing procedures and training to create a disciplined approach to personnel certification.

Contractor safety

We include all contractors working at our sites in the Tenaris Safety Management System to ensure our prevention programs are truly effective.

In 2022, we continued to strengthen our Contractor Management Process by holding structured evaluations of HSE performance and checking that the process of sharing HSE requirements with contractors, including our Process Safety Management program, is managed smoothly and comprehensively.

As members of worldsteel's safety groups, we work with other leading steel producing companies to share information and constantly enhance our guidelines for safety management in several different areas.

In 2022, Tenaris set up a Contractor Taskforce with input from Exiros, the Techint Group's procurement company.

The Taskforce has issued a new procedure for "Contractor Safety Management" aligned with worldsteel guidelines, while the revamped Contractor Evaluation process is currently under review.

Global recognition

In 2022, Tenaris was chosen to host worldsteel's Health and Safety Committee annual meeting at its Dalmine plant, in recognition of the efforts it has made over the years.



To secure renewable energy for our operations, we are building a 24-turbine wind farm in Argentina, expected to be functional in the second half of 2023.

Environment

→ Our commitment

To reduce our environmental footprint within our communities and value chain; to work with partners and peers to address the climate change challenge and dedicate efforts to the transition to a net zero GHG economy.

Steel is an essential material for our daily lives, used everywhere and for a variety of products, yet steelmaking is a highly energy-intensive process and produces significant quantities of different emissions, including carbon dioxide. The physical, social and financial risks of climate change and the global challenge of reducing greenhouse gas emissions are driving steel industry leaders to find new solutions for reducing their carbon footprint and transitioning to a low carbon economy.

New technologies and practices bring benefits that are both economic and environmental, from recycling materials as part of the circular economy, to harnessing cleaner energy. Achieving greater energy and material efficiency, increasing scrap recycling and expanding the use of renewables and new technologies, such as hydrogen, are best achieved with an ongoing industry commitment to working together. These alternatives are not equally effective and viable in all facilities as regional and site variables differ markedly.

As an industry leader, Tenaris believes that its responsibility to reduce the environmental impact of its activity is also an opportunity to embrace innovation and technological change and engage its partners in the value chain to add their efforts to achieve a cleaner future.

30%

BY 2030
INTENSITY REDUCTION TARGET
IN CO₂-eq TN / TN STEEL

18%

REDUCTION
IN TN CO₂-eq / TN STEEL
VS 2018 BASELINE

77%

RECYCLING
CONTENT IN
OUR STEEL

97.8%

MATERIAL
EFFICIENCY
AT STEELMAKING
SITES

Energy and climate action

→ Our commitment

To reduce the intensity and overall level of our CO₂-eq emissions by using energy resources efficiently, increasing the use of scrap and low-carbon electricity while implementing the best available technologies that are most suited to each of our sites.

→ Our objectives

- Increase the efficiency of energy and materials use in our operations
- Reduce the intensity of CO₂-eq emissions by implementing actions ranging from increasing scrap use and low-carbon electricity, to the use of hydrogen and carbon capture, and progressively replacing fossil fuel use in our operations
- Provide our customers with products and services which help to minimize their footprint and facilitate their own strategies
- Engage with our suppliers to promote the production and use of more sustainable products, services and operations

→ Our actions

World steel production accounts for around 8% of energy-related greenhouse gas emissions, making the reduction of CO₂-eq emissions an urgent priority for our industry.

Aware of how steel contributes to global CO₂ levels, but also of its essential role in building the infrastructure of today's world, Tenaris is committed to reducing emissions and achieving greater energy and material efficiency throughout its operations. Tenaris is pursuing the target of reducing the carbon emissions intensity of its operations, counting Scopes 1, 2 and 3 (related to raw materials) emissions, by 30% by the year 2030, compared to a 2018 baseline.

The actions we have taken over the past three years are yielding results, as we have achieved a 18% decrease in the CO₂-eq intensity of our operations compared to a 2018 baseline. However, further progress will require substantial resources in terms of investments, actions and time.

DECARBONIZATION PROGRAM

-30%
TARGET
2030

REDUCTION IN CO₂-eq INTENSITY per ton of steel (Scopes 1, 2 & 3) vs. 2018 values

USD 80
per ton CO₂

Internal
carbon
price



Collaboration with
partners to minimize
CO₂ footprint



Increased
scrap use



Energy
efficiency



Alternative
raw materials



Renewable
electricity



H₂ use



Carbon capture,
use and storage



Our performance in sustainability is increasingly relevant for our stakeholders, making the robustness of our system and its ability to continually drive improvement a key asset in our business strategy.”



Carolina Bengochea
Global Environmental
Senior Director

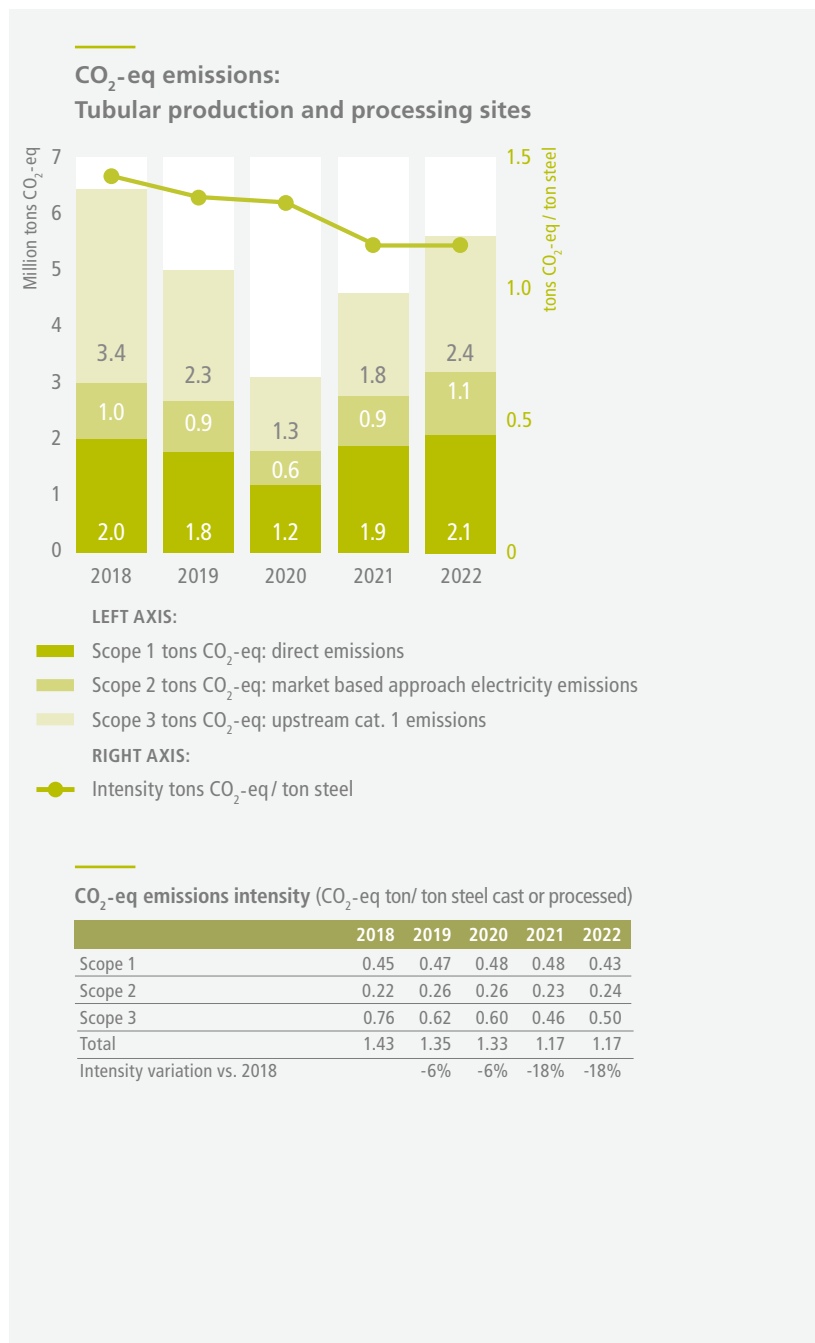
Implementing our strategy

The main actions we have implemented so far are related to achieving greater energy efficiency and maximizing scrap use to the extent available at our different sites.

We are now investing in renewable projects and looking at opportunities to replace the use of coal, while continuing to invest in projects aimed at improving energy and material efficiency, as well as our scrap collection and handling capabilities.

We aim to increase the use of steel scrap and the recycling content of our steel as much as possible. This depends on various factors which differ by site, such as local availability, scrap quality, and the steel quality requirements of the products we make.

We have upped the recycling content of our steel in recent years by reducing the level of pig iron in the metallic mix, reaching a peak scrap rate use in 2020, a year when our production level was severely affected by the pandemic and market conditions. In 2021 and 2022, our use of scrap was between 77-78%.



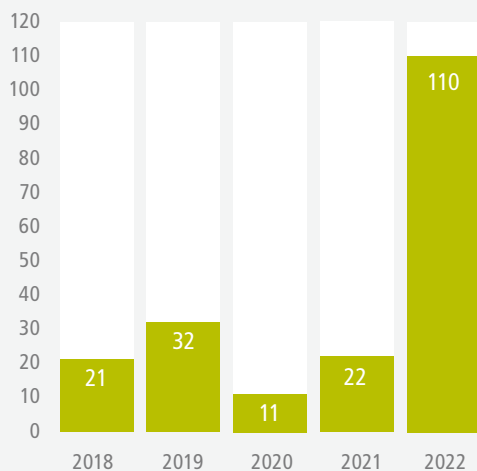
Increasing scrap levels in the metallic charge is not always easy. Our R&D, steel experts and process innovation areas work with data science models to design the optimum metallic charge and scrap mix to maximize scrap use while complying with expected steel quality standards, as the amount of residual levels in available scrap can affect steel quality.

We are also investing in some of our scrap management areas with a view to installing new facilities better able to capture scrap from the market and improve our handling and management capabilities.

Energy efficiency is another critical element of our decarbonization plan. The range of actions spans from major projects to smaller actions designed to raise awareness among our teams and encourage them to adopt habits promoting conservation and a more efficient use of energy sources in our day-to-day work.

Investment in Environment

In USD million



Efficiency is sometimes a matter of reviewing and rethinking processes to minimize involved energy requirements.

In Dalmine, we are now investing in replacing an older heat treatment furnace with one fitted with burners able to use hydrogen blended with natural gas at different blending levels of up to 100% hydrogen, in preparation for when hydrogen becomes more available.

We have re-defined a rolling mill process in Dalmine, extending the range of pipe diameters that can be processed without the double heat treatment required by larger diameters, achieving an annual CO₂ reduction of approximately 7,000 tons.

Our steel processing furnace investments also envisage the changes necessary to adapt to green hydrogen use. Meanwhile, we have put on hold our project to replace the use of natural gas with green hydrogen at our Dalmine steel shop, pending the development of more favorable conditions to produce green hydrogen for this initiative.

At Siderca, Argentina, we are replacing one of two EAF furnaces with Consteel® technology, a steel production system that continuously feeds the furnace with scrap and direct reduced iron, while preheating the scrap with the fumes produced during the process.

This reduces the consumption of electricity, natural gas and electrodes and, combined with the use of renewable energy, will enable a significant reduction in our carbon footprint compared with standard batch charging technologies.



The 100.8 MW-wind farm we are building in Argentina will meet nearly 50% of the electricity demand of the Siderca mill and reduce our CO₂-eq emissions by some 150,000 tons a year.

In 2022, we approved projects for USD 11 million for a number of small-scale environmental initiatives carried out during the year. These ranged from introducing energy monitoring meters, switching to LED lighting, and electrifying specific processes, to the use of higher efficiency equipment such as compressors, pumps and fans at the plants.

We are now turning our attention to securing sources of renewable, or zero-carbon, energy. Our largest project to-date is based in Argentina involving an investment of USD 200 million in the construction of a 100.8 MW wind farm that is expected to supply nearly 50% of the electricity demand of our Siderca mill.

The wind farm is expected to start operations in the second half of 2023 and will include 24 wind turbines located in an area with excellent conditions for renewable electricity generation.

Elsewhere, at our Arcore and Sabbio sites in Italy, as well as in China, we are installing small, mostly rooftop solar panel systems to further contribute to reducing our electricity-related emissions and increase our use of renewables.

Once the Argentine wind farm and our smaller rooftop solar projects come on line, these will meet around 12% of our total electricity demand. All these are additional projects, contributing to increase the renewable electricity infrastructure where we operate.

We continue to look at other renewables investment opportunities, and to evaluate alternative supply sources for zero-carbon electricity available in the market for our sites.

In the meantime, we are also looking to use renewable energy certificates or guarantees of origin where we have the opportunity to do so.



Thanks to the optimal combination of multimodal transport modes, we are improving delivery timing, reducing costs and associated emissions.



As regards our supply chain, we are working to identify alternative materials, such as biomass-based or residues from other processes to integrate them into our EAF steel production processes, thus replacing coal use. Our steel mill in Romania is a member of Retrofeed, a European-funded project that tests different materials in the steel process to enhance circularity.

During 2022, as part of the Retrofeed initiative, we identified a number of different materials with promising results, and we will continue conducting industrial trials with the objective of using them more widely at our other steel sites.

We are researching technology solutions to increase efficiency or decrease our energy requirements, seeing how to incorporate hydrogen into different processes, and evaluating carbon capture use or storage techniques.

We are improving efficiency in the transport of our intermediate and final products in terms of emissions, increasing the use of barges, train and multimodal systems wherever possible. This is particularly so in the U.S. where we are making greater use of barges, and in Europe where we are using multimodal systems in order to meet the European Union's transport decarbonization targets.

The map on the following pages shows the wide-ranging scope and different alternatives of the measures we are taking to reduce carbon emissions in our operations worldwide.

Environmental Product Declaration

Tenaris has certified Environmental Product Declarations (EPDs) for several products. The most recent ones issued are for Seamless Large Vessels manufactured at our Dalmine site, and for Carbon & Alloy Seamless Tubes & Pipes for Power Generation Applications produced at Dalmine and Silcotub.

The EPDs disclose environmental data for specific product groups in standardized form. These last EPDs join those issued for structural pipes from Dalmine and Tamsa as well as Dalmine line pipe solutions.

Our EPDs confirm that over 60% of our GHG emissions come from upstream processes and 30% from pipe manufacturing, while transport only has a limited impact on the overall total.

This information serves to steer our actions towards improving the consumption and type of raw materials we use, as part of our drive to achieve efficiency throughout the steelmaking process.

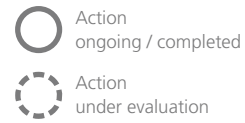
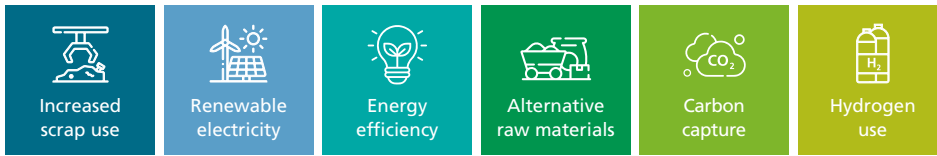
Efficiency in the Value Chain

The Rig Direct® service model was developed not only to help customers save time and costs by reducing on-site inventories and synchronizing supply chain activities to avoid duplicating processes, but also to reduce the overall levels of CO₂ generated, as less material is produced, transported and handled.

Our experts in pipe materials and performance, materials supply and inventory management, work closely with our customers to maximize operational safety and minimize environmental impact by optimizing the use and service life of materials. This contributes to more efficient drilling operations in terms of cost, time and environmental footprint.

Decarbonization Strategy

AREAS OF ACTION



Sault Ste. Marie Energy efficiency

Integration of Prudential welding line into Sault Saint Marie operations.

BayCity Renewable electricity

Under evaluation: zero-carbon electricity.

Carbon capture, use or storage

Under evaluation: project to capture, use or store CO₂.

Tamsa Increased scrap use

Recycling content of steel increased by 40%, reaching 86% in 2022.

Renewable electricity

Under evaluation: a project for renewable solar electricity generation.

Alternative raw materials

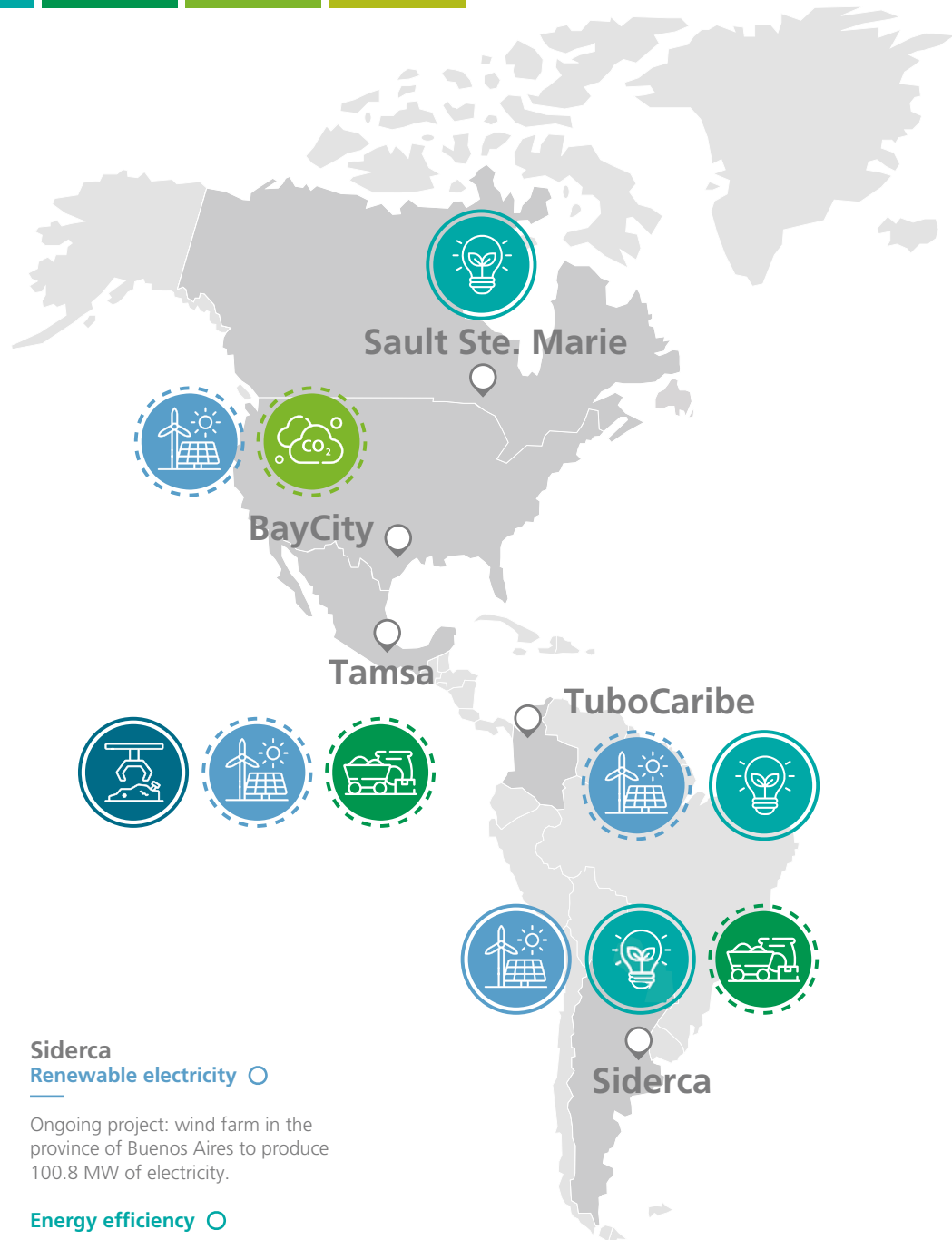
Under evaluation: alternatives for using charcoal and charcoal-based pig iron.

TubeCaribe Renewable electricity

Under evaluation: a project for renewable solar electricity generation.

Energy efficiency

Ongoing electrification project replacing a natural gas-fired furnace with an induction one.



Siderca Renewable electricity

Ongoing project: wind farm in the province of Buenos Aires to produce 100.8 MW of electricity.

Energy efficiency

Replacement of one EAF by Consteel® technology to increase efficiency.

