TENARIS SA
Form 20-F
April 30, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 20-F

(Mark One)

¨ **Registration statement pursuant to Section 12(b) or 12(g) of the Securities Exchange Act of 1934**
or

x **Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

for the fiscal year ended December 31, 2017

or

¨ **Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**
or

¨ **Shell company report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

Commission file number: 001-31518

TENARIS S.A.

(Exact name of Registrant as specified in its charter)

N/A

(Translation of Registrant's name into English)

Grand Duchy of Luxembourg

(Jurisdiction of incorporation or organization)

29, Avenue de la Porte-Neuve – 3rd floor

L-2227 Luxembourg

(Address of principal executive offices)

Gonzalo Domínguez

29, Avenue de la Porte-Neuve – 3rd floor

L-2227 Luxembourg

Tel. + (352) 26 47 89 78, Fax. + (352) 26 47 89 79, e-mail: gdominguez@tenaris.com

(Name, Telephone, E-Mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

1

Title of Each Class	Name of Each Exchange On Which Registered
American Depositary Shares	**New York Stock Exchange**
Ordinary Shares, par value $1.00 per share	**New York Stock Exchange***

* **Ordinary shares of Tenaris S.A. are not listed for trading but only in connection with the registration of American Depositary Shares which are evidenced by American Depositary Receipts.**

Securities registered or to be registered pursuant to Section 12(g) of the Act:

None

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

1,180,536,830 ordinary shares, par value $1.00 per share

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes x No ¨

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ¨ No x

Note – checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ¨

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of "large accelerated filer," "accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act (Check one):

Large accelerated filer x	Accelerated Filer ¨	Non-accelerated filer ¨
		Emerging growth company ¨

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act. ¨

† The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

2

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP ¨	International Financial Reporting Standards as issued by the International Accounting Standards Board x	Other ¨

If "Other" has been checked in response to the previous question indicate by check mark which financial statement item the registrant has elected to follow. Item 17 ¨ Item 18 ¨

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No x

Please send copies of notices and communications from the Securities and Exchange Commission to:

Cristian J. P. Mitrani	**Robert S. Risoleo, Esq.**
Mitrani, Caballero, Ojam & Ruiz Moreno Abogados	**Sullivan & Cromwell LLP**
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TABLE OF CONTENTS

CERTAIN DEFINED TERMS

Unless otherwise specified or if the context so requires:

- References in this annual report to “the Company” are exclusively to Tenaris S.A., a Luxembourg *société anonyme*.
- References in this annual report to “Tenaris”, “we”, “us” or “our” are to Tenaris S.A. and its consolidated subsidiaries. See “*II Accounting Policies A. Basis of presentation*” and “*II. Accounting Policies B. Group accounting*” to our audited consolidated financial statements included in this annual report.
- References in this annual report to “San Faustin” are to San Faustin S.A., a Luxembourg *société anonyme* and the Company’s controlling shareholder.
- “shares” refers to ordinary shares, par value $1.00, of the Company.
- “ADSs” refers to the American Depositary Shares, which are evidenced by American Depositary Receipts, and represent two shares each.
- “OCTG” refers to oil country tubular goods. See Item 4.B. “Information on the Company – Business Overview – Our Products.”
- “tons” refers to metric tons; one metric ton is equal to 1,000 kilograms, 2,204.62 pounds, or 1.102 U.S. (short) tons.
- “billion” refers to one thousand million, or 1,000,000,000.
- “U.S. dollars”, “US$”, “USD” or “$” each refers to the United States dollar.

PRESENTATION OF CERTAIN FINANCIAL AND OTHER INFORMATION

Accounting Principles

We prepare our consolidated financial statements in accordance with International Financial Reporting Standards, or IFRS, as issued by the International Accounting Standards Board, or IASB, and in accordance with IFRS as adopted by the European Union. IFRS differs in certain significant respects from generally accepted accounting principles in the United States, commonly referred to as U.S. GAAP. Additionally, this annual report includes non-IFRS alternative performance measures such as EBITDA, Net cash/debt position and Free Cash Flow. See Exhibit 7.2 for more details on these alternative performance measures.

Following the sale in January 2017 of our steel electric conduit business in North America, known as Republic Conduit, the results of Republic Conduit are presented as discontinued operations in accordance with IFRS 5 "Non-current Assets Held for Sale and Discontinued Operations." Consequently, all amounts related to discontinued operations within each line item of the consolidated income statement are reclassified into discontinued operations. The consolidated statement of cash flows includes the cash flows for continuing and discontinued operations; cash flows and earnings per share from discontinued operations are disclosed separately in note 28 "Net assets of disposal group classified as held for sale" to our audited consolidated financial statements included in this annual report, as well as additional information detailing net assets of disposal group classified as held for sale and discontinued operations.