Alternative raw materials

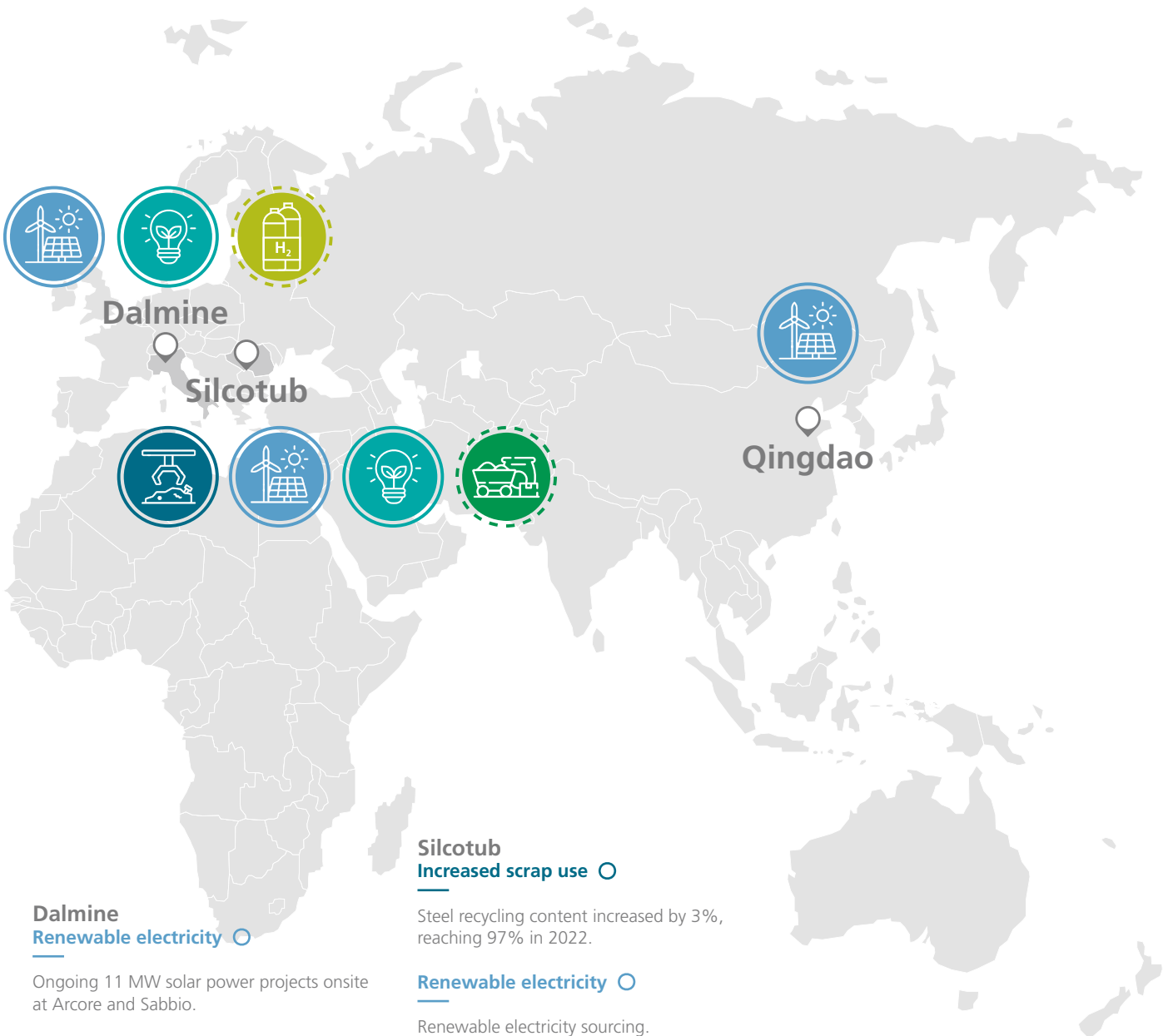
Under evaluation: alternatives for using charcoal and charcoal-based pig iron.

-30%
TARGET
2030

REDUCTION IN CO₂-eq INTENSITY
per ton of steel (Scopes 1, 2 & 3) vs. 2018 values

80 USD
per ton CO₂

INTERNAL CARBON PRICE



Dalmine
Renewable electricity ○

Ongoing 11 MW solar power projects onsite at Arcore and Sabbio.

Energy efficiency ○

Replacement of heat-treatment furnace to achieve improvements in rolling mill process.

Hydrogen use ○

New furnaces equipped to use H₂ when available.
Under evaluation: R&D project on use of hydrogen in furnaces and process.

Silcotub
Increased scrap use ○

Steel recycling content increased by 3%, reaching 97% in 2022.

Renewable electricity ○

Renewable electricity sourcing.

Energy efficiency ○

Ongoing energy efficiency projects in different areas.

Alternative raw materials ○

Retrofeed: EU-funded R&D project: testing different materials to enhance circular economy while reducing CO₂ emissions.

Qingdao
Renewable electricity ○

Rooftop solar panel project for onsite use.

Air quality

→ Our commitment

To minimize emissions of fumes and particulates, contributing to good air quality in our operations and the communities where we operate.

→ Our objectives

- Comply with local and internal emissions requirements
- Eliminate fugitive emissions from steelmaking processes
- Reduce VOC emissions related to our coating activities

→ Our actions

In addition to CO₂ emissions, the steelmaking process generates emissions from particulate matter and other pollutants that can be inimical to air quality and public health.

Accordingly, we have established procedures setting strict limits on stack emissions and monitoring requirements. Internal limits have been defined according to the best technologies available to improve processes beyond local legal compliance levels, as not all countries where we produce have the same requirements.

Reducing emissions

In the past three years, we have made significant investments in the control of particulate emissions, upgrading systems and technology at our sites in Tamsa in Veracruz and Siderca in Argentina.

To improve emissions control at our recently-acquired Koppel steel shop in Pittsburgh, we plan to make a significant investment to modernize the fumes capture and treatment system.

In the meantime, we are strengthening preventive maintenance, controls and operating conditions to sustain the operation as required.

In 2023, with our Consteel® investment at one of our two EAFs in Siderca, we will overhaul our entire fume management process at the facility, as Consteel® technology allows for a far more efficient extraction system.

We continuously monitor particulate material in our steel shop stacks except for Koppel, where this is currently not technically feasible. We have set very high internal particulate emission standards for our steel shops, as this is essential to ensure healthy working conditions and clean air for both our employees and the communities where we operate.

We also monitor other pollutants such as nitrogen oxide (NO_x) emissions in our steelmaking processes to verify compliance with internal and legal requirements. At our new and revamped furnaces, low NO_x burners have been introduced to reduce emissions, while in Bay City, we have implemented selective catalytic reduction to achieve further reductions.

Another measure to reduce air pollutants is the gradual conversion from solvent to water-based varnish coating throughout our industrial system to reduce volatile organic compounds (VOCs) related emissions. In the past four years, we have invested in reducing VOCs at Siderca, Tamsa and Bay City as well as in our Dopeless® technology lines.



Circularity and material efficiency

→ Our commitment

To implement circular economy concepts throughout our industrial system.

→ Our objectives

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

→ Our actions

As a permanent resource, steel is fundamental to achieving a circular economy: it can be recycled infinitely without losing any of its properties, a way of saving iron, energy, coal and other materials, producing less CO₂ emissions, and preventing useful material from ending up in landfill as waste.

Recycling scrap

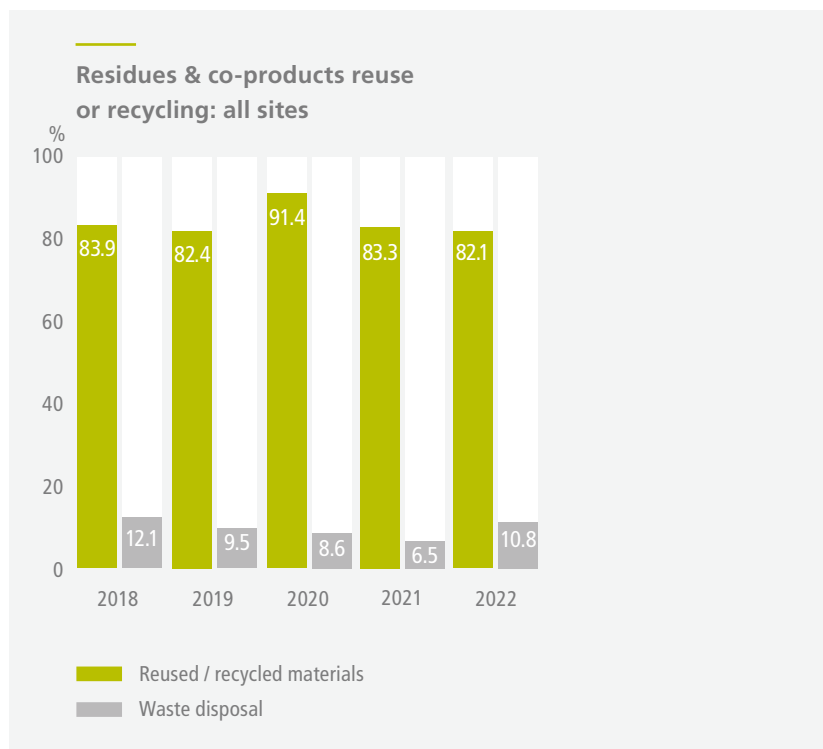
The life-cycle approach to scrap recycling that we use helps to minimize the environmental footprint of our operations, and represents a key opportunity for the steel industry to reduce CO₂-eq emissions.

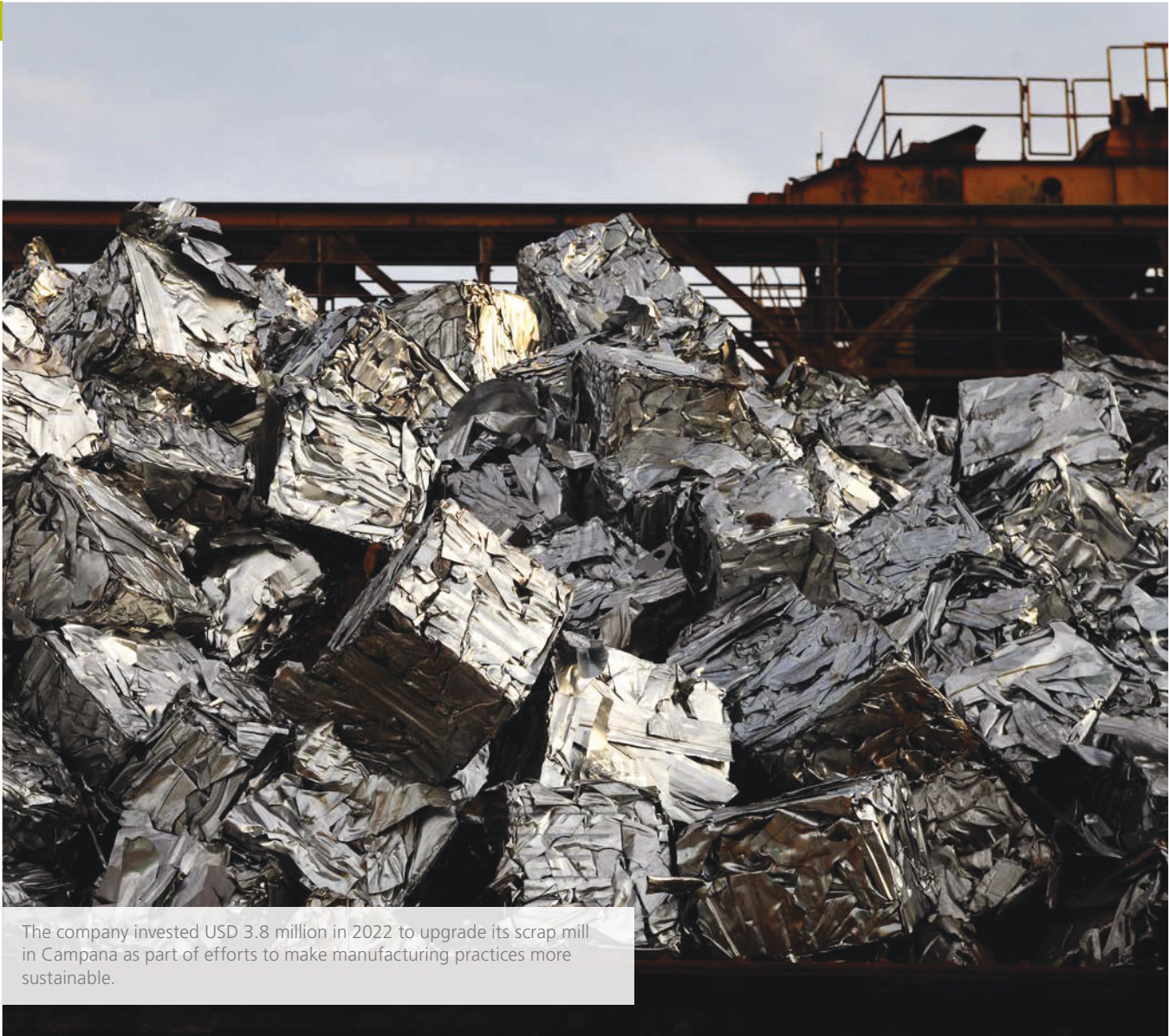
Scrap is processed into new steel in a closed material recycling loop, avoiding primary steel production. As this applies to the whole steel sector today, competition for scrap supplies will inevitably increase.

We trust that governments in the countries where we operate will recognize this issue and the importance of encouraging and promoting the use of steel scrap for steel production, and allow steel scrap recycling to occur efficiently, avoiding its classification as a waste stream.

During 2022, we recycled almost 3,400,000 tons of steel scrap to produce new high quality steel products.

Steel produced at our Dalmine, Koppel, Siderca, Silcotub and Tamsa facilities has a recycled content of 77%, calculated in accordance with ISO 14021 standards, averaging results from the five steel mills. The value achieved is similar to that of 2021, even with an increase in production.





The company invested USD 3.8 million in 2022 to upgrade its scrap mill in Campana as part of efforts to make manufacturing practices more sustainable.



Methodology: worldsteel
Sites covered: Dalmine, Koppel, Siderca, Silcotub, Tamsa

Material management

Our level of material efficiency reached 97.8% in 2022 for our steel sites, compared to a steel industry average of 97.3% as reported by worldsteel for 2021.

We reuse and recycle residue and co-products to cut waste: in 2022, our waste disposal rate from all our sites increased compared with 2021, reaching almost 11%. Among the reasons for this increase is the restart of our recently-acquired operations in the U.S. We have maintained our reuse or recycling rates for our co-products, with higher volumes for slag, followed by scale and iron fines. Slag, as the major waste co-product, is reused and recycled in a number of areas such as building materials, fillers, road surfacing, and concrete, while scale, the second co-product, is mainly used in cement processing or by other steel companies.



Silcotub’s participation in the Retrofeed project trialing alternative materials in the steel process should contribute not only to reducing the use of fossil coal and its related CO₂-eq emissions, but also to enhancing the circularity of our products.

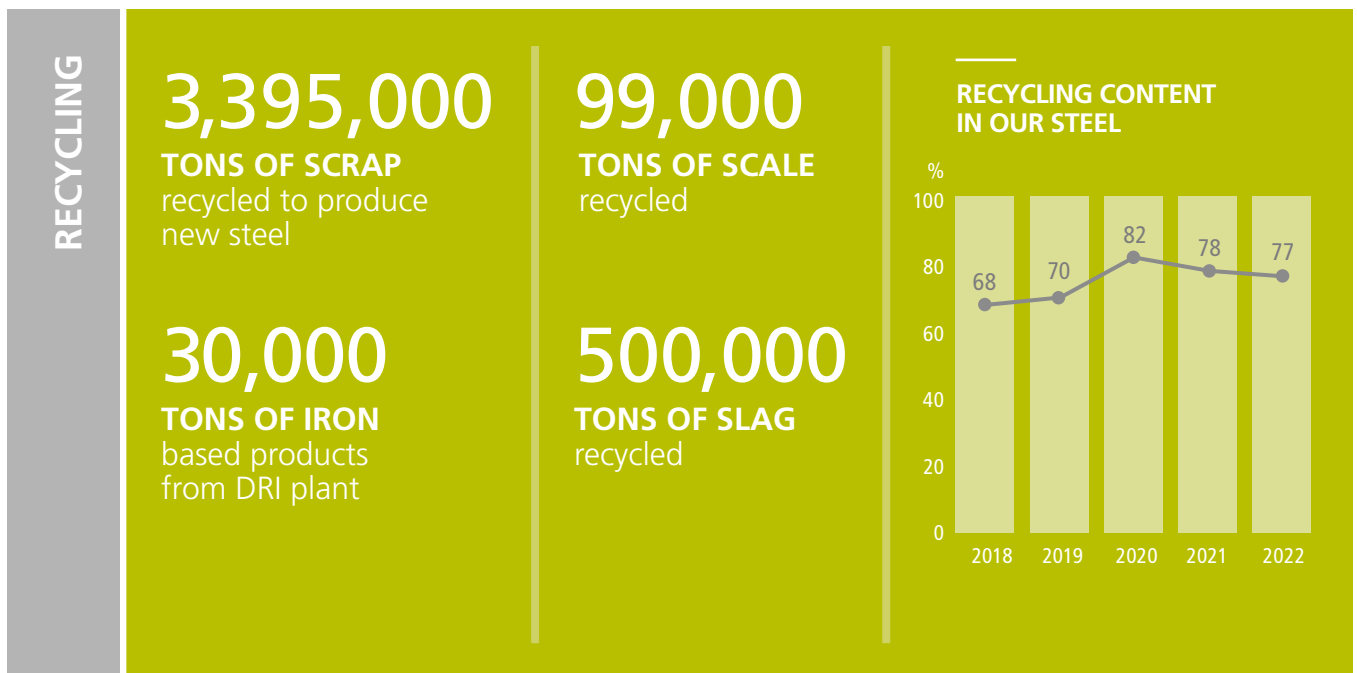
At our Dalmine and Silcotub Calarasi sites in Europe, we have a 90% residue recycling/reuse rate thanks to several initiatives implemented over the years.

Confab, our welded pipe site in Brazil, reuses or recycles over 90% of waste products, such as scale, wood, and residues from the welding process, etc., up from a rate of 60% three years ago.

The high recycling rate achieved is the result of the efforts made by the local team to deploy a series of employee training and awareness campaigns as well as a new range of digitalization tools, research into different alternatives, and the development of new opportunities for Confab residues.

We are working to develop Reduce, Recycle, Reuse (3R) initiatives with our employees, focusing on initiatives such as reducing single-use plastics or using biodegradable materials instead of plastic.

We also continue with our thread protectors recycling program in several of the regions where we operate. During 2022, 6,000 tons of plastic protectors were recycled to produce new protectors or other plastic products, thus increasing opportunities for circularity.



Water management

→ Our commitment

To ensure the responsible management of water resources.

→ Our objectives

- Minimize water intake, especially in water-scarce areas where we have water-intensive operations
- Meet water discharge quality targets
- Implement the best water-management technologies for new lines

→ Our actions

Water plays a major role in steel manufacturing processes, although little of it is consumed as most is reused or returned to source. Aware of its responsibility for managing water resources efficiently, Tenaris constantly evaluates its water conservation and reuse practices.

Reducing surface water intake

In 2022, 74% of the water used came from surface water and 23% from subsurface; the rest from local networks. At Siderca, more than 90% of our intake is from surface water as the site was designed to work off an open water circuit on the shores of the Paraná River.

In 2018, we invested in a new water recycling and treatment circuit, leading to an overall 25% reduction in surface water intake, and we continue to invest in upgrading water management systems.

Although water withdrawal is a relevant and challenging issue for the steel industry, especially when sites are located in areas with high consumption or low availability, the quality of the water discharged is no less important. Effluent discharge quality is regularly monitored to ensure compliance with local and internal standards, with different treatments implemented according to effluent type and destination.

Most are secondary physical-chemical treatments for internal sewage wastewater systems, deployed when there is no appropriate infrastructure in the location where we operate.

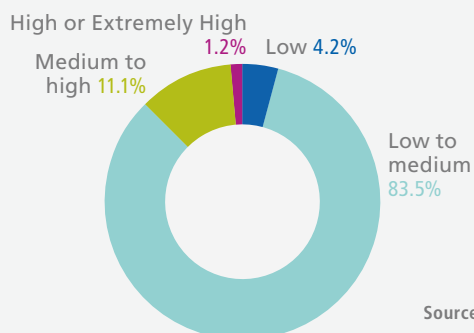
Improving water use and management

We have evaluated water stress levels at our facilities, especially those with high water-use rates for seamless pipe making, rolling and heat treatment. Processes for welded pipe and finishing plants use less water.

Of our total water withdrawal, we have mapped 1.2% of this in areas classified by the World Resources Institute's Aqueduct global water risk mapping tool as high / extremely high water stress areas. In medium to high stress areas, this is 11.1%, while around 88% is in low / low to medium ones. Thus, most of our more intensive water-use facilities lie in areas of low or medium water stress risk, according to the Aqueduct map, and these sites currently display high recycling rates.

Managing resources responsibly goes further than reducing our site water footprint. Regarding products, our Dopeless® connections require no water for cleaning when running in the field, while a standard dope thread needs between 10-20 liters of water per connection.

Water risk levels across Tenaris's locations





BIODIVERSITY: EVALUATING IMPACT AND CONTRIBUTING TO CONSERVATION PROJECTS

Biodiversity, and its relation to climate change, is gaining relevance as understanding grows about the impact of businesses activities and climate change on the diversity of plant and animal life.

We are working to enhance our management and governance approach in order to recognize these impacts and define actions where needed. We carry out targeted activities in specific regions where we can contribute to interaction with local ecosystems.

In Argentina, Tenaris signed an agreement with the Rewilding Argentina foundation in 2021 to work together in partnership to conserve and restore local fauna in different projects throughout the country. These include places such as the Esteros del Ibera reserve in Northeast Argentina, El Impenetrable in the North, and two areas in Patagonia.

More recently, following the wildfires that swept across much of the province of Corrientes, home to the Esteros del Iberá, Tenaris, together with other members of the Techint Group, donated materials to help with efforts to recover the local ecosystem. The donations included machinery such as tractors, steel sheets and profiles, as well as steel tubes to replace the perimeter fencing destroyed in the blaze, vital for keeping livestock separate from wildlife.

Rewilding Argentina is part of the Tompkins Conservation organization, whose work in Esteros del Ibera, creating a successful model of conservation, restoration and local economic development, was ranked by the National Geographic Society among the top seven best projects of its kind in 2020. Tenaris has contributed to the project by supplying pipes to build corrals, bridges or cages to support the strengthening and reintroduction of local fauna such as jaguar, giant otter and several local bird species.

Noise nuisance

Several of our facilities are long-standing industrial activities located close to residential areas and we are aware that we may create nuisance to our neighbors especially with noise.

This is an environmental aspect of great relevance for some of our sites and is thus taken into account in our management system. When we design new lines, we analyze the technologies available on the market.

These take noise into account with a view to minimizing indoor noise, thus reducing impact on our employees and avoiding undue disturbance to our neighboring communities.

Over the year, we extended the noise barrier at our Dalmine site and implemented other noise absorption and isolation measures.



Our R&D focus is on improving our product and service portfolio to achieve greater sustainability and efficiency, in line with evolving customer needs.

Innovation and the Value Chain

→ Our commitment

To develop integrated product and service solutions to meet customer requirements while enhancing safety, efficiency and reliability, and minimizing our environmental impact through the supply chain.

→ Our objectives

- Develop and improve our product and service portfolio to match evolving customer needs and enter new markets
- Promote supply chain efficiency through more efficient, cleaner and simplified processes, digital integration and the minimization of waste
- Develop reliable and competitive value chains in the countries where we operate

→ Our actions

Innovation and continuous improvement are integral to our processes at Tenaris and underpin our commitment to develop products and services that contribute to advancing the energy industry, while minimizing our environmental footprint. In 2022, we invested USD 51 million in R&D, reaching a total of USD 262 million over the last five years.

Our R&D network, coordinated by our technology offices in Amsterdam, has centers in Argentina, Italy and Mexico, manned by a team of 249 product developers and researchers dedicated to pushing the boundaries of material science and mechanical design. Their mission is to come up with new technological solutions to withstand extreme applications and make standard operations safer and more efficient.

In addition, as part of our sustainability strategy, we are constantly researching ways to optimize processes to achieve better quality and lead times, through digital integration, automation and AI initiatives.

USD

51

MILLION
INVESTMENT
IN R&D IN 2022

500

RIGS
SUPPLIED UNDER
THE RIG DIRECT®
MODEL WORLDWIDE
IN DECEMBER 2022

249

PEOPLE
WORKING
IN R&D

46,000

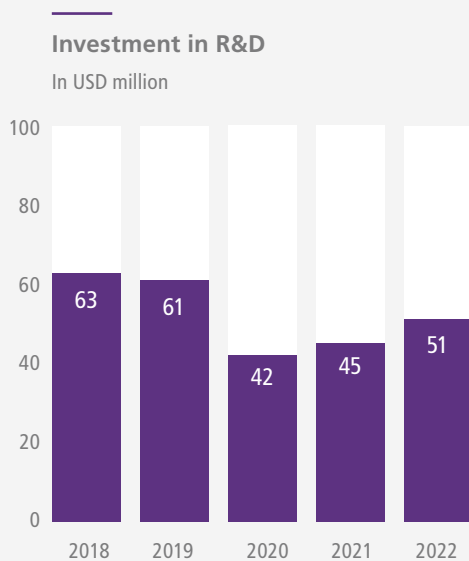
SME EMPLOYEES
TRAINED THROUGH
PROPYMES

At the forefront of development

Our work in R&D is twofold, reflecting our commitment to servicing the energy market, principally the oil and gas sector, accompanying our industry and customers on the path toward the energy transition.

Over the last few years, we have contributed to the development of unconventional resources in shale plays around the world, thanks to our premium TenarisHydril Wedge Series 400™ connections. Engineered to exceed the bending, fatigue, compression and torque challenges of horizontal wells, they ensure safer and more efficient drilling and completion operations.

By working side-by-side with our customers and assessing their needs first-hand at the rig, our teams are constantly developing solutions that move our industry forward. Leveraging decades of rig experience, Tenaris has recently put together the most robust package available on the market to improve the safety and efficiency of offshore operations.



This reduces the need for manual operations in the rig's red zone, a high-risk area that poses big safety challenges industry-wide.

Key to this package is the TenarisHydril BlueDock® premium connector, with design concepts from the extensively tested Blue® Series of connections. It provides a good performance in complex ultra-deepwater operations requiring gas sealability and fatigue performance. Its Automatic Anti-Rotational Keys enable multiple automatic and hands-free activation without the need for special tools and eliminates the need for personnel to enter the red zone.

In 2022, we brought our connector technology onshore, with the debut running of the TenarisHydril DesertDock™ weld-on connector for an operator in South America. This technology simplifies handling and installation, for safer and more efficient operations.

Our field-proven Dopeless® technology is another of the technological solutions offered in this package. This industrially-applied coating system not only eliminates the need to apply running compounds at the rig, but also increases running reliability, for cleaner, safer and more sustainable operations. The benefits of this technology are particularly appreciated in offshore operations.

Innovative solutions, enhanced by on-site support by our field services team, means that customers can drastically reduce the need to enter the red zone, leading to more efficient and safer offshore operations. From an operational standpoint, we are replacing the use of lift eyes to mobilize pipes with slings securing the pipe body at both ends. This is a key development for safety, as there is no longer any need for personnel to enter the red zone to remove the lift eyes.

On the digital side, Tenaris's PipeTracer® mobile application allows operators to identify Tenaris products onsite in real time, reducing pipe handling, improving accuracy and streamlining operations.



With hydrogen set to play a major role in the path to decarbonization and net zero, Tenaris's THera™ portfolio offers reliable and safe hydrogen transport and storage options.

Working for tomorrow, today

Tenaris is committed to building a low-carbon product portfolio for the next generation of energy, including solutions for hydrogen storage and transportation, carbon capture and sequestration (CCS) and geothermal energy. We are serving the evolving needs of these markets with our premium connections, proprietary steel grades, solid R&D knowhow, and technical support.

As the importance of hydrogen continues to grow in the sector's pathway to net zero, Tenaris joined and chaired DNV's H2Pipe Joint Industry Project (JIP) aimed at developing guidelines for safe and reliable design, re-qualification, construction and operation of pipelines for hydrogen transportation. The second phase of this international initiative is due to start in 2023 and will include a comprehensive test program to deepen the understanding of hydrogen embrittlement mechanisms and the effect of hydrogen on pipeline integrity.

Also, in terms of hydrogen applications, Tenaris's THera™ technology—Tenaris Hydrogen era—continues to gain ground with projects in Europe and the United States.

Tenaris is placing its experience and knowhow in developing and testing tubular technologies at the service of CCS initiatives, collaborating with leading public and private entities and operators.

Low temperatures and corrosion are the main technical challenges affecting CO₂ transportation and storage. Tenaris has run full-scale testing for TenarisHydril Blue® premium connections with Dopeless® technology at temperatures near -80°C, to prove its gas sealability performance at extremely low potential operating temperatures. Our extensive experience in corrosive service conditions ensures we are well-placed to develop reliable products for offshore and onshore transportation in the CO₂ use and storage sector.

We are developing R&D initiatives internally and on behalf of CCS end-users, for CCS materials and connections. Our relationship with leading CCS players provides us with input to guide connections and material testing. We are also involved in hydrogen research task forces at the European Pipeline Research Group (EPRG), the European Industrial Gases Association (EIGA) and the Pipeline Research Council International (PRCI).



Our proprietary PipeTracer® app enables rig personnel to scan QR codes to tally pipes received and upload data to the cloud in real time, generating cost and time savings for customers.

Beyond product technology

Over the last years, Tenaris has been transforming the tubular supply chain in the energy industry through its Rig Direct® service model, streamlining delivery from the mill to the well, and optimizing operational costs.

In 2022, Tenaris and Microsoft formed a five-year alliance to accelerate the company's digital transformation, and create greater efficiencies and synergies across its value chain.

Customer digital integration is an integral part of our Rig Direct® service value proposition, and we have been investing in other digital technologies to maximize customer integration efficiency, lowering operational and supply chain costs and increasing collaboration.

Through the Digital Transformation Alliance, Tenaris will be able to fast-track its migration to the Cloud environment as it leverages Microsoft's Azure computing solutions for information scalability, accessibility and reliability.

This includes the development of digital tools to enhance customer services with real-time data, optimizing performance throughout its supply chain thanks to improved management and control processes. This will also contribute to our decarbonization strategy, and enrich employee experiences with digital resources.

In addition, Tenaris has revamped its digital Marketplace for smaller customers in Argentina, including construction companies and distributors needing to place occasional orders.



Innovation plays a critical role in helping the industry to improve energy efficiency, safety performance and results.”



Alejandro Lammertyn
Chief Digital and Information Officer

The new platform streamlines efficiency and user experience so customers can easily access information on Tenaris products and pricing, place orders, and track the status of an order, while enabling direct communication between customers and Tenaris to resolve specific queries.

Also available in Mexico and Colombia, the Marketplace will be launched in Canada later this year.

Industry 4.0

In parallel to our focus on meeting current customer needs and shaping the technologies of tomorrow, we are also working to improve our own production processes in order to achieve optimized and leaner operations.

Tenaris has transformed its production system into a connected factory able to continuously adjust and self-optimize through autonomous robotics, IoT devices, cloud technology and AI.

The comprehensive scenario offered by Big Data is revolutionizing our global manufacturing system, allowing for all parts to run processes in a connected and optimized manner.

Taking advantage of these interlinked pools of data has helped us to advance our industrial processes and has also opened up new opportunities in terms of quality, productivity and cost savings.

Real-time signal processing and auto-learning control algorithms are now an intrinsic part of proprietary control systems that automatically operate machinery in our key industrial processes.

These mechanisms improve production yield and quality, and reduce energy consumption, enabling us to manufacture the highest quality products at competitive costs.

Standardized, detailed views of key metrics across Tenaris’s global manufacturing system offer a thorough understanding of the performance of each production center in real time.

In terms of human-machine collaboration, robotic process automation, digital assistants and wearable technology have contributed to eliminating repetitive tasks and making key data easily accessible remotely, in real time.

We have also implemented video analytics, and automated risk detection systems and location-tracking technologies to enhance operational safety.

The potential uses of new technologies in our industry, such as virtual and augmented reality devices, continue to expand. Our IT and Automation teams are constantly testing new applications in order to further optimize processes.



We take an integrated approach to sustainability by promoting sustainable practices throughout our value chain.



The Value Chain: building trust

The inflationary context following the pandemic, and the continuing conflict in Ukraine, have had a profound impact on how companies run their businesses, reinforcing the need to build resilience into their supply chains, with many firms migrating towards more localized, regional or near-shoring strategies.

In a context of ongoing global uncertainty, Tenaris is investing in strengthening its supplier relationships, based on mutual trust and coordination, in the knowledge that this will directly contribute to reducing transaction costs, enhancing flexibility and adaptability for more efficient problem-solving. In deepening our approach to value-chain management, we are also extending existing policies implemented by our procurement company Exiros for a sharper focus on environmental performance.

Sustainable sourcing

Tenaris is working to adopt a Sustainable Sourcing Policy aimed at enhancing dialogue and awareness of sustainability concepts among our suppliers, and accompanying us in meeting the standards we require in our operations, offering support and training as required.

Our vision is to help our supply chain become more competitive by adopting global quality, safety and environmental standards, and developing the resilience to withstand market changes and sustain a solid value chain.

Materials management

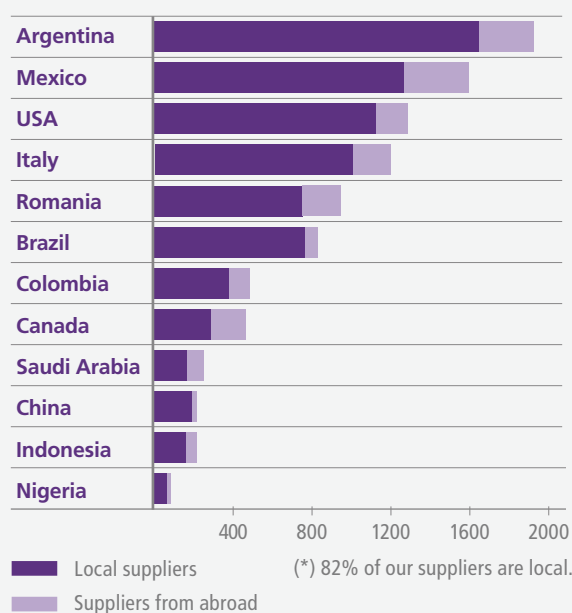
Most of our products are manufactured using EAF in integrated steelmaking operations from steel scrap, DRI, HBI, pig iron and ferroalloys. In Argentina, we make our own DRI from iron ore in pellet form, using natural gas as a reductant.

In 2022, annual iron ore consumption, mostly from Brazil and Canada, was approximately one million tons. Prices and availability of iron ore or other raw materials may be negatively affected by production interruptions, such as accidents or natural disasters. To mitigate risks and reduce dependency, we have been developing alternative suppliers.

With our procurement company Exiros, we hold a selection process to ensure suppliers comply with the Company's Code of Conduct and local laws. We will integrate the concepts of our new Sustainable Sourcing Policy into this selection process. We require all our business partners to observe our internal standards governing ethical behavior, legal compliance, and HSE responsibilities.

Our HSE audits are designed to help suppliers manage long-term risks, certifying that those performing high HSE-risk activities have the right capabilities.

Suppliers by country (*)





PROPYMES: CELEBRATING PARTNERSHIPS

Launched in December 2002, the ProPymes Program supports Small and Medium-sized Enterprises (SMEs) working in the value chain of Tenaris and its sister companies Ternium, Tecpetrol and Techint Engineering & Construction. The Program's aim was to create an integrated ecosystem with the companies in the value chain by helping them grow, innovate and develop export strategies.

Initially with 26 participating companies, the Program now works with 1,007 firms in Argentina. Over the last 20 years, the SMEs taking part have received technical assistance to train over 46,000 employees, benefited from over USD 78 million in credit support from the Techint Group, and exported goods and services worth USD 252 million to other companies in the group. As regards training, the ProPymes Program provided a record number of 75,358 training hours in 2022.

In addition, 779 people have participated in trade missions.

The 21st annual seminar held in December 2022 commemorated the achievements of the Program's first 20 years, a hybrid event attended by over 700 representatives of SMEs, featuring speeches from our CEO Paolo Rocca and public officials. The event was also an opportunity to present a new facet of the program, ProPymes Environment, designed to offer training aimed at improving environmental sustainability indicators for companies in the value chain.

ProPymes is also involved in our community education program Technical Gene, helping technical high schools furnish young people with the right workplace skills through on-the-job training. In 2022, the ProPymes Technical Gene Program offered 1,370 students the opportunity to practice their skills.

As of the date of this report, we have audited and certified 90% of our high-HSE risk active service suppliers, a prerequisite for the award of a service contract. The audit is based on Tenaris's standard self-assessment process designed for suppliers that intend to provide services. In 2022, 469 new audits were carried out.

Tenaris purchases most supplies through Exiros, whose quality system is certified to ISO 9001 standards. In December 2022, Exiros had nearly 49,000 registered suppliers, of which over 15,000 were active during the year, with 8,600 supplying Tenaris.



The ramp-up in activities in key markets and the ensuing rise in new hires make it more important than ever to ensure the well-being of our employees.

Human Capital

→ Our commitment

To lead with care, providing a safe working environment built upon well-being, accountability, inclusion and trust, to enable employees to develop their skills and careers while contributing to the company's goals.

→ Our objectives

- Foster trust and empower employees to manage and promote change
- Embed sustainability values through transparent and effective processes
- Respect and promote diversity and inclusion in all its forms

→ Our actions

- Our people, their enthusiasm, ideas, efficiency and skills, are our most valued asset, driving innovation and forging the path toward business growth.

As a global industry leader, we face a world dynamic tempered by economic and political uncertainties, technological disruption and trade conflict. Nurturing the competencies and determination of our teams is more important than ever before to unlock a more sustainable future.

2.8

MILLION HOURS
OF TRAINING DELIVERED
IN 2022

100

NATIONALITIES
REPRESENTED ON
OUR TEAM

96%

SUPERVISORS
RECEIVED UPWARD
FEEDBACK

88%

PARTICIPATION
IN LAST ENGAGEMENT PULSE
SURVEY, NOVEMBER 2022
(excluding shop-floor employees)

Emphasizing value

As we move into a post-pandemic phase, our focus is on recovery and adapting to an uncertain and complex world characterized by shorter business cycles and the move towards the energy transition.

We have also continued to experience the effects of the ramp-up of our industrial system, particularly in the U.S. and Canada, with the commensurate opportunity to hire more local professional and shop-floor personnel and rotate Tenaris employees to international assignments as part of their growth path.

Industrial passion as a core value

At our company, industrial excellence is not just a goal but also a fundamental aspect of our corporate identity. We work to strengthen our industrial and productive areas through a range of initiatives that reflect our unwavering commitment to this objective. Central to this effort is a team of technical leaders, young professionals and managers who share our passion for the industrial sector.

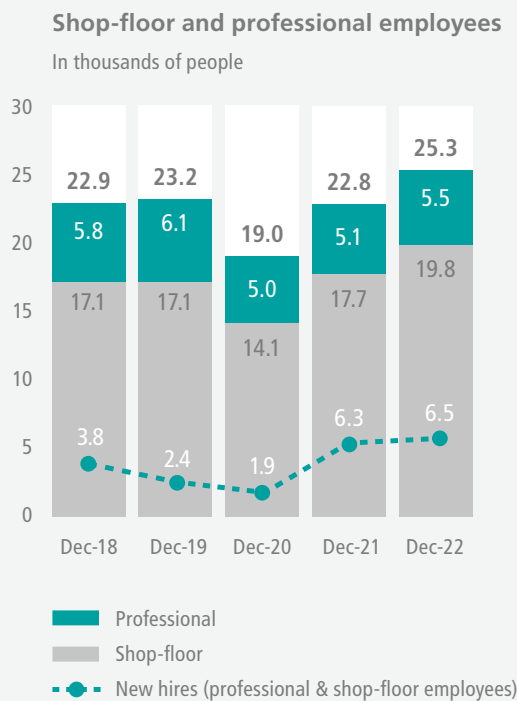
To help them realize their full potential, we provide ongoing training and support, enabling them to stay at the forefront of their fields. Additionally, we have established specialized technical schools focusing on particular processes to ensure that our workforce remains highly skilled and knowledgeable.

By nurturing a culture of industrial excellence, we stand out from our competitors and approach every aspect of our business from a rational, value-driven perspective.

We believe that building and developing a passionate, industrial workforce is not just a business imperative, but a cultural obligation that springs from our roots. That's why we are committed to fostering a community of industrial talent that shares our values and aspirations.

Our offer includes exposure to challenging projects, a multicultural environment, and a wealth of opportunities for learning and professional growth.

We seek to attract individuals who are not only highly skilled, but also deeply committed to leading a sustainable industrial project that benefits society as a whole.





We are fostering a culture that puts collaboration front and center by promoting employee recognition, to strengthen effective teamwork and organizational efficiency.”



Luis Scartascini
Chief Human Resources
Officer

A human-centric approach

The pandemic has made it clear that understanding and empathy as part of investing in employee well-being are crucial to maintain efficiency and productivity. Post-pandemic workplace trends, such as the great resignation and quiet quitting, have empowered people to seek new meaning in the work-life balance, particularly the younger generations. This is posing a challenge for industry and business worldwide, and Tenaris is no exception.