We publish consolidated financial statements presented in increments of a thousand U.S. dollars. This annual report includes our audited consolidated financial statements for the years ended December 31, 2017, 2016 and 2015.

Rounding

Certain monetary amounts, percentages and other figures included in this annual 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 that precede them.

Our Internet Website is Not Part of this Annual Report

We maintain an Internet website at www.tenaris.com. Information contained in or otherwise accessible through our Internet website is not a part of this annual report. All references in this annual report to this Internet site are inactive textual references to these URLs, or "uniform resource locators" and are for informational reference only. We assume no responsibility for the information contained on our Internet website.

Industry Data

Unless otherwise indicated, industry data and statistics (including historical information, estimates or forecasts) in this annual report are contained in or derived from internal or industry sources believed by Tenaris to be reliable. Industry data and statistics are inherently predictive and are not necessarily reflective of actual industry conditions. Such statistics are based on market research, which itself is based on sampling and subjective judgments by both the researchers and the respondents, including judgments about what types of products and transactions should be included in the relevant market. In addition, the value of comparisons of statistics for different markets is limited by many factors, including that (i) the markets are defined differently, (ii) the underlying information was gathered by different methods and (iii) different assumptions were applied in compiling the data. Such data and statistics have not been independently verified, and the Company makes no representation as to the accuracy or completeness of such data or any assumptions relied upon therein.

CAUTIONARY STATEMENT CONCERNING FORWARD-LOOKING STATEMENTS

This annual report and any other oral or written statements made by us to the public may contain "forward-looking statements" within the meaning of and subject to the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. This annual report contains forward-looking statements, including with respect to certain of our plans and current goals and expectations relating to Tenaris's future financial condition and performance.

Sections of this annual report that by their nature contain forward-looking statements include, but are not limited to, Item 3. "Key Information", Item 4. "Information on the Company", Item 5. "Operating and Financial Review and Prospects", Item 8. "Financial Information" and Item 11. "Quantitative and Qualitative Disclosure About Market Risk."

We use words such as "aim", "will likely result", "will continue", "contemplate", "seek to", "future", "objective", "goal", "sho pursue", "anticipate", "estimate", "expect", "project", "intend", "plan", "believe" and words and terms of similar substance to i forward-looking statements, but they are not the only way we identify such statements. All forward-looking statements are management's present expectations of future events and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. These factors include the risks related to our business discussed under Item 3.D. "Key Information – Risk Factors", among them, the following:

- our ability to implement our business strategy or to grow through acquisitions, joint ventures and other investments;
- the competitive environment in our business and our industry;
- our ability to price our products and services in accordance with our strategy;
- our ability to absorb cost increases and to secure supplies of essential raw materials and energy;
- our ability to adjust fixed and semi-fixed costs to fluctuations in product demand;
- trends in the levels of investment in oil and gas exploration and drilling worldwide;
- general macroeconomic and political conditions and developments in the countries in which we operate or distribute pipes; *and*
- changes to applicable laws and regulations, including the imposition of tariffs or quotas or other trade barrier.

By their nature, certain disclosures relating to these and other risks are only estimates and could be materially different from what actually occurs in the future. As a result, actual future gains or losses that may affect our financial condition and results of operations could differ materially from those that have been estimated. You should not place undue reliance on the forward-looking statements, which speak only as of the date of this annual report. Except as required by law, we are not under any obligation, and expressly disclaim any obligation to, update or alter any forward-looking statements, whether as a result of new information, future events or otherwise.

PART I

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

A. Selected Financial Data

The selected consolidated financial data set forth below have been derived from our audited consolidated financial statements for each of the years and at the dates indicated therein[(1)]. Our consolidated financial statements were prepared in accordance with IFRS, and were audited by PricewaterhouseCoopers, Société coopérative, *Cabinet de révision agréé*, an independent registered public accounting firm. PricewaterhouseCoopers, Société coopérative is a member firm of PwC International Limited, or PWC. IFRS differs in certain significant respects from U.S. GAAP.

For a discussion of the accounting principles affecting the financial information contained in this annual report, please see "Presentation of Certain Financial and Other Information – Accounting Principles."