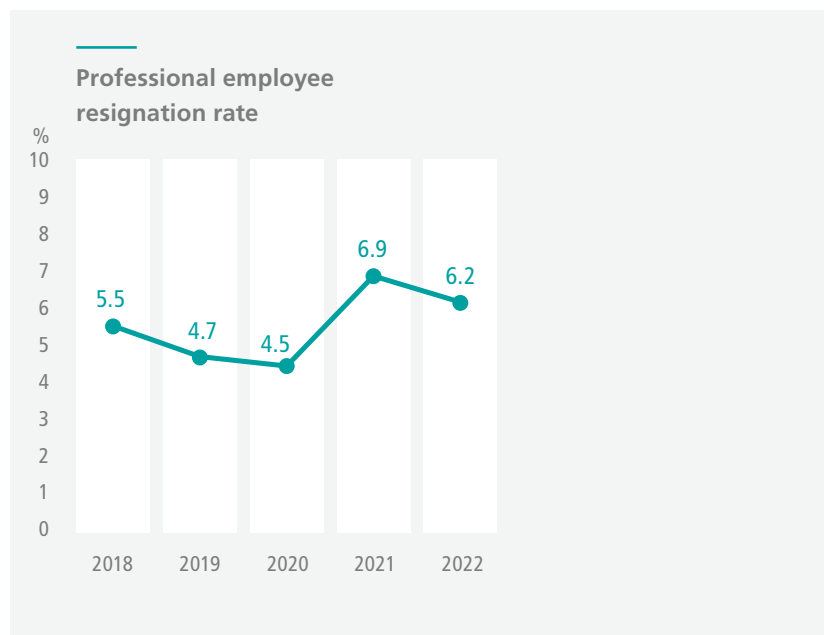
We have been refining our employee value proposition in line with our strengths as a global company, while reforming our talent search policy to prioritize personal attributes and skills such as creativity and a collaborative mindset that can add value to teamwork and our organizational capabilities.

We highlight the importance of connection and recognition, a human-centered approach pivoting on more personalized relationships. This requires us to be close to the line and its processes, and to draw out specific leadership qualities in response to the results of our engagement surveys. This includes continued emphasis on diversity, inclusion and sustainability.

Reshaping talent management

The major changes in the talent market, its offer, competitiveness and preferences, have affected us in different ways according to region and functions. We have thus individualized critical profiles and customized our action plans to counter the effects of trends such as the post-pandemic mass resignations on our industry. Although we, like our peers in the sector, have been affected by the latter, our overall resignation rate in 2022 was several percentage points below the manufacturing industry’s benchmark.

The resignation rate among our professional employees fell from 6.9% to 6.2%, while the resignation rate among our shop-floor employees rose to 6.2%, mostly in the U.S. and Canada.



ENHANCING WELL-BEING

With hybrid and remote work posing the risk of destabilizing the work-life balance, in 2022 we devoted special attention to our employees' mental health and well-being. As mentioned in the chapter on Health & Safety, medical protocols have been developed with Humanitas, supported by targeted communications campaigns emphasizing the need for annual medical check-ups as well as the importance of self-care, including nutrition and exercise.

We also invest continuously in training and awareness-raising campaigns, both for new hires and more senior personnel, to provide a safe working environment for our employees. These complement and reinforce our policies—Human Rights Policy, Diversity Policy and Harassment Free Policy—and codes of conduct which explicitly aim to ensure a healthy and safe working environment, prohibiting any form of discrimination or harassment in the workplace.

Our global biennial workplace climate surveys held among shop-floor and professional employees allow us to keep our finger on the pulse and take action to tackle any areas of concern for our people.

New talent attraction drive

In an increasingly competitive market, job profile preferences are changing radically, leaning towards emotional fulfilment rather than a transactional relationship.

This has led to a generalized scarcity of talent, particularly in our industry and that of our customers, compelling us to develop new ways of meeting expectations in order to attract, engage and retain the human and professional skills we need.

As a global company, we know that our career development and rotation prospects are an attractive differential for both industrial and administrative profiles.

With flexibility as the basis for our employee value proposition, we have been developing new incentives and solutions for industrial positions that traditionally required a greater presence in the workplace, a specific challenge for our industry.

Inclusive digital transformation

As a core element of its strategy to address, govern and drive a comprehensive digital transformation, Tenaris launched its own version of the Citizen Development program to encourage non-IT-trained employees to leverage low-code/no-code software solutions to tackle problems and create new business applications, such as automating specific processes.

The new training program enables us to upskill our employees and improve process optimization and simplification so we can move our current workload towards digital tools.





Mentoring to guide development

After a significant influx of candidates in certain regions and areas, we ended 2022 with over 500 Global Trainees (GT), mostly with an industrial profile from regional universities.

Our new GT Pool program is being deployed on the ground by specially trained “mentors” who closely follow each GT in the office or mill in order to guide their development and inspire their engagement.

As a recruitment tool, we expect to see this impact on our retention rates and reduce the time taken to fill open positions, while enhancing our talent pipeline to support succession planning.

The GT Pool program will also have an impact on diversity in operational and management roles, as we are working to ensure that 50% of our professional employee intake are women, contributing to a better distribution of the workload in a context of growing activity.



BACK TO IN-PERSON TRAINING

2022 was welcomed with enthusiasm as the return to full in-person training and events, and at TenarisUniversity, we resumed the four global management programs with updated competencies: the TenarisUniversity Induction Camp (TUIC), the Management Development Program (MDP), the Advanced Management Program (AMP) and the Leadership Program (LP). These are now buttressed by the Business Acumen (BA) and Management Essentials (ME) programs that were introduced during the pandemic.

Revamped over the last couple of years to combine the latest learnings with technology, the programs now offer participants improved and effective ways of networking, incorporating the values of the peer learning communities to share understanding of the course material and develop new practical and softer skills. Overall, they offer a broad and structured range of management training, featuring participation from prominent business schools, with particular application to our industry.

Employee participation in Global Management Programs

Participants per course

Year	TUIC	MDP	AMP	LP	BA	ME
2018	133	113	48	38		
2019	183	105	52	39		
2020	-	49	-	-	30	85
2021	86				36	83
2022	162	96	-	42	33	77

TUIC: TenarisUniversity Induction Camp
MDP: Management Development Program
AMP: Advanced Management Program
LP: Leadership Program
BA: Business Acumen Program
ME: Management Essentials Program

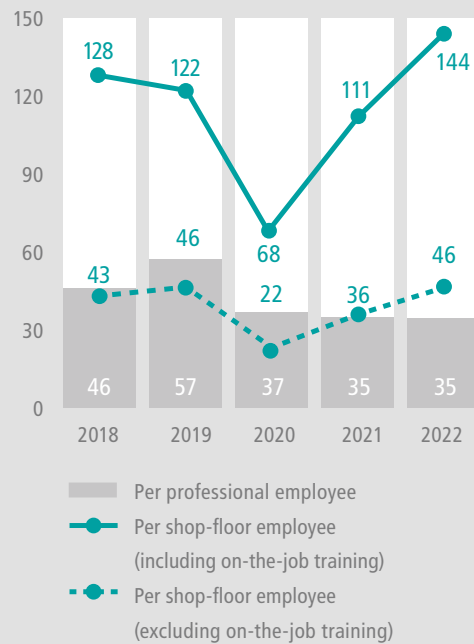
STRENGTHENING OUR KNOWLEDGE CULTURE

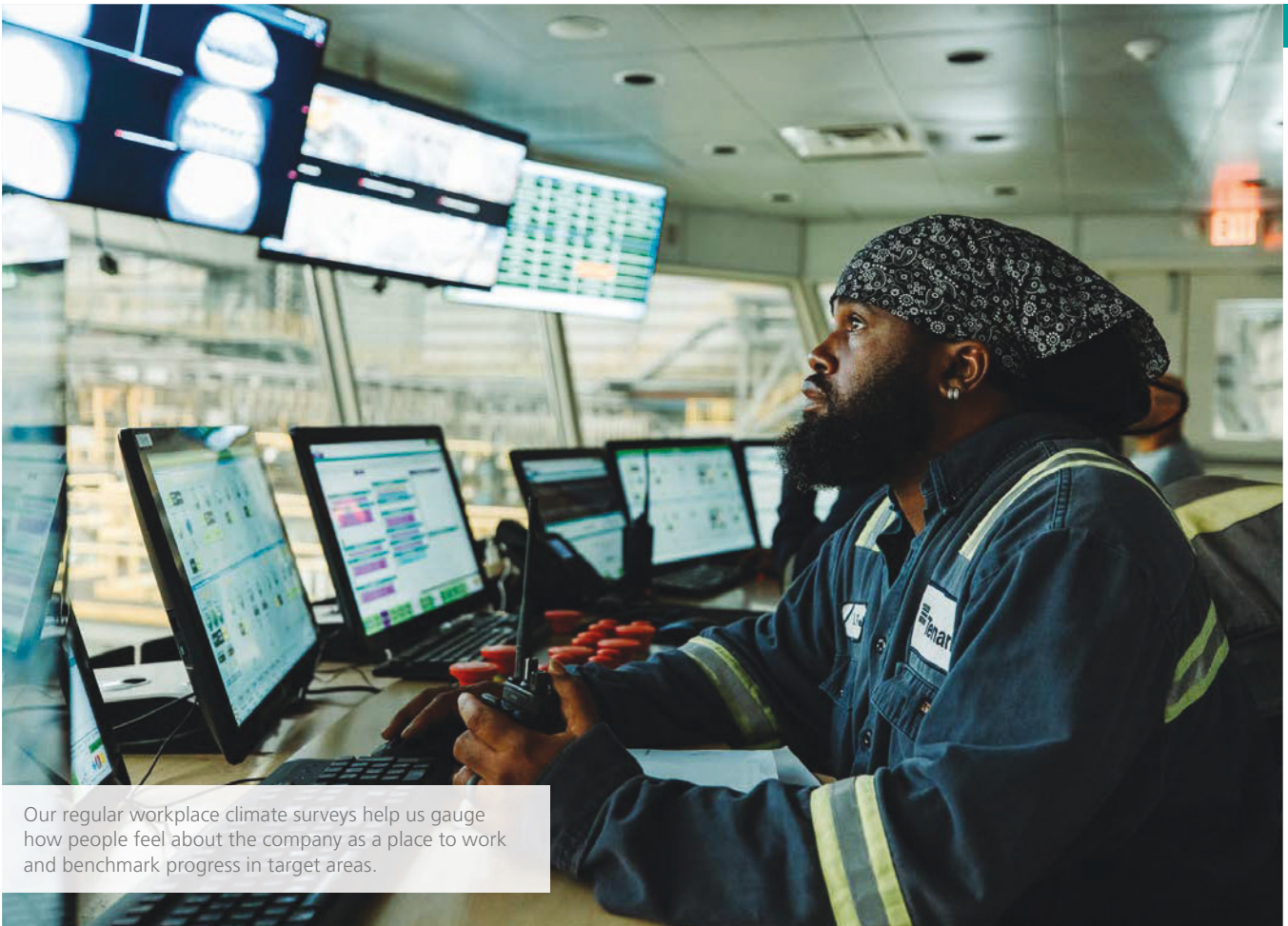
The level of engagement displayed by participants, the feedback provided and the comments shared, were visible proof of the importance of in-person learning experiences for Tenaris's culture and the focus on skills and knowledge rather than roles.

This year, we launched the Maintenance Technical School in Mexico, and the Hot Rolling Technical School in Italy, following the success of a similar initiative for our Technical Sales professionals, to strengthen knowledge sharing and foster a sense of community as part of our industrial culture.

We also deployed a company-wide training plan aimed at imparting team management skills to new shift leaders, part of a growth model strategy rooted in setting common goals.

Total training hours





Our regular workplace climate surveys help us gauge how people feel about the company as a place to work and benchmark progress in target areas.

Global opportunities for growth

During 2022, we experienced strong business recovery with the corresponding ramp-up in personnel hires to drive renewed activity, particularly in the U.S. and Canada, opening up opportunities to recruit people from the local market for both professional and operational roles.

This has also enabled us to offer Tenaris employees new options for international assignments as part of their professional and personal development, while providing support for the region as a whole in the wake of the challenges ensuing from the spurt in activity.

In 2022, we had a net increase in the number of employees of 2,500, thanks to the reopening of production facilities and overall increase in production activity.

A good place to work

We held our latest six-monthly Pulse Survey in November, a year on from our more detailed Employee Opinion Survey (EOS).

With an 88% participation rate, the Pulse Survey enabled us to benchmark progress on the priority topics identified in the 2021 EOS, such as mental health and well-being, and deepen engagement with key figures and critical populations.

88% PARTICIPATION RATE
IN PULSE SURVEY 2022

80% FAVORABILITY SCORE
CONFIDENCE IN TENARIS'S FUTURE

76% SATISFACTION WITH TENARIS
AS A PLACE TO WORK

The positive responses highlighted attributes such as the company's financial strength, product quality and market leadership in general terms. At an internal level, there was positive feedback regarding employee flexibility, well-being and career development, indicating a high level of satisfaction with the company as a good place to work, 4% up on the previous year.

Aspects such as collaboration and recognition continue to be areas for improvement, with comments reflecting concerns about their effect on employee deliverables. These are now the subject of focus groups to gain a greater understanding of the main issues prior to developing actions, a priority for 2023.

Leveling the playing field

Tenaris fosters diversity in the workplace as the bedrock of a healthy company culture, enhancing productivity, employee retention and general work satisfaction. A rich diversity of ages, abilities and nationalities, as well as an active commitment to promoting gender equality across the organization, have set the course for inclusion at all levels.

Also key for our talent management strategy is the intention to have a high proportion of local staff at each of our locations, averaging 85% of employees who are native to the respective country.

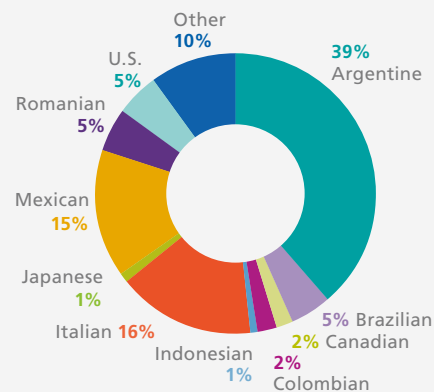
We continue to work to improve the gender balance with a focus on attracting more women to our GT and entry level programs, as well as our corporate internships. Here, we aim to have an equal gender balance between women and men. As a company that grows from within, there are a number of internal programs designed to help our female talent develop professionally by providing long-term career planning and support.

In Colombia, Tenaris was certified for the Labor Equity Gold Seal by Equipares, the national program on labor equity which benchmarks gender issue.

Employees by nationality

Argentine	6,617	26%
Mexican	6,201	25%
USA	2,889	11%
Italian	2,096	8%
Romanian	1,873	7%
Brazilian	1,473	6%
Colombian	1,201	5%
Canadian	862	3%
Indonesian	491	2%
Others	1,589	6%

Senior managers by nationality





Our objective is to ensure that at least half of our young professional hires are women, as part of our efforts to improve the gender balance throughout the organization.

Equal opportunities employer

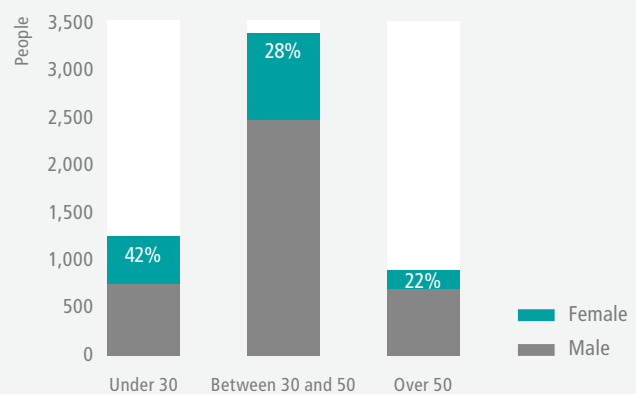
The Tenaris Code of Conduct prohibits unlawful discrimination in employment relationships, granting all people the right to apply for a position in the company, or to be considered for a new post on the criteria of merit, without arbitrary discrimination.

The company's Human Resources Policy upholds equal opportunities by ensuring that hiring, promotion, transfer, notice periods, dialogue, rights and protection, as well as other employment decisions are taken without regard for race, color, religious belief, gender, age, disability, national origin or sexual orientation. Compensation and remuneration refer to individual duties, performance, competence and behavior.

The Company operates a Compliance Line, available 24/7, to which employees may report any supposed breach of the Company's Code of Conduct or its principles, such as acts of corruption, fraud, theft, and abuse or discrimination in the workplace. The Compliance Line is a confidential communication channel which is managed independently by our Internal Audit Department. Reports are duly analyzed and in many cases, disciplinary actions, including dismissals, have ensued.

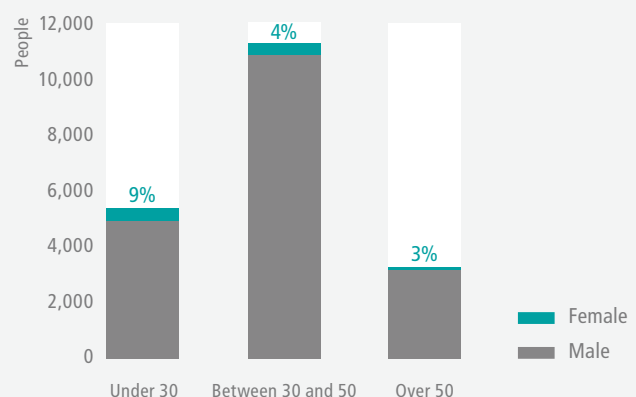
Percentage of women

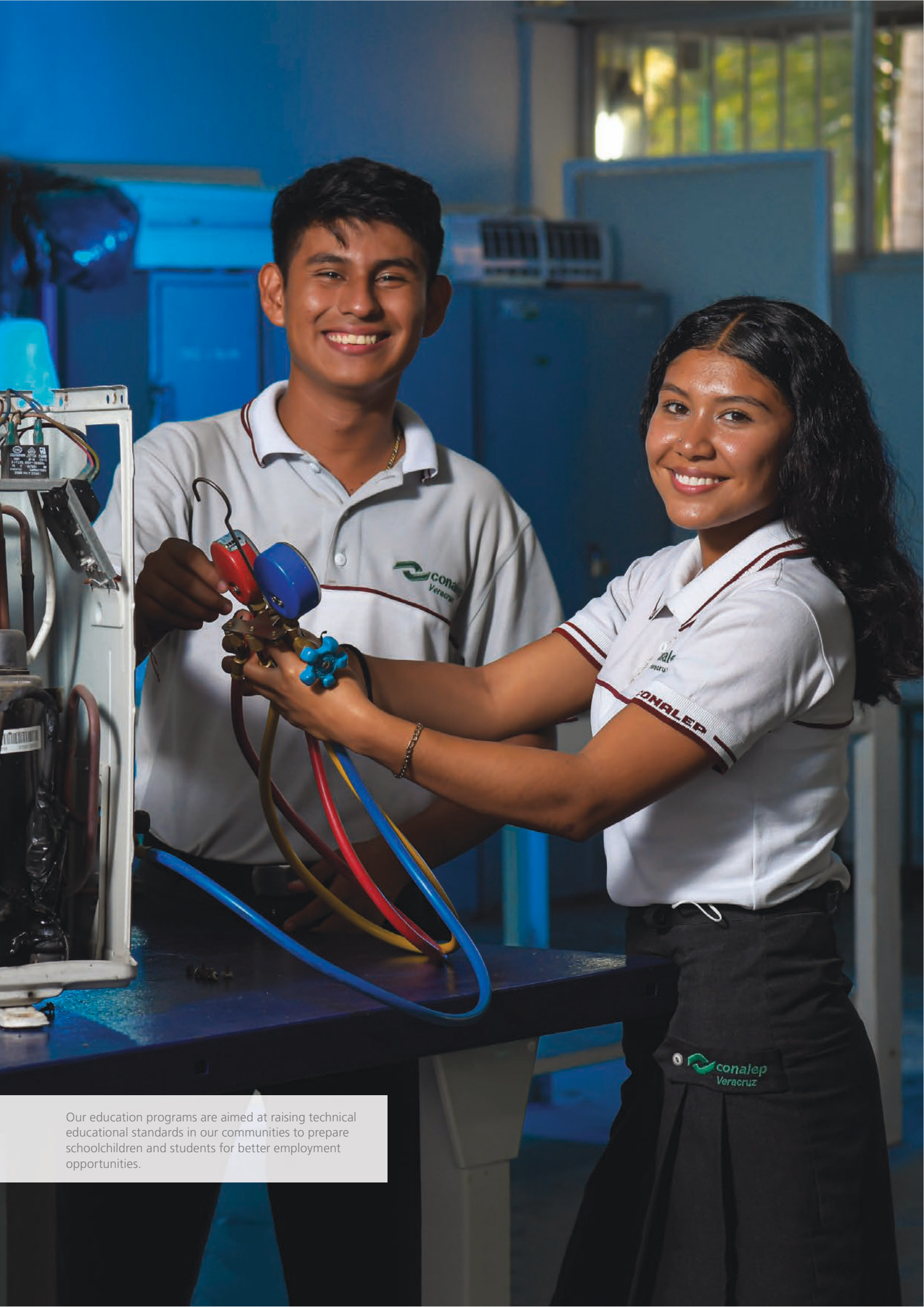
Professional employees by age



Percentage of women

Shop-floor employees by age





Our education programs are aimed at raising technical educational standards in our communities to prepare schoolchildren and students for better employment opportunities.

Community Relations

→ Our commitment

To drive inclusive growth and development in the communities where we work and live, promoting a culture that rewards merit and encourages enterprise, both academic and in terms of personal effort.

→ Our objectives

- Contribute to improving all levels of education in our immediate and broader communities, with a focus on technical education
- Help preserve our community's identity and heritage
- Encourage creativity and innovation through culture
- Support our communities during crisis (health, education, humanitarian)

→ Our actions

Our community program reflects over seven decades of industrial tradition worldwide, with a special focus on Latin America. We believe that a project like ours can only be sustainable if community and industry grow together, with the conviction that education is the main driver of individual and social progress. Our seven global strategic programs are implemented locally, taking into account the different realities of each community where we operate.

In 2022, our global education programs were renamed after Roberto Rocca as a tribute to his legacy and values: the Roberto Rocca Technical Schools, Roberto Rocca Technical Gene, Roberto Rocca After School Program and Roberto Rocca Scholarships. He was passionate about education as fundamental factor for people's development, driving social mobility and creating opportunities for growth. These beliefs are intrinsic to the ethos of the Techint Group and underpin its core values. In 2022, to celebrate the Centenary of Roberto Rocca's birth, we set June 10 as our Global Education Day.

In 2022, Tenaris invested USD 13.4 million, complemented by an additional contribution of USD 1.4 million made by our controlling shareholder group. Of the total amount of USD 14.8 million, USD 11.4 million, or 77%, was invested in our education programs.

USD

14.8

(USD 13.4 MILLION DIRECT)
INVESTED IN
OUR COMMUNITIES
IN 2022

77%

ALLOCATED TO
EDUCATION
IN 2022

37,000

BENEFICIARIES
OF OUR GLOBAL AND
LOCAL EDUCATION
PROGRAMS

214,000

BENEFICIARIES
OF OUR GLOBAL AND
LOCAL CULTURAL
PROGRAMS

Education at all levels

Our educational programs cover the entire school cycle, from elementary to higher level, helping children to fulfill their potential and become active contributors to society.

The Roberto Rocca Technical Schools Network, Roberto Rocca Technical Gene, the Roberto Rocca After School program and Roberto Rocca Scholarships program, are the four global initiatives designed to support education in our communities.

During 2022, we launched our Roberto Rocca Educational Campus, offering free online training in Math, Technical Skills and Safety, among other courses for students from our communities. This was complemented by the launch of our robertorocca.org website to share education articles and global best practices.

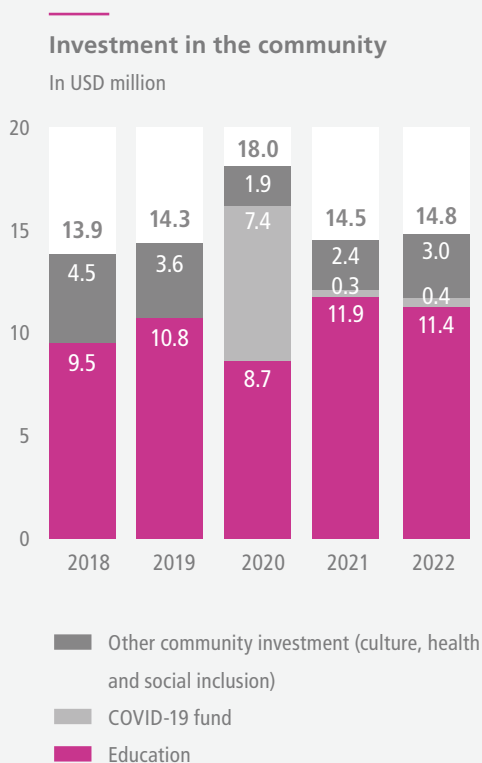
Technical education: the foundation for industrial growth

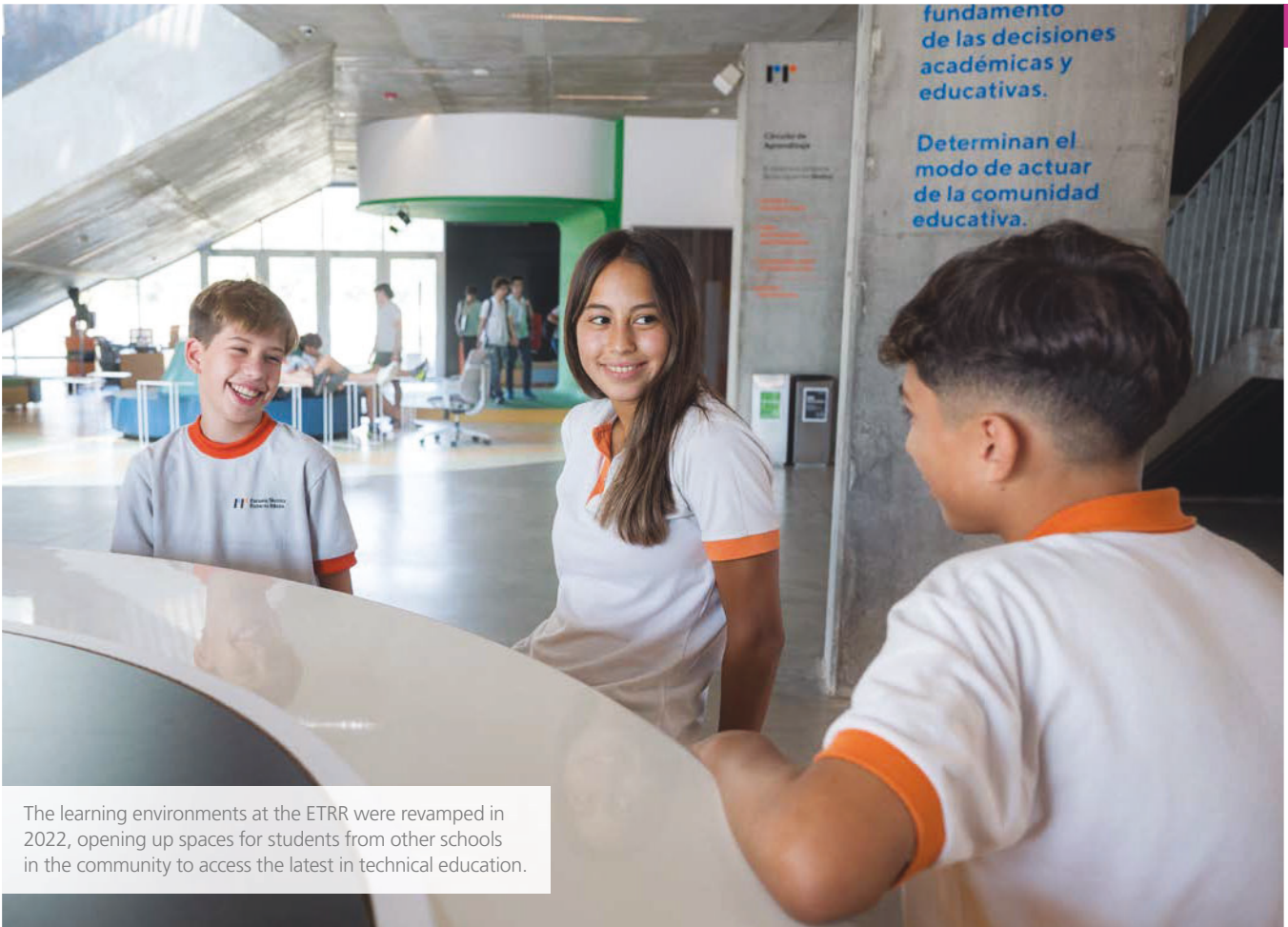
At the heart of our education drive is the network of Roberto Rocca Technical Schools (ETRR, in Spanish). The ETRR program was launched to educate high-school students from our communities using innovative teaching methods and technologies for classrooms and laboratories. All the students receive different scholarships depending on their needs.

The first school, inaugurated in 2013 in the city of Campana (Argentina), has 436 students, while our sister company Ternium opened a second technical school in 2016, with a capacity of 406 students, in the town of Pesquería (Mexico).

In 2022, the American Chamber of Commerce in Argentina distinguished Tenaris and the ETRR with an award for their outstanding contribution to quality education, in recognition of the educational model followed, the innovative learning environment and its impact on the community.

Five ETRR students were picked in 2022 to represent Argentina and participate in the FIRST Global Challenge, a yearly Olympics-style robotics competition organized by the International First Committee Organization and held in Switzerland. The ETRR team competed against their peers from 190 countries to build a robot in record time.





The learning environments at the ETRR were revamped in 2022, opening up spaces for students from other schools in the community to access the latest in technical education.

Our community work in 2022 sought to increase the value of education for the community through global partnerships with the German automation and industrial manufacturing companies, FESTO and Siemens, respectively. The Argentine ETRR was certified as a Technical Training Center, enabling it to offer Industry 4.0-related technical courses and certify people from the local communities. The ETRR in Campana is the first training center in Argentina qualified to provide this certification. Math and Language skills-strengthening courses were offered to 431 elementary school-leavers about to begin high school and technical courses given to 95 students from other local technical high schools.

We believe that gifted teachers who are truly committed to both students and the community are a springboard for academic excellence. During 2022, we ran our annual teacher performance evaluation system involving student feedback surveys as well as an assessment of the work completed, conduct and disciplinary records. Our school assessment committee met to evaluate 87 teachers, with a view to applying a series of incentive systems in line with annual teaching performance.

Creating innovative learning environments

The ETRR's educational model was inspired by the High Tech High (HTH) schools network in California, and the Project-Based Learning (PBL) dynamic teaching method, from PBLWorks. Drawing on these sources, the ETRR model is based on active, collaborative, project-based learning. It places emphasis on social-emotional skills development as well as on achieving high academic and technical standards.

During 2022, the school revamped its learning environments to strengthen its educational model, facilitate an increase in the number of ETRR students, and open up learning spaces to other schools to enable them to offer their own students the latest in technical training.

The ETRR commissioned the Danish architects Rosan Bosch Studio to propose the necessary changes, as the firm specializes in the design of innovative schools offering flexible and diverse learning landscapes.



Our Technical Gene program offers high-school students the opportunity to develop Industry 4.0 skills and receive on-the-job training at companies from our ProPymes program.

Accordingly, spaces were redesigned in line with a new approach centered on four main learning areas (nodes) rather than traditional classrooms: technical and technological, STEM, nature and sustainability, citizenship, art and communication, and health and movement. These learning spaces are designed to encourage students to develop their concentration, collaboration, production, action and presentation skills as part of our PBL approach.

Technical education to strengthen skills in the community

The Roberto Rocca Technical Gene program provides schools with infrastructure and equipment, as well as teacher training and on-the-job internships for high-school students, leveraging the teaching and learning practices developed by the Roberto Rocca Technical Schools program. High-school students have the opportunity to develop Industry 4.0 skills using specific tools to guide their learning.

Through our ProPymes program, we extend Technical Gene to our network of small and medium-sized suppliers.

As well as infrastructure and equipment, we provide practical experience through technological projects bringing schools closer to industry, including on-the-job internships in our mills.

Launched in 2006, Technical Gene is underway in 12 communities: Campana, Zárate, Pindamonhangaba, Cartagena, Bérgamo, Aktau, Veracruz, Calarasi, Campina, Zaláu, Bay City and Midland; in eight countries: Argentina, Brazil, Colombia, Italy, Kazakhstan, Mexico, Romania and the U.S. In 2022, 3,544 students and teachers took part in the program.

In Cartagena, we redesigned a technical school in the Nelson Mandela neighborhood, improving job opportunities for school leavers with local industrial companies, and introduced three new technical study courses in partnership with the SENA national learning system. We also provided technical equipment, built new workshops and trained teachers and students in Math and technical subjects.



Our commitment to strengthening education, focused on STEM subjects, is a strategic one, benefiting the future of our companies and communities, in the interests of creating greater prosperity for society as a whole.”



Erika Bienek
Community Relations
Director, Techint Group

In efforts to bring schools closer to industry, in 2022, our mill internships returned to the in-person pre-pandemic format. 219 students from Campana, Zárate, Pindamonhangaba, Calarasi, Zaláu and Aktau, did internships at our facilities, and we rolled out the technical internships experience for the first time at our plants in Veracruz and Calarasi.

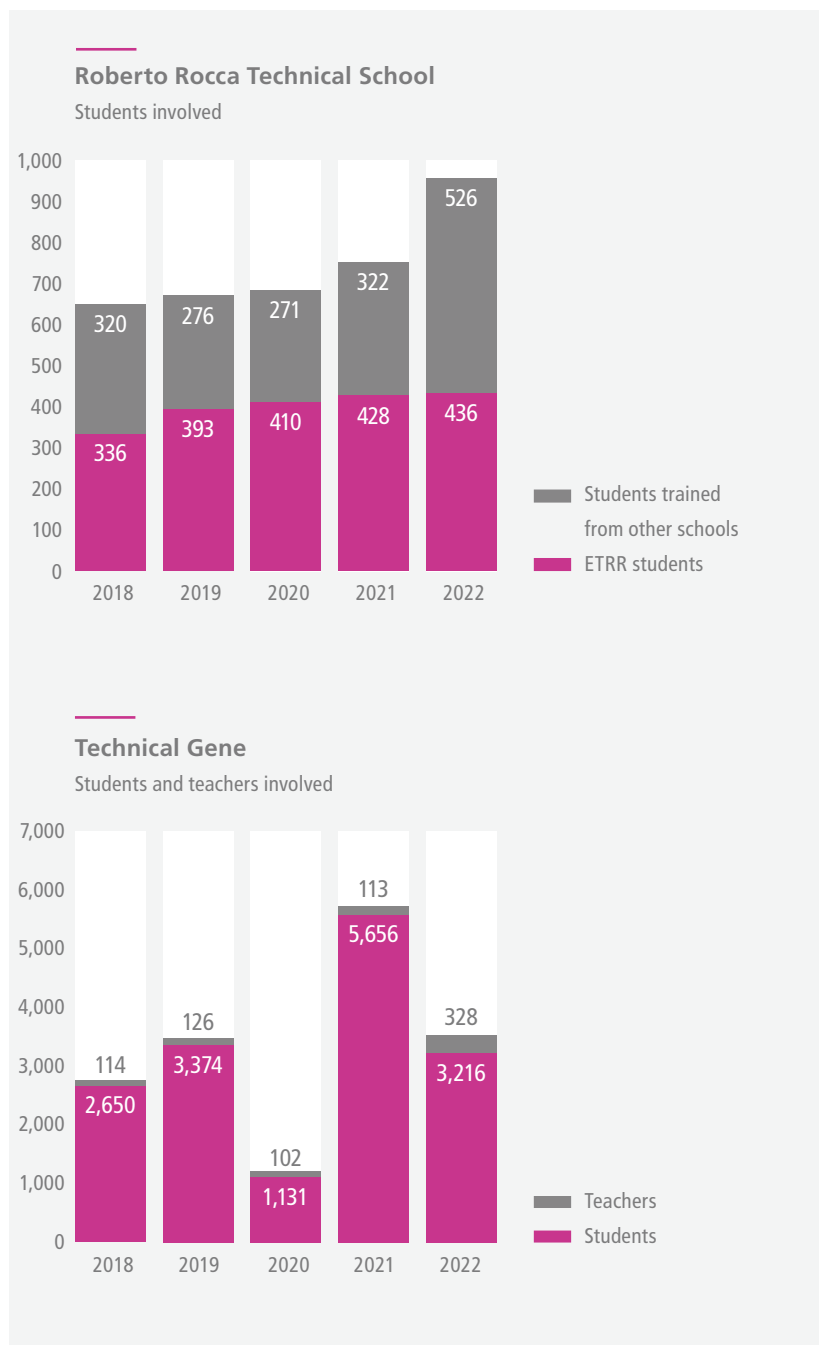
With a focus on raising educational standards, teachers in Campana, Veracruz, Pindamonhangaba, Cartagena and Zaláu received PBL training courses as well as Math and FESTO Certifications.

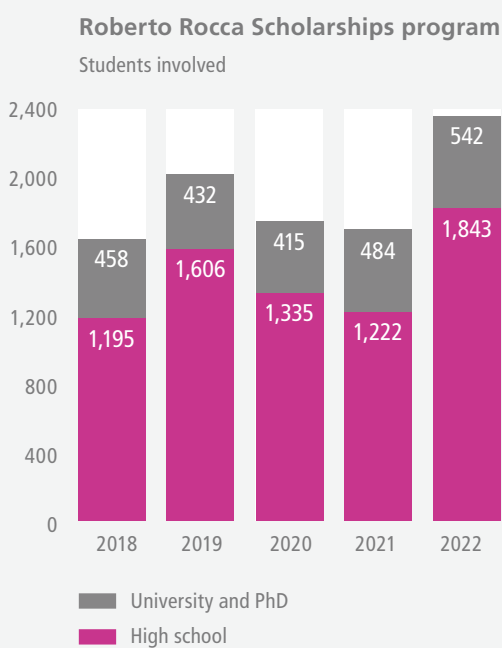
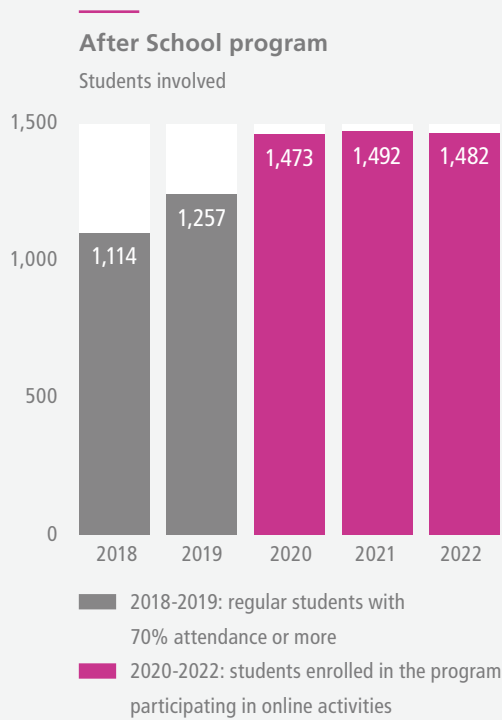
Regarding infrastructure, we supported technical schools by upgrading workshops and equipment in line with the demands of industrial environments, such as new classrooms for schools in Campana and Cilegon.

Starting out on the right foot

The Roberto Rocca After School program offers STEM and Art classes for children aged 6-15, an integrated approach to develop basic literacy, math, science and social-emotional skills through quality education, four days a week.

Launched in 2009, the program is currently being implemented in a total of ten communities through both Tenaris and Ternium: Campana, Pindamonhangaba, Cartagena, Veracruz, Zaláu, Montevideo and Blytheville (Tenaris), and Ramallo, Santa Cruz and Monterrey (Ternium), reaching 1,789 students.





The results and approach of the Roberto Rocca After School program were presented at the 2022 Virtual Conference of the WERA-International Research Network in Extended Education. The program was singled out for its contribution to the all-around development of children, particularly those from vulnerable communities.

In 2022, we reinforced educational content for our Science, Math and Literacy teaching, focusing on bringing children who were behind in reading and writing skills up to speed. As a result, overall Math skills improved by 7% and Literacy levels by 27%, according to College Board measurements. In addition, students attending the Roberto Rocca After School show higher school attendance rates, with those in Campana, for example, clocking up an average per year of 30 days more than their peers.

Encouraging educational excellence

Launched in 1976 in Argentina, the Roberto Rocca Scholarships program encourages academic performance and commitment among high-school students living in Tenaris communities. The program was expanded in 2005 to include undergraduate and graduate students and encourage them to study applied science and engineering. The criteria used to assess whether high-school students qualify for scholarships, in addition to academic excellence, include an evaluation of their family's socioeconomic situation. This is part of the company's drive to promote equal opportunities, in the understanding that education is key to promoting upward social mobility.

In 2022, we awarded 1,843 scholarships to high-performing secondary-school students, 530 scholarships to undergraduates, and 12 to doctoral students studying outside their home country.



Culture and tradition

Sharing horizons past and present

For Tenaris and its sister companies in the Techint Group, art and culture are a source of innovation as well as a means of celebrating diversity and exploring humanity. The foundation of our global arts programs is our partnership with the contemporary art Fundación PROA in Argentina. In 2022, Tenaris invested USD 1.9 million in cultural activities in 8 countries.

In 2022, together with Fundación PROA, we held a series of Film Festivals achieving a record turnout. 7,029 spectators gathered to watch a selection of Latin American films screened in communities in Bay City, Bergamo, Blytheville, Calarasi, Campana, Campina, Houston, Montevideo and Zalău.