Thousands of U.S. dollars (except number of shares and per share amounts)	For the year ended December 31, 2017	2016	2015	2014	2013
Selected consolidated income statement data [(1)]					
Continuing operations					
Net sales	5,288,504	4,293,592	6,903,123	10,141,459	10,424,191
Cost of sales	(3,685,057)	(3,165,684)	(4,747,760)	(6,140,415)	(6,322,198)
Gross profit	1,603,447	1,127,908	2,155,363	4,001,044	4,101,993
Selling, general and administrative expenses	(1,270,016)	(1,196,929)	(1,593,597)	(1,932,778)	(1,912,164)
Other operating income (expenses), net [(2)]	1,157	9,964	(395,971)	(187,734)	(13,727)
Operating income (loss)	334,588	(59,057)	165,795	1,880,532	2,176,102
Finance income	47,605	66,204	34,574	38,211	34,767
Finance cost	(27,072)	(22,329)	(23,058)	(44,388)	(70,450)
Other financial results	(43,550)	(21,921)	3,076	39,575	7,290
Income (loss) before equity in earnings (losses) of non-consolidated companies and income tax	311,571	(37,103)	180,387	1,913,930	2,147,709
Equity in earnings (losses) of non-consolidated companies [(3)]	116,140	71,533	(39,558)	(164,616)	46,098
Income before income tax	427,711	34,430	140,829	1,749,314	2,193,807
Income tax	17,136	(17,102)	(234,384)	(580,431)	(625,798)
Income (loss) for the year for continuing operations	444,847	17,328	(93,555)	1,168,883	1,568,009

Discontinued operations					
Result for discontinued operations	91,542	41,411	19,130	12,293	6,363
Income (loss) for the year (4)	536,389	58,739	(74,425)	1,181,176	1,574,372
Income (loss) attributable to (4):					
Owners of the parent	544,737	55,298	(80,162)	1,158,517	1,551,394
Non-controlling interests	(8,348)	3,441	5,737	22,659	22,978
Income (loss) for the year (4)	536,389	58,739	(74,425)	1,181,176	1,574,372
Depreciation and amortization for continuing operations	(608,640)	(657,109)	(653,313)	(609,647)	(604,017)
Weighted average number of shares outstanding	1,180,536,830	1,180,536,830	1,180,536,830	1,180,536,830	1,180,536,830
Basic and diluted earnings (losses) per share for continuing operations	0.38	0.01	(0.08)	0.97	1.31
Basic and diluted earnings (losses) per share	0.46	0.05	(0.07)	0.98	1.31
Dividends per share (5)	0.41	0.41	0.45	0.45	0.43

(1) Following the sale in January 2017 of our steel electric conduit business in North America, known as Republic Conduit, the results of that business are presented as discontinued operations in accordance with IFRS 5 "Non-current Assets Held for Sale and Discontinued Operations." Consequently, all amounts related to discontinued operations within each line item of the consolidated income statement are reclassified into discontinued operations.

(2) Other operating income (expenses), net in 2015 includes an impairment charge of $400 million on our North American welded pipe operations and in 2014 includes an impairment charge of $206 million on our welded pipe operations in Colombia and Canada.

(3) Equity in earnings (losses) of non-consolidated companies includes impairment charges on the Usiminas investment of $29 million in 2015 and $161 million in 2014.

(4) International Accounting Standard No. 1 ("IAS 1") (revised) requires that income for the year as shown on the income statement does not exclude non-controlling interests. Earnings per share, however, continue to be calculated on the basis of income attributable solely to the owners of the parent (i.e., the Company).

(5) Dividends per share correspond to the dividends proposed or paid in respect of the year.

Thousands of U.S. dollars (except number of shares)	At December 31, 2017	2016	2015	2014	2013
Selected consolidated financial position data					
Current assets	5,381,154	4,817,154	5,743,031	7,396,322	6,903,900
Property, plant and equipment, net	6,229,143	6,001,939	5,672,258	5,159,557	4,673,767
Other non-current assets	2,787,921	3,032,765	3,471,685	3,954,799	4,353,303
Assets of disposal group classified as held for sale	-	151,417	-	-	-
Total assets	14,398,218	14,003,275	14,886,974	16,510,678	15,930,970
Current liabilities	2,070,899	1,713,036	1,754,775	2,602,829	2,119,729
Non-current borrowings	34,645	31,542	223,221	30,833	246,218
Deferred tax liabilities	457,970	550,657	750,325	714,123	751,105
Other non-current liabilities	253,734	276,874	292,597	356,579	344,052
Liabilities of disposal group classified as held for sale	-	18,094	-	-	-
Total liabilities	**2,817,248**	**2,590,203**	**3,020,918**	**3,704,364**	**3,461,104**
Capital and reserves attributable to the owners of the parent	11,482,185	11,287,417	11,713,344	12,654,114	12,290,420
Non-controlling interests	98,785	125,655	152,712	152,200	179,446
Total equity	**11,580,970**	**11,413,072**	**11,866,056**	**12,806,314**	**12,469,866**
Total liabilities and equity	14,398,218	14,003,275	14,886,974	16,510,678	15,930,970
Share capital	1,180,537	1,180,537	1,180,537	1,180,537	1,180,537
Number of shares outstanding	1,180,536,830	1,180,536,830	1,180,536,830	1,180,536,830	1,180,536,830

B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors

You should carefully consider the risks and uncertainties described below, together with all other information contained in this annual report, before making any investment decision. Any of these risks and uncertainties could have a material adverse effect on our business, revenues, financial condition and results of operations, which could in turn affect the price of shares and ADSs.