During 2022, PROA presented the exhibitions “A panorama of this world”, “Christo and Jeanne-Claude”, “Labyrinths”, “Anthropocene”, and the site-specific “Giros”. PROA received 100,000 in-person visitors, and 2,200 people attended seminars and virtual classes.

Tenaris also supports the Galleria d’Arte Moderna e Contemporanea (GAMEC) in Bergamo, which hosts a wide variety of local and international exhibitions, and last year welcomed 102,165 visitors.

History in the making

In Italy, the Fondazione Dalmine in Bergamo is responsible for disseminating Tenaris’s history and industrial culture, and its archive is home to a vast collection of historical material documenting industrial development in the region. The institution hosts cultural events and exhibitions, and offers elementary and high-school students learning experiences about the region’s past and present, as well as Robotics, History, Digital Media, Productive Processes and Security Labs training courses.

At our photo libraries in Campana, Pindamonhangaba, Veracruz and Montevideo, we collect and preserve photographic data recording the history of the locations and communities where we operate. This material is made available to the community on the photo libraries’ respective web pages.

VOLUNTEERS IN ACTION

With renewed emphasis on helping educational institutions to recover as lessons returned to in-person attendance after the pandemic, the Tenaris Volunteer program brought together dozens of employees and their families as well as local students who poured their efforts into refurbishing schools.

In Campana, the volunteers dedicated two days to upgrading the Josefa school, waterproofing structures, replacing wood and metalwork and overhauling kitchens, classrooms and bathrooms, to provide schoolchildren with safe, modern and comfortable facilities. Furnished with the necessary protective equipment and tools, the volunteers worked enthusiastically to refurbish the establishment, which has just been designated the new local headquarters for the After School program.





Independent Board members paid a visit to one of our customers' operations in the Vaca Muerta shale play where our products and services are used.

Governance, Risk and Compliance

→ Our commitment

To build a corporate culture of transparency and integrity based on ethical behavior and compliance with the law.

→ Our objectives

- Develop and oversee Tenaris's strategy and risk management, taking into account financial, social, environmental and ethical considerations to ensure our long-term sustainability.

Corporate governance

Tenaris S.A. was established as a *société anonyme* organized under the laws of the Grand Duchy of Luxembourg on December 17, 2001. As of the date of this report, San Faustin S.A. beneficially owned 60.45% of the Company's outstanding voting shares. San Faustin has controlling interests in Ternium, the leading steel producer in Latin America; Tecpetrol, an oil and gas company; Techint, an engineering and construction company; Tenova, supplying equipment and technologies for iron and steel and mining; and Humanitas, a research hospital network in Italy.

The Company's shares are listed and traded on the Italian Stock Exchange and the Mexican Stock Exchange; and in addition, the Company's American Depositary Shares (ADSs) are listed and traded on the New York Stock Exchange.

Management of the Company is vested in a board of directors with the broadest powers to act on behalf of the Company and accomplish or authorize all acts and transactions of management and disposal that are within its corporate purpose and not specifically reserved in the articles of association, or by applicable law, to the general shareholders' meeting.

The Company's current board of directors is composed of eleven directors, of which five qualify as independent directors under applicable U.S. securities regulations, and the Company's articles of association.

The board of directors meets as often as required by the interests of the Company and at least four times per year. In 2022, the Company's board of directors met nine times and adopted four unanimous written resolutions. On May 3, 2022, the board of directors appointed Mr. Paolo Rocca as *administrateur délégué* (CEO) and delegated to him the power to manage the Company's affairs within the ordinary course of business to the full extent permitted by Luxembourg law; to direct and supervise the business activities of the Company's subsidiaries; and to represent the Company in relation to such matters.

The Company's board of directors has an audit committee, which currently consists of four independent members under applicable U.S. securities regulations and the Company's articles of association.



We are an industrial company whose sustainability depends on the continuing support of our local communities.

The audit committee operates under a charter, which sets forth the audit committee's purpose and responsibilities. The audit committee assists the board of directors in its oversight responsibilities related to (i) the integrity of the Company's financial statements; (ii) the effectiveness of the Company's system of internal control, risk management and internal audit over financial reporting; and (iii) the independence and performance of the Company's external auditors.

The audit committee also performs other duties entrusted to it by the Company's board of directors or required to be performed by it under applicable laws and regulations.

In addition, the audit committee is required to review and, where applicable, approve material transactions between the Company or its subsidiaries with related parties, as provided in the Company's articles of association, or as may be required by any law, rule or regulation applicable to the Company, in order to determine whether their terms are consistent with the interests of the Company and all its shareholders, and are consistent with market conditions or are otherwise fair to the Company and its subsidiaries.

For further details of our corporate governance, including our board of directors, audit committee, senior management and major shareholders, please refer to our Annual Report at ir.tenaris.com/financial-and-sustainability-reports/reports.



The work carried out by our Critical Risk Committee is vital to keep track of risks that could affect the company, such as economic and political crises, cyberattacks or climate change, and define a response.”



Alicia Mondolo
Chief Financial Officer

Risk management

The Company has established at management level a Critical Risk Committee (CRC) that assists the board of directors, the audit committee and the CEO, in connection with the monitoring, assessment and review of risks to which Tenaris is exposed, and regarding the oversight of the risk management framework and processes.

Risks are identified and managed by management. We have categorized risk factors according to the potential area impacted, the likelihood of their occurrence and the severity of any eventual impact.

The CRC primarily focuses on risks considered critical to the Company’s assets, operations or reputation or that have the potential to trigger significant liabilities.

The CRC facilitates the identification and assessment of critical risks, the adoption of mitigating actions and the monitoring of action plans. Critical risks are escalated through existing reporting lines and decisions are not dissociated from other management decisions. The CRC periodically reports to the board of directors, the audit committee and the CEO on its activities.

Critical risks include accidents, cybersecurity, commercial execution, climate change and environmental issues, health and safety, and regulatory risks, among others.

For further information about Tenaris's risks, please see the “Risk factors” section in our 2022 Annual Report.

Business Conduct: committed to Compliance

Tenaris is committed to building a corporate culture of business ethics based on ethical behavior and compliance with the law. The Company has adopted a Code of Conduct incorporating guidelines and standards of integrity and transparency applicable to all of our directors, officers and employees. As far as the nature of each relation permits, all the principles detailed in the Company’s Code of Conduct also apply to relations with our contractors, subcontractors, suppliers and associated persons.

In addition, the Company has adopted a Code of Ethics for Senior Financial Officers, intended to supplement the Company’s Code of Conduct. It applies specifically to the principal executive officer, the principal financial officer, the principal accounting officer or controller, as well as persons performing similar functions.

The Company has also adopted a Policy on Business Conduct, effective since 2012. The Company’s business conduct compliance officer is responsible for implementing the Company’s Business Conduct Compliance Program aimed at identifying and mitigating corruption risks, managing third-party risk and fostering a culture of compliance, ethical behavior, integrity and transparency.

The Company regularly issues, reviews and validates its codes, policies, procedures and standards following anti-corruption and ethical business regulations and its developments, including the U.S. Foreign Corrupt Practices Act (FCPA), the UK Bribery Act, and the fundamentals of the OECD Convention on Combating Bribery of Foreign Public Officials.

The Company's Business Conduct Compliance Program is a single, risk-based approach to how the Company develops, structures and implements anti-corruption and anti-bribery compliance and adherence to ethical business, regulating interaction with public officials, governmental entities, communities, other public and private corporations, business partners and third-party employees.

The Business Conduct Compliance Program develops several preventive actions within the following ten core compliance areas: Risk Assessment and Planning, Normative, Advising and Guidance, Communications, Training, Certifications, Third Parties, Monitoring and Audit, Discipline and Remediation, and Benchmarking and Profession.

These activities are based on regular risk evaluations to identify and focus on critical factors and best practices, with a view to developing and applying each activity with special attention to risk prevention through education and communication.

Tenaris understands that high standards of integrity and transparency can only be achieved by setting common rules among its employees, officers and directors, as well as the third parties with which it engages in business.

As commitment and compliance with these common rules by our suppliers becomes essential for securing our goals and expectations on ethical, transparent and rightful behavior, Tenaris has developed a Code of Conduct for Suppliers, applicable to suppliers and their respective employees, officials, directors or authorized representatives for dealings and transactions involving Tenaris. Commitment to comply with the provisions of the Code of Conduct for Suppliers will be considered for the selection and engagement of suppliers.

The Company has also implemented a [Conflict of Interests and Non-Competition Policy](#), which was last reviewed in 2022, to address conflict of interest risks associated with employees' business relations with other companies or entities.

During 2022, Tenaris updated 24 compliance and ethics-related internal norms, and offered 71 in-person or online business conduct training sessions to 1,155 employees around the world, coming to 3,334 training hours. Training nurtures our compliance culture and raises awareness about taking reliable decisions and preventing bribery, corruption issues or any other actions which disregard company controls. Tenaris also offered e-training to 402 third-party employees, of which 302 are based in high-risk countries.

Tenaris has implemented standardized processes to evaluate, select and hire representatives or associates, such as commercial intermediaries, customs agents, permitting assistants, advisors and law firms.



Risk recognition and ethical behavior underpin Tenaris’s culture of integrity: the commitment of our leadership and employees to compliance education has been crucial to raise people’s awareness of the importance of business ethics in achieving Tenaris’s goals.”



Andreina Ostos
Business Conduct
Compliance Officer (BCCO)

Procedures include due diligence processes, internal authorization controls and standard provisions to ensure third-party commitment to comply with Tenaris’s anti-bribery and anti-corruption policies.

Regarding the automation of compliance activities, Tenaris has implemented a digital platform to systematize due diligence procedures carried out on high-risk third parties, including background checks, onboarding, e-training courses and monitoring.

Tenaris believes that the effective involvement and responsibility assumed by each employee on a daily basis are critical for the Company’s business ethics culture.

As part of our Business Conduct Compliance Program, we develop awareness-raising activities and communicate relevant guidelines, policies and procedures throughout the organization, in the form of newsletters, flyers, banners, stories and notices published on our intranet.

We also hold regular management meetings and distribute educational materials aligned with the industry’s best practices. In 2022, our Company issued 49 communication pieces with a global reach within Tenaris.

Regular monitoring and audit activities are performed to verify compliance and to gauge our response capacity worldwide.

Compensation Policy and Report

Tenaris has adopted a Compensation Policy, in compliance with applicable Luxembourg law.

The Compensation Policy, on the Company’s website, sets forth the principles and guidelines for purposes of determining the compensation payable to the members of the Company’s board of directors and the CEO.

Tenaris’s Compensation Policy seeks to:

- attract, motivate and retain individuals of high professional standing and experience
- promote internal pay equity
- incentivize long-term decision making
- promote sustainability, efficiency and growth
- ensure maximum transparency.

By doing so, Tenaris seeks to continue encouraging long-term shareholder engagement.

On March 31, 2023, the Company’s board of directors approved the 2022 Compensation Report, available on the Company’s website.

In accordance with applicable Luxembourg law, the 2022 Compensation Report will be submitted to the non-binding vote of the shareholders at the next shareholders’ annual general meeting, scheduled to be held on May 3, 2023.

The 2022 Compensation Report sets forth the compensation paid or payable to the members of the Company's board of directors and to the CEO for the performance of their duties during the year ended December 31, 2022. Among other issues, the 2022 Compensation Report contains the assessment made by the board of directors for the purposes of determining the CEO's variable compensation for the year 2022, based on a report prepared by an independent compensation consultant and an analysis of Tenaris's annual performance, including financial and non-financial performance indicators.

Compliance Line

Tenaris has implemented a "Compliance Line" available 24/7 to all employees, customers, contractors, suppliers and other interested parties that wish to report any violation to the Company's Code of Conduct. The Compliance Line is managed by the Company's internal audit department under the supervision of the Company's audit committee.

The information reported through the Compliance Line is strictly confidential, to the extent permitted by applicable law.

Reports may be submitted in person, online, by email or through our toll-free numbers available in most of the countries where Tenaris operates. During 2022, Tenaris's Compliance Line was available in ten languages.

In February 2022, the Company enhanced its Compliance Line in accordance with best market practices, technological developments and applicable regulatory requirements. For example, the new system makes it easier for interested parties to submit their reports (including the possibility of reporting from a mobile device by scanning a QR code) and allows for interaction with the reporting person.

The renewed Compliance Line was publicized, and a communication campaign held in each location where Tenaris operates.

Compared to previous years, complaints reported during 2022 have significantly increased, mainly due to the adoption of the new enhanced compliance line system, which facilitates the reporting of violations, the afore-mentioned communication campaign, the headcount increase, and the return of many employees to the offices.

In 2022, the complaints received had a substantiation rate of 56% and led to disciplinary actions, including dismissals and termination of commercial relationships, and helped to improve the Company's internal control system. 54% complaints received in 2022 were not made anonymously. 56% of complaints were related to workplace environment matters.

Shareholder's Compliance Line

Shareholders, investors and other interested parties have access to an exclusive channel to communicate any concerns related to accounting or reporting matters, as well as issues affecting the process of internal control over financial reporting. The Shareholder's Compliance Line is a web-based form available on the Company's website, which, once submitted is sent directly to the members of the Company's audit committee and the Chief Audit Executive.

Human Rights

Tenaris is committed to conducting operations in a way consistent with human rights principles by fostering and promoting respect for the fundamental rights and dignity of people.



Our Human Rights Policy was adopted in 2009; it was first reviewed in 2018 and more recently updated in March 2022. The Policy provides that Tenaris will act in compliance with the Universal Declaration of Human Rights, the principles articulated in the International Labour Organisation's Declaration of Fundamental Principles and Rights at Work, and the United Nations Global Compact, as well as all human rights laws, rules and regulations applicable in the jurisdictions where it conducts its business.

Tenaris is also subject to the 2015 UK Modern Slavery Act and has implemented modern slavery due diligence review to assess commitment and compliance by its suppliers, as well as targeted training for employees performing tasks related to human rights and modern slavery issues. In addition, the Company's Code of Conduct, based on United Nations recommendations, has a specific chapter on "Labor and Human Rights"; and Tenaris's standard terms and conditions for the purchase of goods and services include provisions on compliance with human rights regulations.

Much of the information included in this report expresses our commitment to help our employees and third parties understand and carry out activities in accordance with these principles. They include respect for human freedom and dignity, the prohibition of child labor, forced labor and discriminatory behavior, and the recognition of people's rights to freedom of association and collective bargaining.

Tenaris is a long-term industrial project, and we are convinced that the only way to succeed and prosper is by building long-lasting relations with all our stakeholders, including employees, investors, customers, contractors and suppliers, as well as with the communities where we operate.

As part of our risk assessment of suppliers, commercial intermediaries, representatives and other third-party contractors, we have:

- i) adopted a due diligence review to verify that third-party contractors comply with essential human rights regulations and have not infringed any applicable laws regarding slavery, forced or child labor;
- ii) included in our general terms and conditions for the purchase of goods and services, a commitment by third-party contractors to comply with applicable laws, rules and regulations on human rights, including a prohibition of all forms of slavery, forced labor or child labor, and;
- iii) implemented a Code of Conduct for Suppliers based on United Nations recommendations, which contemplates a specific section concerning "Labor and Human Rights".

The Code of Conduct for Suppliers applies to all our suppliers and must be accepted as a condition for entering into any agreement to provide goods or services to Tenaris.

We value and respect the culture and tradition of the communities where we operate, and we actively work to take into account their health, safety, environment, human rights and economic well-being.

On April 28, 2022, the board of directors approved the Company's annual Modern Slavery Statement, available on www.tenaris.com/en/sustainability/governance-and-ethics/.

Accounting Policies

The principal accounting policies applied in the preparation of this Sustainability Report are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

Basis of presentation

This report has been prepared with reference to the Global Reporting Initiative (GRI) and is based on the guidelines established by worldsteel, the UN Global Compact, the Sustainability Accounting Standards Board (SASB) and the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD). Please see the GRI, SASB and TCFD content indices at the end of this report.

Our Health, Safety and Environment, and Quality Management systems are designed according to the latest versions of the ISO 14001, ISO 45001 and ISO 9001 standards.

The scope of this report is the same as the one for our financial statements, except for those production sites that were not considered material due to their low level of operation during the year as explained below.

Rounding:

Certain monetary amounts, percentages and other figures included in this Sustainability Report, have been subject to rounding adjustments. Accordingly, figures shown as totals in certain tables may not be the arithmetic aggregation of the figures that precede them, and figures expressed as percentages in the text may not total 100% or, as applicable, when aggregated may not be the arithmetic aggregation of the percentages preceding them.

→ ECONOMIC

- **EBITDA:** Earnings before interest, tax, depreciation and amortization. EBITDA provides an analysis of the operating results excluding depreciation and amortization and impairments, as they are recurring non-cash variables which can vary substantially from company to company depending on accounting policies and the accounting value of the assets. EBITDA is an approximation to pre-tax operating cash flow and reflects cash generation before working capital variation. EBITDA is widely used by investors when evaluating businesses (multiples valuation), as well as by rating agencies and creditors to evaluate the level of debt, comparing EBITDA with net debt. EBITDA is a non-IFRS alternative performance measure.
$$\text{EBITDA} = \text{Net income for the period} + \text{Income tax charges} \pm \text{Equity in Earnings (losses) of non-consolidated companies} \pm \text{Financial results} + \text{Depreciation and amortization} \pm \text{Impairment charges/(reversals)}$$
- **EBITDA margin (%):** Of net sales.
- **Net cash position=** Cash and cash equivalents + Other investments (Current and Non-Current) \pm Derivatives hedging borrowings and investments – Borrowings (Current and Non-Current).
- **Return on equity (%):** Net income (loss) attributable to shareholders' equity / Average equity attributable to shareholders' equity.
- **Return on capital employed (%):** Operating income (loss) / (Average equity attributable to shareholders' equity – Average net cash).
- **FCF Margin (%):** [Net cash (used in) provided by operating activities – Capital expenditures] / Net sales.

→ HEALTH & SAFETY

- **Opportunity ratio** refers to improvement opportunities, which include learning opportunities and opportunities to improve conditions in the work. **Opportunities Ratio:** Number of opportunities per million hours worked.



Through our Rig Direct® services we are supporting over 500 rigs around the world, integrating operations with our customers to minimize materials production and optimize workflow.

- Total Injury Frequency Rate: (First Aid injuries + injuries with lost days + injuries without lost days) per million hours worked
- Injury Frequency Rate: Number of accidents with and without lost days (not including First Aid) per million hours worked.
- Lost Time Injury Frequency Rate: Number of accidents with lost days per million hours worked.
- Major Injury Frequency Rate (excluding fatalities): Number of major accidents (amputation, asphyxia, deep laceration, fracture—with exception of finger fractures—second and/or third degree extended burns and severe contusion) per million hours worked.
- Near Miss Frequency Rate: Number of incidents per million hours worked.
- High Potential Incidents Frequency Rate: Number of incidents with potential high consequences per million hours worked.

→ ENVIRONMENT

• Greenhouse Gas Protocol

In 2022, we adopted the GHG Protocol for the purposes of reporting our emissions. Up until 2021, we had been using worldsteel standards, so comparative amounts have accordingly been reclassified where necessary to comply with this change.

We continue to report to worldsteel according to its methodology, and comply with local applicable legal requirements. Our emissions reporting applies to all tubular production sites, including those with integrated steelmaking facilities, rolling mills and finishing facilities for both seamless and welded pipes.

The annual inventory for the GHG Protocol is held according to the “Operational control approach”, meaning that the scope of accounting includes all Tenaris sites for steel and tubes production where Tenaris has operational control. The emissions from a site may be excluded if its production level is below 10,000 tons in the reporting year.

A site’s emissions will be excluded if it is not operational for at least 9 months in the reporting year in question.

The base year is defined as 2018.

The Scopes 1, 2 and 3 reporting system is used in line with the definitions enshrined in the GHG Protocol. As Scope 3 involves voluntary reporting, relevant categories will be added and may change over time, increasing the number of categories included. Changes to outputs from different sites owned by Tenaris and included in its operational control boundary do not present the need to modify calculations either over time, or in the base year.

Acquisitions, mergers, and divestitures are tracked over time and will be included in the base year calculation if they have an influence higher than 10% on total emissions, considering the production level of the sites when an acquisition, merger or divestiture takes place.

Emissions factors selected are in accordance with GHG Protocol hierarchy. Scope 2 emissions related to purchased electricity, heat or cooling, are calculated using a location-based and market-based approach. The market-based approach is the method selected by Tenaris to calculate and report its intensity. Local contracts, Renewable Electricity Certificates (RECs) or Guarantees of Origin (GOs) are considered in the market-based approach, as well as the residual mix for unclaimed electricity when this information is available and reliable.

Intensity is expressed as ton CO₂-eq/ton processed steel, which includes internal cast steel produced at Tenaris sites and the acquisitions of steel bars, coils and plates subsequently processed at any of our sites to produce seamless and welded pipes.

Intensity includes Scope 1 emissions, the Scope 2 market-based approach emissions and Scope 3 emissions for category one raw materials, within the boundaries and considering the exclusion criteria mentioned above.

Electricity sold from internal power plants is not included in the intensity calculation, and is reported separately.

Scope 3 emissions

The majority of our seamless steel pipe products are manufactured in integrated steelmaking operations using the electric arc furnace route, with the principal raw materials being steel scrap, direct reduced iron (“DRI”), hot briquetted iron (“HBI”), pig iron, and ferroalloys. Additionally, we complement our steel needs with the purchase of steel bars from third parties. Our welded steel pipe products are processed from purchased steel coils.

We report Scope 3 emissions related to the purchase of steelmaking raw materials, and steel bars and coils purchased from external suppliers used at our tubular production and processing facilities. Based on the results of our life cycle analysis and our certified Environmental Product Declaration, available at www.tenaris.com/en/sustainability/environment/, we conclude that raw materials and steel bars and coils are the most relevant source of Scope 3 emissions.

Whenever possible, supplier-specific emissions factors are used. Tenaris reviews the supplier-based information provided and refers to internal criteria to define applicability. A material used may have different suppliers so a weighted average is performed using supplier based emission factor when available and adopted, otherwise literature available emission factors are used. As data reliability increases over time, when emissions factors are found to be more accurate, they are applied from that moment on. However, they are not always applied to past years, as there is no certainty about their applicability with the same value. For those inputs where values are not expected to change over time, they may be applied to previous years. If supplier-based data is not available, then other sources are used such as worldsteel, IEA, etc.

Additionally, since 2022 we are reporting other Scope 3 categories: category 3 as upstream emissions from fuels used and category 9 downstream emissions due to the transportation of intermediate and final product. These other Scope 3 emissions are only reported under the absolute emissions number but are not considered for the intensity calculation.

Emissions calculated for the transport of intermediate and final products present the following exclusions: inland transport in Brazil, Indonesia, China, Saudi Arabia and UAE, Rig Direct® movements in Argentina, Mexico and Colombia and spot exports from the U.S. and Canada using containers or liners. These boundaries may be different from exclusions for the GHG sites included, as different criteria apply. The real distances of transport routes have been calculated for those routes bearing over 3,000 tons in the reporting year for inland and maritime transportation and 8 tons on aerial transportation; otherwise, an historic average is used. We will continue to evaluate the relevance of other categories of Scope 3 emissions according to the GHG Protocol corporate value chain standard.

Other environmental indicators

- Recycling content in our steel: Proportion of recycled material in our steel calculated according to ISO 14021 standard.
- Material efficiency (sites with steel shops): The methodology is aligned with worldsteel. Sites covered are Dalmine, Koppel, Siderca, Silcotub and Tamsa.
- Residues & co-products reuse or recycling: All sites.
- Water withdrawal intensity: Tubular production and processing sites (including steel shops).


Restatement of previous years' indicators:

The following figures have been restated due to changes in boundaries, quantities acquired and/or emissions factors, in order to align scope and methodology for all periods presented:

- GHG emissions for all years
- 2020 and 2021. Total energy and electricity consumed.





 Tenaris

GRI Content Index



Statement of use: Tenaris S.A. has reported the information cited in this GRI content index for the period 2022 with reference to the GRI Standards.
GRI 1: Foundation 2021

GRI Disclosures	Description	Reference
UNIVERSAL STANDARDS		
2	General Disclosures 2021	
2-1	Organizational details	Public limited liability company, 1, 24, 25, 83, 124
2-2	Entities included in the organization's sustainability reporting	CFS - Note 32
2-3	Reporting period, frequency and contact point	Year 2022, Annual, irtenaris@tenaris.com
2-4	Restatements of information	90-93
2-5	External assurance	110
2-6	Activities, value chain and other business relationships	8, 9, 24-27, 55-63, 105, 107, AR
2-7	Employees	65-73, 103-106
2-8	Workers who are not employees	103
2-9	Governance structure and composition	83, AR
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2-11	Chair of the highest governance body	83-89
2-12	Role of the highest governance body in overseeing the management of impacts	14, 15, 83-89
2-13	Delegation of responsibility for managing impacts	AR
2-14	Role of the highest governance body in sustainability reporting	83-89
2-15	Conflicts of interest	AR
2-16	Communication of critical concerns	83-89
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2-19	Remuneration policies	AR
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201-2	Financial implications and other risks and opportunities due to climate change	8-11
201-3	Defined benefit plan obligations and other retirement plans	AR: Acc. Pol. P.; Empl. benefits; Note 4 & 22

AR: 2022 Tenaris Annual Report
CFS: 2022 Tenaris Consolidated Financial Statements

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302-4	Reduction of energy consumption	102
302-5	Reductions in energy requirements of products and services	102
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305-1	Direct (Scope 1) GHG emissions	41, 102
305-2	Energy indirect (Scope 2) GHG emissions	41, 102
305-3	Other indirect (Scope 3) GHG emissions	41, 102
305-4	GHG emissions intensity	41, 102
305-5	Reduction of GHG emissions	41, 102
305-7	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	48, 102
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SASB

Iron & Steel Producers

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	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	n/a	EM-IS-110a.2	8-11, 39-47, 102
Air Emissions	Air emissions of the following pollutants: (1) CO, (2) NOx (excluding N ₂ O), (3) SOx, (4) particulate matter (PM ₁₀), (5) manganese (MnO), (6) lead (Pb), (7) volatile organic compounds (VOCs), and (8) polycyclic aromatic hydrocarbons (PAHs)	Metric tons (t)	EM-IS-120a.1	48, 102
Energy Management	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Gigajoules (GJ), Percentage (%)	EM-IS-130a.1	102
	(1) Total fuel consumed, (2) percentage coal, (3) percentage natural gas, (4) percentage renewable	Gigajoules (GJ), Percentage (%)	EM-IS-130a.2	102
Water Management	(1) Total fresh water withdrawn, (2) percentage recycled, (3) percentage in regions with High or Extremely High Baseline Water Stress	Thousand cubic meters (m ³), Percentage (%)	EM-IS-140a.1	52, 102
Waste Management	Amount of waste generated, percentage hazardous, percentage recycled	Metric tons (t), Percentage (%)	EM-IS-150a.1	49-51, 103
Workforce Health & Safety	(1) Total recordable incident rate (TRIR), (2) fatality rate, and (3) near miss frequency rate (NMFR) for (a) full-time employees and (b) contract employees	Rate	EM-IS-320a.1	29-37, 101
Supply Chain Management	Discussion of the process for managing iron ore and/or coking coal sourcing risks arising from environmental and social issues	n/a	EM-IS-430a.1	62-63
Activity Metric		Unit of measure	Code	Page
Raw steel production, percentage from: (1) basic oxygen furnace processes, (2) electric arc furnace processes		Metric tons (t), Percentage (%)	EM-IS-000.A	101
Total iron ore production (*)		Metric tons (t)	EM-IS-000.B	None
Total coking coal production (*)		Metric tons (t)	EM-IS-000.C	None

(*) We do not produce either iron ore or coking coal. In Argentina we consume iron ore to produce direct reduced iron using gas as a reductant. Our annual consumption of iron ore during 2021 was approximately 768,000 tons.

TCFD

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Governance	a) Describe the board's oversight of climate-related risks and opportunities.	8-11, 83
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Strategy	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term.	8-11
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	8-11
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	8-11
Risk Management	a) Describe the organization's processes for identifying and assessing climate-related risks.	85
	b) Describe the organization's processes for managing climate-related risks.	85
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	85
Metrics and Targets	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	102
	b) Disclose Scope 1, 2 and, if appropriate, Scope 3 GHG emissions, and the related risks.	102
	c) Describe targets used by the organization to manage climate-related risks and opportunities and performance against targets.	8-11

Sustainability Performance Indicators

Indicator	Unit	2020	2021	2022
PRODUCTION				
Cast steel (100% electric arc furnace)	Million tons	1.8	3.3	3.9
Seamless pipes	Million tons	1.9	2.7	3.3
Welded pipes	Million tons	0.3	0.2	0.5
SAFETY				
Investments in health and safety	USD million	21	18	20
Million hours worked	Employees and contractors	–	58	67
	Employees	–	44	50
	Contractors	–	14	17
Safe hours held	Hours	36,000	43,000	53,200
Opportunities ratio	Rate	2.0	2.0	2.5
Total Injury Frequency Rate	Employees and contractors	6.5	6.5	6.0
	Employees	6.8	7.0	6.6
	Contractors	5.4	4.9	4.2
Injury Frequency Rate	Employees and contractors	2.8	3.4	3.1
	Employees	3.1	3.7	3.4
	Contractors	2.0	2.6	2.2
Lost Time Injury Frequency Rate	Employees and contractors	1.1	1.0	0.9
	Employees	1.1	1.1	1.0
	Contractors	1.1	0.7	0.5
Major Injury Frequency Rate (excluding fatalities)	Employees and contractors	0.27	0.47	0.33
	Employees	0.32	0.53	0.36
	Contractors	0.10	0.29	0.24
Fatalities as a result of work-related injury	Employees number	0	0	0
	Employees rate	0	0	0
	Contractors number	0	0	0
	Contractors rate	0	0	0
Near Miss Frequency Rate	Employees and contractors	16	13	13
	Employees	17	14	14
	Contractors	11	9	9
High Potential Incidents Frequency Rate	Employees and contractors	4.6	3.3	3.3
	Employees	5.1	3.8	3.6
	Contractors	2.9	1.9	2.4

Indicator	Unit	2020	2021	2022
ENVIRONMENT				
Investments in environment and energy savings	USD million	11	22	110
Emissions				
Greenhouse gas emissions				
CO₂ emissions from all sites				
Scope 1 emissions	CO ₂ -eq million tons	1.2	1.9	2.1
Scope 2 emissions - Market based	CO ₂ -eq million tons	0.6	0.9	1.1
Scope 3 emissions - Category 1 - Purchased goods and services	CO ₂ -eq million tons	1.3	1.8	2.4
Intensity	Ton CO ₂ -eq/ton steel cast/processed	1.33	1.17	1.17
Intensity from all sites vs. 2018	%	-7	-18	-18
Scope 2 emissions - Location based	CO ₂ -eq million tons			1.1
Scope 3 emissions - Category 3 - Fuel -and energy- related activities	CO ₂ -eq million tons	0.3	0.4	0.4
Scope 3 emissions - Category 9 - Downstream transportation and distribution	CO ₂ -eq million tons	0.5	0.9	1.1
Scope 1 emissions from all sites covered under emissions-limiting regulations	%	93	92	88
Air emissions				
Particulate material emissions	g/ton product	11	17	17
Nitrogen oxides emissions	Kg/ton product	1	1.2	0.8
Volatile organic compound emissions from pipe & coupling varnishing	g/ton product	414	396	221
Energy management				
Total energy consumed	Terajoules (TJ)	24,652	40,828	48,615
Total electricity consumed from the grid	TJ	5,607	9,828	12,466
Electricity consumption supplied from grid	%	75	80	86
Total fuel consumed	TJ	19,345	31,246	36,149
-of which natural gas	%	93	93	94
-of which coal	%	6	6	5
-of which other (e.g., diesel and gasoline)	%	1	1	1
Electricity generated and sold	TJ	1,167	669	317
Energy intensity from all sites	GJ/ton processed steel	11	11	10

Indicator	Unit	2020	2021	2022
Water management				
Water withdrawal	Million m ³	32.9	49.7	53.0
-of which surface	%	63	73	74
-of which subsurface	%	30	22	23
-of which network	%	7	5	4
Intensity of water withdrawal at all sites	m ³ water/ton pipe	17	17	16
Intensity of water withdrawal excluding Siderca	m ³ water/ton pipe	7	6	5
Estimated water consumed at all sites	m ³ water/ton pipe	4	1	3
Water withdrawal from high or extremely high baseline water stress	%	1.4	1.4	1.2
Waste Management				
Co-products and waste				
Material efficiency at sites w/steelshops	%	99.0	99.0	97.8
Residue & co-products reuse or recycle at all sites	%	91.4	93.3	82.1
Waste disposal at all sites	%	8.6	6.7	10.8
HUMAN CAPITAL				
Employees at year-end				
Shop floor	People	14,063	17,671	19,765
-of which male	People	–	–	18,788
-of which female	People	439	705	977
-of which male	%	97	96	95
-of which female	%	3	4	5
Professional	People	4,965	5,105	5,527
-of which male	People	3,563	3,602	3,868
-of which female	People	1,402	1,503	1,659
-of which male	%	72	71	70
-of which female	%	28	29	30
Total employees (full-time)	People	19,028	22,776	25,292
-of which male	People	17,184	20,568	22,656
-of which female	People	1,841	2,208	2,636
-of which male	%	90	90	90
-of which female	%	10	10	10
Trainees (part-time)	People	314	493	590
-of which male	People	196	301	293
-of which female	People	118	192	297
-of which male	%	62	61	50
-of which female	%	38	39	50

Indicator	Unit	2020	2021	2022
Senior managers by gender				
Total	People	978	975	1,016
Male	People	853	854	885
Female	People	125	121	131
Male	%	87	88	87
Female	%	13	12	13
Age ranges				
Employees under 30	People	3,350	5,013	6,555
-of which male	People	2,848	4,323	5,566
- of which female	People	502	690	989
-of which male	%	85	86	85
- of which female	%	15	14	15
Employees between 30 and 50	People	12,384	13,912	14,623
-of which male	People	11,266	12,674	13,274
- of which female	People	1,118	1,238	1,349
-of which male	%	91	91	91
- of which female	%	9	9	9
Employees over 50	People	3,294	3,851	4,114
-of which male	People	3,070	3,571	3,816
- of which female	People	224	280	298
-of which male	%	93	93	93
- of which female	%	7	7	7
Average age of workforce	Years	40	40	39
Age ranges for professional employees				
Professionals under 30	People	899	961	1,247
-of which male	People	557	557	725
-of which female	People	342	404	522
-of which male	%	62	58	58
-of which female	%	38	42	42
Professionals between 30 and 50	People	3,300	3,308	3,386
-of which male	People	2,409	2,382	2,449
-of which female	People	891	926	937
-of which male	%	73	72	72
-of which female	%	27	28	28
Professionals over 50	People	766	836	894
-of which male	People	597	652	694
-of which female	People	169	184	200
-of which male	%	78	78	78
-of which female	%	22	22	22

Indicator	Unit	2020	2021	2022
Age ranges for shop-floor employees				
Shop floor under 30	People	2,451	4,052	5,308
-of which male	People	2,304	3,768	4,841
-of which female	People	147	284	467
-of which male	%	94	93	91
-of which female	%	6	7	9
Shop floor between 30 and 50	People	9,084	10,604	11,237
-of which male	People	8,902	10,286	10,825
-of which female	People	182	318	412
-of which male	%	98	97	96
-of which female	%	2	3	4
Shop floor over 50	People	2,528	3,015	3,220
-of which male	People	2,477	2,925	3,122
-of which female	People	51	90	98
-of which male	%	98	97	97
-of which female	%	2	3	3
Age ranges for managers				
Managers under 30	People	3	1	1
-of which male	People	1	1	–
-of which female	People	2	–	1
-of which male	%	30	100	–
-of which female	%	70	–	100
Managers between 30 and 50	People	717	700	725
-of which male	People	612	600	619
-of which female	People	105	100	106
-of which male	%	90	90	90
-of which female	%	10	10	10
Managers over 50	People	258	274	290
-of which male	People	238	253	266
-of which female	People	20	21	24
-of which male	%	90	90	90
-of which female	%	10	10	10
Female to male actual total compensation per professional employee category	Ratio	0.98	0.97	0.97
Training				
Training hours per professional employee	Hours	37	35	34
Training hours per shop-floor employee	Hours, including on-the-job training	68	111	144
Training hours per shop-floor employee	Hours, excluding on-the-job training	22	36	45.6
Hours of training	Million hours	1.2	2	2.8

Indicator	Unit	2020	2021	2022
Employees by nationality				
Argentine	People	4,507	5,319	6,617
Mexican	People	4,680	5,681	6,201
USA	People	1,362	2,190	2,889
Italian	People	2,026	1,989	2,096
Romanian	People	1,562	1,737	1,873
Brazilian	People	1,188	1,817	1,473
Colombian	People	750	1,011	1,201
Canadian	People	519	703	862
Indonesian	People	510	506	491
Others	People	1,525	1,443	1,589
Senior managers by nationality				
Argentine	People	357	377	395
Italian	People	166	158	159
Mexican	People	147	150	153
Romanian	People	44	43	52
USA	People	51	48	51
Brazilian	People	45	45	47
Colombian	People	19	21	24
Canadian	People	23	18	19
Indonesian	People	10	8	9
Japanese	People	15	12	8
Others	People	98	96	99
Number of nationalities represented in the employee population	Number	88	93	100
Employees covered by collective bargaining agreements	%	66	71	71
Resignation rate	% All employees	3.2	4.9	6.2
Resignation rate	% Professional employees	4.5	6.9	6.2
New hires	People	1,940	6,264	6,458
GTs new hires	People	54	219	316
GTs new hires - Male	People	36	134	196
GTs new hires - Female	People	18	85	120
GTs new hires - Male	%	67	61	62
GTs new hires - Female	%	33	39	38

Indicator	Unit	2020	2021	2022
Employee participation in global management programs				
TUIC	People	0	86	162
MDP	People	49	0	96
AMP	People	0	0	0
LP	People	0	0	42
BA	People	30	36	33
ME	People	85	83	77
COMMUNITY				
Education investment	USD millions	5.1	4.5	10
COVID-19 fund	USD millions	6.2	0.1	0.4
Other community investment	USD millions	1.4	2.3	3.0
Total community investment	USD millions	12.7	6.9	13.4
Technical Gene	N° of students	1,131	5,656	3,216
Technical Gene	N° of teachers	102	113	328
After School Program	N° of students	1,473	1,492	1,482
Roberto Rocca Education Program University & PhD	N° of students	415	484	542
Merit Awards Program - High school	N° of students	1,335	1,222	1,843
ECONOMIC AND FINANCIAL				
Net sales	USD millions	5,147	6,521	11,763
Operating income	USD millions	-663	708	2,963
EBITDA	USD millions	638	1,359	3,648
EBITDA margin	% of net sales	12	21	31
Net income attributable to shareholders' equity	USD millions	-634	1,100	2,553
Capital and reserves attributable to shareholders' equity	USD millions	11,263	11,961	13,906
Net cash provided by operating activities	USD millions	1,520	119	1,167
Capital expenditures	USD millions	193	240	378
R&D investments	USD millions	42	45	51
Dividends	USD millions	248	484	602
Net cash position	USD millions	1,085	700	921
Return on equity	%	-5	9	20
Return on capital employed	%	-6	7	24
FCF Margin	% of net sales	26	-2	7

EU taxonomy tables

	Code	Absolute turnover		Significant contribution criteria						DNSH criteria ^(*)					Minimum safeguards	Share of taxonomy-aligned turnover in FY 2022
		USD million	%	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and ecosystems	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution		
SALES (turnover)																
A. Taxonomy-eligible activities																
A.1 Environmentally sustainable activities (taxonomy-aligned)																
Manufacture of iron and steel	3.9	7,131	61%	100%						Y	Y		Y	Y	Y	61%
Turnover with environmentally sustainable activities (taxonomy-aligned) (A.1)		7,131	61%	100%												61%
A.2 Taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities)																
Manufacture of iron and steel	3.9	4,002	34%													
Turnover with taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities) (A.2)		4,002	34%													
Total (A.1 + A.2)		11,133	95%													
B. Non-taxonomy-eligible activities																
Turnover with non-taxonomy-eligible activities (B)		630	5%													
Total (A + B)		11,763	100%													
CAPEX																
A. Taxonomy-eligible activities																
A.1 Environmentally sustainable activities (taxonomy-aligned)																
Manufacture of iron and steel	3.9	134	36%	100%						Y	Y		Y	Y	Y	36%
Electricity generation from wind power	4.3	87	23%	100%						Y	Y		Y	Y	Y	23%
CapEx with environmentally sustainable activities (taxonomy-aligned) (A.1)		222	59%	100%												59%
A.2 Taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities)																
Manufacture of iron and steel	3.9	153	41%													
CapEx with taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities) (A.2)		153	41%													
Total (A.1 + A.2)		375	99%													
B. Non-taxonomy-eligible activities																
CapEx with non-taxonomy-eligible activities (B)		3	1%													
Total (A + B)		378	100%													
OPEX																
A. Taxonomy-eligible activities																
A.1 Environmentally sustainable activities (taxonomy-aligned)																
Manufacture of iron and steel	3.9	185	58%	100%						Y	Y		Y	Y		58%
OpEx with environmentally sustainable activities (taxonomy-aligned) (A.1)		185	58%	100%												58%
A.2 Taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities)																
Manufacture of iron and steel	3.9	114	36%													
OpEx with taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities) (A.2)		114	36%													
Total (A.1 + A.2)		299	94%													
B. Non-taxonomy-eligible activities																
OpEx with non-taxonomy-eligible activities (B)		19	6%													
Total (A + B)		318	100%													

(*) "Do No Significant Harm"

Independent Limited Assurance Report



Independent Limited Assurance Report on a selection of Key Performance Indicators disclosed in Sustainability Report 2022

To the Board of Directors of
Tenaris S.A.
26, Boulevard Royal
L-2449 Luxembourg

We have performed a limited assurance engagement with respect to a selection of Key Performance Indicators disclosed in the Sustainability Report 2022 (the “Sustainability Report”) of Tenaris S.A. (the “Company”) for the year ended 31 December 2022 as set out in the “Scope” section below.

Scope

The scope of our work was limited to provide limited assurance over the selected Key Performance Indicators as set out in the Exhibit 1 attached (the “Selected Information”).

Our assurance was with respect to the year ended 31 December 2022 information only and we have not performed any procedures with respect to earlier periods or any other elements included in the 2022 Sustainability Report and, therefore, do not express any conclusion thereon.

The Assessment Criteria

The Selected Information was prepared in accordance with certain sections of the Global Reporting Initiative (GRI) and of the Sustainability Accounting Standards Board (SASB) frameworks and additional methodologies defined by Company policies (together the “Assessment Criteria”) for the year ending 31 December 2022, accompanying the KPI disclosures in the Sustainability Report.

Management considers the Assessment Criteria relevant for the purpose of the Company’s business and for the ultimate users of the Sustainability Report.

Responsibilities of the Board of Directors

The Board of Directors of the Company is responsible for:

- developing appropriate Assessment Criteria against which to assess the Selected Information and applying these consistently;
- ensuring that those Assessment Criteria are relevant and appropriate to the Company and its shareholders;
- designing, implementing and maintaining internal control procedures that provide adequate control over the preparation and presentation of the Selected Information that is free from material misstatement, whether due to fraud or error;



- selecting and applying appropriate policies, and making estimates that are reasonable in the circumstances;
- the preparation of the Selected Information in accordance with the Assessment Criteria;
- retention of sufficient, appropriate records to support the reported data and assertions included in the Selected Information.

Inherent limitations

The Selected Information needs to be read and understood together with the Assessment Criteria which the Company is solely responsible for selecting and applying. The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, measurement techniques and can affect comparability between entities and over time. The selection of different but acceptable measurement techniques may result in materially different measurements.

Our independence and quality management

We have complied with the independence and other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants as adopted for Luxembourg by the “Commission de Surveillance du Secteur Financier” (CSSF), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Our firm applies International Standard on Quality Management 1, as adopted for Luxembourg by the CSSF, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Responsibility of the “Réviseur d’entreprises agréé”

Our responsibility is to express a limited assurance conclusion on the Selected Information as set out in the Exhibit 1 based on the procedures we have performed and the evidence we have obtained. We conducted our assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): Assurance Engagements other than Audits or Reviews of Historical Financial Information issued by the “International Auditing and Assurance Standards Board” (IAASB) as adopted for Luxembourg by the “Institut des Réviseurs d’Entreprises”. This Standard requires that we plan and perform the assurance engagement to allow us to conclude with limited assurance that nothing has come to our attention that causes us to believe that the Selected Information has not been prepared, in all material aspects, in accordance with the Assessment Criteria.

A limited assurance engagement involves assessing the suitability in the circumstances of the Company’s use of the Assessment Criteria as the basis for the preparation of the Selected Information, assessing the risks of material misstatement of the Selected Information whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the Selected Information.



In a limited assurance engagement, the procedures vary in nature and timing and are less in extent than for a reasonable assurance engagement. As a result, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

Within the scope of our engagement we did not perform an audit or a review on external sources of information or expert opinions, referred to in the Sustainability Report.

Within the scope of our limited assurance engagement, we performed, amongst others, the following procedures:

- we gained an understanding of the Selected Information and related disclosures;
- we gained an understanding of the Assessment Criteria and their suitability for the evaluation and/or measurements of the Selected Information;
- we gained an understanding of the internal control procedures in place supporting the gathering, aggregation, processing, transmittal of data and information and reporting of the Selected Information, including controls over third party information (if applicable) and performing walkthroughs to confirm our understanding;
- based on that understanding, we assessed the risks that the Selected Information may be materially misstated and determination of the nature, timing and extent of further procedures;
- we inquired relevant Company management, personnel and third parties;
- we performed analytical procedures related to the Selected Information;
- we considered the significant estimates and judgements made by management in the preparation of the Selected Information;
- we performed limited testing, on a selective basis of evidence supporting the reported Selected Information and assessed the related disclosures.

Limited Assurance Conclusion

Based on the procedures we have performed and evidence we have obtained, nothing has come to our attention that causes us to believe that the Company's Selected Information for the period from 1 January 2022 to 31 December 2022 has not been prepared, in all material aspects, in accordance with the Assessment Criteria.



Restriction on Use and Distribution of our Report

This report, including the opinion, has been prepared for and only for the Board of Directors of Tenaris in accordance with the terms of our engagement letter and is not suitable for any other purpose. We do not accept any responsibility to any other party to whom it may be distributed.

PricewaterhouseCoopers, Société coopérative
Represented by

Luxembourg, 31 March 2023

Gilles Vanderweyen
Réviseur d'entreprises agréé

Encl.:
Exhibit 1 - The "Selected Information"

Exhibit 1
The “Selected Information”

Topic	GRI	SASB	Selected Information	Division	Measure Unit
General contents	2-1	-	Name of the organisation	-	-
	2-1	-	Location of headquarters	-	-
	2-1	-	Location of operations	-	-
	2-1	-	Ownership and legal form	-	-
	2-6		Markets Served	Geographic locations where products and services are offered;	-
	2-6		Markets Served	Sectors served;	-
	2-6	-	Scale of the organisation	Total number of employees;	N° of people
	2-6	-	Scale of the organisation	Net sales (for private sector organisations) or net revenues (for public sector organisations);	USD million
	2-6	-	Scale of the organisation	Total capitalisation (for private sector organisations) broken down in terms of debt and equity;	USD million
Human Resources (HR) (General contents)	2-7	-	Total shop floor and professional employees	Professional employees	N° of people
	2-7	-	Total shop floor and professional employees	Shop floor employees	N° of people
	2-7	-	Total shop floor and professional employees	Total	N° of people
	2-7	-	Total shop floor and professional employees	Full-time - Male	Thousand people
	2-7	-	Total shop floor and professional employees	Full-time - Female	Thousand people
	2-7	EM-IS-320a.1.	Total shop floor and professional employees	Full-time - Total	Thousand people
	2-7	-	Total shop floor and professional employees	Part-time - Male	Thousand people
	2-7	-	Total shop floor and professional employees	Part-time - Female	Thousand people
	2-7	-	Total shop floor and professional employees	Part-time - Total	Thousand people
	2-7	-	Total shop floor and professional employees	Argentina	N° of people
	2-7	-	Total shop floor and professional employees	Mexico	N° of people
	2-7	-	Total shop floor and professional employees	USA	N° of people

Exhibit 1
The “Selected Information”

Topic	GRI	SASB	Selected Information	Division	Measure Unit
	2-7	-	Total shop floor and professional employees	Italy	N° of people
	2-7	-	Total shop floor and professional employees	Romania	N° of people
	2-7	-	Total shop floor and professional employees	Brazil	N° of people
	2-7	-	Total shop floor and professional employees	Colombia	N° of people
	2-7	-	Total shop floor and professional employees	Canada	N° of people
	2-7	-	Total shop floor and professional employees	Indonesia	N° of people
	2-7	-	Total shop floor and professional employees	Japan	N° of people
	2-7	-	Total shop floor and professional employees	Other countries	N° of people
	2-7/405-1	-	Professional employees - Male	-	N° of people
	2-7/405-1	-	Professional employees - Female	-	N° of people
HR (General contents)	2-7/405-1	-	Senior Managers - Male	-	N° of people
HR (General contents)	405-1	-	Senior Managers - Male	-	%
HR (General contents)	2-7/405-1	-	Senior Managers - Female	-	N° of people
HR (General contents)	405-1	-	Senior Managers - Female	-	%
HR (General contents)	2-7/405-1	-	Senior Managers - Total	-	N° of people
HR (General Contents)	2-6	-	Significant changes to the organisation and its supply chain	Changes in the location of, or changes in, operations, including facility openings, closings, and expansions;	-
	2-6	-	Significant changes to the organisation and its supply chain	Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organisations);	-

Exhibit 1
The “Selected Information”

Topic	GRI	SASB	Selected Information	Division	Measure Unit
	2-6	-	Significant changes to the organisation and its supply chain	Changes in the location of suppliers, the structure of the supply chain, or relationships with suppliers, including selection and termination.	-
	2-9	-	Governance structure	Governance structure of the organisation, including committees of the highest governance body.	-
	2-9	-	Governance structure	Committees responsible for decision-making on economic, environmental, and social topics.	-
	2-2		Entities included in the consolidated financial statements		
	2-4		Restatements of information		
	2-3		Reporting period		
	2-3		Reporting cycle		
	2-3		Contact point for questions regarding the report		
	2-5		External assurance		
Economic & Financials	201-1		Net sales	-	USD million
	201-1		Operating income (loss)	-	USD million
	201-1		EBITDA	-	USD million
	201-1		EBITDA margin	-	% of net sales
	201-1		Net income (loss) attributable to owners of the parent	-	USD million
	201-1		Equity attributable to owners of the parent	-	USD million
	201-1		Cash flow from operations	-	USD million
	201-1		Capital expenditures	-	USD million
	201-1		R&D investments	-	USD million

Exhibit 1
The “Selected Information”

Topic	GRI	SASB	Selected Information	Division	Measure Unit
	201-1		Dividends	-	USD million
	201-1		Net financial position	-	USD million
	201-1		Return on equity	-	%
	201-1		Return on capital employed	-	%
	201-1		FCF Margin	-	% of net sales
	201-1		Economic value generated	-	USD billion
	201-1		Economic value distributed in suppliers	-	USD billion
	201-1		Economic value distributed in community investments	-	USD million
	201-1		Economic value distributed in research and development	-	USD million
	201-1		Economic value distributed in capital providers	-	USD million
	201-1		Economic value distributed in taxes	-	USD million
	201-1		Economic value distributed in capex	-	USD million
	201-1		Economic value distributed in employees	-	USD billion
	201-3	-	Defined benefit plan obligations and other retirement plans	-	USD million
Environment	302-1	EM-IS-130a.2.	Total fuel consumption within the organisation - Non-renewable sources	-	Tera Joules (TJ)
	302-2	EM-IS-130a.2.	Total fuel consumption within the organisation - Renewable sources	-	Joules or multiples (TJ)
	-	EM-IS-130a.2.	Fuel consumption- Coal	-	%
	-	EM-IS-130a.2.	Fuel consumption- Natural Gas	-	%
	-	EM-IS-130a.2.	Fuel consumption- Other (Diesel)	-	%
	-	EM-IS-130a.2.	Fuel consumption- Renewable	-	%
	302-1	-	Total sold by type of energy use	-	Tera Joules (TJ)
	302-1	EM-IS-130a.1.	Total energy consumption	-	Tera Joules (TJ)
	-	EM-IS-130a.1.	Total electricity consumption	-	MWh
	-	EM-IS-130a.1.	Electricity/Energy consumption - Supplied from grid electricity.	-	%
	-	EM-IS-130a.1.	Energy consumption - Renewable	-	%
	303-3	EM-IS-140a.1	Water withdrawal	-	Million m3

Exhibit 1
The “Selected Information”

Topic	GRI	SASB	Selected Information	Division	Measure Unit
	303-3	-	Average water intake - Surface water	-	%
	303-3	-	Average water intake - Subsurface water	-	%
	303-3	-	Average water intake - Network water	-	%
	303-3	EM-IS-140a.1.	Water intake - Extremely high and high water stress areas	-	%
	303-3	-	Water intake - Medium-high water stress areas	-	%
	303-3	-	Water intake - Low-medium and low water stress areas	-	%
	305-1	EM-IS-110a.1	Scope 1 emissions (all sites)	-	CO2 million ton
	-	EM-IS-110a.1/2	Scope 1 emissions - Percentage covered under emissions-limiting regulations	-	%
	305-1		Scope 1- Biogenic CO2 emissions	-	Metric tons of CO2 equivalent.
	305-2		Scope 2 emissions market based	-	Metric tons of CO2 equivalent.
	305-2		Scope 2 emissions location based	-	Metric tons of CO2 equivalent.
	305-3		Scope 3 emissions category 1	-	Metric tons of CO2 equivalent.
	305-1 y 305-2		CO2 equivalent total emissions - (Scope 1 + Scope 2 market based)		Metric tons of CO2 equivalent.
	305-1, 305-2 y 305-3		CO2 equivalent total emissions - (Scope 1 + Scope 2 market based+ Scope 3 cat 1)		Metric tons of CO2 equivalent.
	305-3		GHG Emissions - Upstream process - Category 3		Metric tons of CO2 equivalent.
	305-3		GHG Emissions - Downstream process - Category 9		Metric tons of CO2 equivalent.
Human Resources	405-1	-	Professional employees - Male	-	%
	405-1	-	Professional employees - Female	-	%
	405-1	-	Board Employees - Male	-	%
	405-1	-	Board Employees - Female	-	%
	405-1	-	Board Employees - Male	-	N° of people
	405-1	-	Board Employees - Female	-	N° of people
	405-1	-	Board Employees - Total	-	N° of people
	405-1	-	Board Employees under 30	-	%
	405-1	-	Board Employees between 30 and 50	-	%
	405-1	-	Board Employees over 50	-	%
	405-1	-	Board Employees under 30	-	N° of people
	405-1	-	Board Employees between 30 and 50	-	N° of people
	405-1	-	Board Employees over 50	-	N° of people
	405-1	-	Board Employees by nationality - Mexican	-	N° of people
	405-1	-	Board Employees by nationality - Argentinian	-	N° of people
	405-1	-	Board Employees by nationality - Italian	-	N° of people

Exhibit 1
The “Selected Information”

Topic	GRI	SASB	Selected Information	Division	Measure Unit
	405-1	-	Board Employees by nationality - French	-	N° of people
	405-1	-	Board Employees by nationality - American	-	N° of people
	405-1	-	Board Employees by nationality - Brazilian	-	N° of people
	405-1	-	Board Employees by nationality - Belgian	-	N° of people
	405-1	-	Board Employees by nationality - Canadian	-	N° of people
	405-1	-	Employees under 30	-	(No.)
	405-1	-	Employees under 30	-	%
	405-1	-	Employees under 30 - of which women	-	(No.)
	405-1	-	Employees under 30 - of which women	-	%
	405-1	-	Employees between 30 and 50	-	(No.)
	405-1	-	Employees between 30 and 50	-	%
	405-1	-	Employees between 30 and 50 - of which women	-	(No.)
	405-1	-	Employees between 30 and 50 - of which women	-	%
	405-1	-	Employees over 50	-	(No.)
	405-1	-	Employees over 50	-	%
	405-1	-	Employees over 50 - of which women	-	(No.)
	405-1	-	Employees over 50 - of which women	-	%
	405-1	-	Average age of the workforce (in years)	-	(No.)
	405-1	-	Employees under 30 - Shop Floor	-	N° of people
	405-1	-	Employees under 30 - Shop Floor	-	%
	405-1	-	of which women	-	(No.)
	405-1	-	of which women	-	%
	405-1	-	Employees between 30 and 50 - Shop Floor	-	N° of people
	405-1	-	Employees between 30 and 50 - Shop Floor	-	%
	405-1	-	of which women	-	(No.)
	405-1	-	of which women	-	%
	405-1	-	Employees over 50 - Shop Floor	-	N° of people
	405-1	-	Employees over 50 - Shop Floor	-	%
	405-1	-	of which women	-	(No.)
	405-1	-	of which women	-	%
	405-1	-	Professionals under 30	-	(No.)
	405-1	-	Professionals under 30	-	%
	405-1	-	of which women	-	(No.)
	405-1	-	of which women	-	%
	405-1	-	Professionals between 30 and 50	-	(No.)
	405-1	-	Professionals between 30 and 50	-	%
	405-1	-	of which women	-	(No.)
	405-1	-	of which women	-	%
	405-1	-	Professionals over 50	-	(No.)

Exhibit 1
The “Selected Information”

Topic	GRI	SASB	Selected Information	Division	Measure Unit
	405-1	-	Professionals over 50	-	%
	405-1	-	of which women	-	(No.)
	405-1	-	of which women	-	%
	405-1	-	Managers under 30	-	(No.)
	405-1	-	Managers under 30	-	%
	405-1	-	of which women	-	(No.)
	405-1	-	Managers between 30 and 50	-	(No.)
	405-1	-	Managers between 30 and 50	-	%
	405-1	-	of which women	-	(No.)
	405-1	-	Managers over 50	-	(No.)
	405-1	-	Managers over 50	-	%
	405-1	-	of which women	-	(No.)
	405-1	-	Mexican	-	People
	405-1	-	Mexican	-	%
	405-1	-	Argentine	-	People
	405-1	-	Argentine	-	%
	405-1	-	Italian	-	People
	405-1	-	Italian	-	%
	405-1	-	Rumanian	-	People
	405-1	-	Rumanian	-	%
	405-1	-	American	-	People
	405-1	-	American	-	%
	405-1	-	Brazilian	-	People
	405-1	-	Brazilian	-	%
	405-1	-	Colombian	-	People
	405-1	-	Colombian	-	%
	405-1	-	Canadian	-	People
	405-1	-	Canadian	-	%
	405-1	-	Indonesian	-	People
	405-1	-	Indonesian	-	%
	405-1	-	Japanese	-	People
	405-1	-	Japanese	-	%
	405-1	-	Others	-	People
	405-1	-	Others	-	%
	405-1	-	Number of nationalities represented in the employee population	-	(No.)
	405-1	-	Argentine	-	%
	405-1	-	Italian	-	%
	405-1	-	Mexican	-	%
	405-1	-	American	-	%
	405-1	-	Brazilian	-	%
	405-1	-	Romanian	-	%
	405-1	-	Canadian	-	%
	405-1	-	Colombian	-	%

Exhibit 1
The “Selected Information”

Topic	GRI	SASB	Selected Information	Division	Measure Unit
	405-1	-	Japanese	-	%
	405-1	-	Indonesian	-	%
	405-1	-	Others	-	%
Suppliers	414-1/308-1	EM-IS-430a.1.	Percentage of certified suppliers over our active service suppliers classified as high HSE risk suppliers.	-	%
	414-1/308-1	EM-IS-430a.1.	All our suppliers meet the standards enshrined in our QHSE policy and Code of Conduct.	-	%
Health & Safety	403-9	-	Injury Frequency Rate	Employees and contract employees	Rate
	403-9	-	Fatalities as a result of work-related injury	Employees	N°
	403-9	EM-IS-320a.1.	Fatalities as a result of work-related injury	Employees	Rate
	403-9	-	Fatalities as a result of work-related injury - Workers who are not employees but whose work and/or workplace is controlled by the organisation	Contract employees	N°
	403-9	EM-IS-320a.1.	Fatalities as a result of work-related injury - Workers who are not employees but whose work and/or workplace is controlled by the organisation	Contract employees	Rate
	403-9	-	High-consequence work-related injuries (excluding fatalities)	Employees	N°
	403-9	-	High-consequence work-related injuries (excluding fatalities)	Employees	Rate
	403-9	-	High-consequence work-related injuries (excluding fatalities) - Workers who are not employees but whose work and/or workplace is controlled by the organisation	Contract employees	N°
	403-9	-	High-consequence work-related injuries (excluding fatalities) - Workers who are not employees but whose work and/or workplace is controlled by the organisation	Contract employees	Rate
	403-9	-	Recordable work-related injuries	Employees	N°
	403-9	EM-IS-320a.1.	Recordable work-related injuries/Total recordable incident rate (TRIR)	Employees	Rate
	403-9	-	Recordable work-related injuries/Total recordable incident rate (TRIR) - Workers who are not employees but whose work and/or workplace is controlled by the organisation	Contract employees	N°
	403-9	EM-IS-320a.1.	Recordable work-related injuries/Total recordable	Contract employees	Rate

Exhibit 1
The “Selected Information”

Topic	GRI	SASB	Selected Information	Division	Measure Unit
			incident rate (TRIR) - Workers who are not employees but whose work and/or workplace is controlled by the organisation		
	-	EM-IS-320a.1.	Near miss frequency rate (NMFR) - Employees	-	Rate
	-	EM-IS-320a.1.	Near miss frequency rate (NMFR) - Contract employees	-	Rate
	-	EM-IS-320a.1.	Near miss frequency rate (NMFR) - Total	-	Rate
	403-9		Number of hours worked - Employees	-	N°
	403-9		Number of hours worked - Workers who are not employees but whose work and/or workplace is controlled by the organisation/Contract employees	-	N°

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