Risks Relating to Our Industry

Sales and profitability may fall as a result of downturns in the international price of oil and gas and other circumstances affecting the oil and gas industry.

We are a global steel pipe manufacturer with a strong focus on manufacturing products and related services for the oil and gas industry. The oil and gas industry is a major consumer of steel pipe products worldwide, particularly for products manufactured under high quality standards and demanding specifications. Demand for steel pipe products from the oil and gas industry has historically been volatile and depends primarily upon the number of oil and natural gas wells being drilled, completed and reworked, and the depth and drilling conditions of these wells. The level of exploration, development and production activities of, and the corresponding capital spending by, oil and gas companies, including national oil companies, depends primarily on current and expected future prices of oil and natural gas and is sensitive to the industry's view of future economic growth and the resulting impact on demand for oil and natural gas. Several factors, such as the supply and demand for oil and gas, and political and global economic conditions, affect these prices. When the price of oil and gas falls, oil and gas companies generally reduce spending on production and exploration activities and, accordingly, make fewer purchases of steel pipe products. Major oil-and gas-producing nations and companies have frequently collaborated to balance the supply (and thus the price) of oil in the international markets. A major vehicle for this collaboration has been the Organization of Petroleum Exporting Countries, or OPEC. Many of our customers are state-owned companies in member countries of OPEC. A more recent factor affecting oil and gas prices has been the ability of producers in the United States and Canada to rapidly increase production from their reserves of tight oil and shale gas in response to changes in market conditions. Other circumstances – such as geopolitical events and hostilities in the Middle East and elsewhere – may also affect drilling activity and, as a result, cause steel pipe consumption to decline, and thus have a material impact on our revenues, profitability and financial condition. For example, the level of drilling activity and the investment by oil and gas companies declined in 2015 and 2016 as they were severely affected by the strong decline of oil and gas prices. Several factors, such as the supply and demand for oil and gas, and political and global economic conditions, affect, and may continue to affect, these prices; accordingly, oil and gas companies may cut their investment plans and consequently, demand for our products could decline.

Climate change legislation or regulations could curtail demand for fossil fuels and therefore demand for our products and services could be reduced.

There is an increased attention on greenhouse gas emissions and climate change from different sectors of society. Existing or future legislation and regulations related to greenhouse gas emissions and climate change, as well as government initiatives to promote the use of alternative energy sources (with many jurisdictions implementing tax advantages and other subsidies to promote the development of renewable energy sources, or even requiring minimum thresholds for power generation from renewable sources), may significantly curtail demand for and production of fossil fuels such as oil and natural gas. These initiatives, together with the growing social awareness regarding climate change and other environmental matters, have resulted in increased investor and consumer demand for renewable energy and additional compliance requirements for fossil energy projects, which are likely to become more stringent over time and to result in substantial increases in costs for the oil and natural gas industry. Furthermore, ongoing technological developments in the renewable energy industry are making renewable energy increasingly competitive against fossil-fuels. If this trend continues, energy demand could shift increasingly towards "cleaner" sources such as hydroelectrical, solar, wind and other renewable energies, which would, in turn, reduce demand for oil and natural gas, thus negatively affecting demand for our products and services and, ultimately, our future results of operations.

Competition in the global market for steel pipe products may cause us to lose market share and hurt our sales and profitability.

The global market for steel pipe products is highly competitive, with the primary competitive factors being price, quality, service and technology. In recent years, substantial investments have been made, especially but not only in China, to increase production capacity of seamless steel pipe products. New production capacity continues to be installed and there is significant excess production capacity, particularly for “commodity” or standard product grades. Capacity for the production of more specialized product grades has also increased. At the same time, the high cost and long lead times required to develop the most complex projects, particularly deepwater and oil sands projects, has led to a slowdown in the sanctioning of new developments in a context of low and more volatile oil prices. Despite our efforts to develop products and services that differentiate us from our competitors, reduced demand for steel pipe products from these complex projects means that the competitive environment is expected to remain intense in the coming years and effective competitive differentiation will be a key success factor for Tenaris. In addition, there is an increasing risk of unfairly traded steel pipe imports in markets in which Tenaris produces and sells its products and, despite the application of antidumping duties and tariffs, we can give no assurance with respect to the effectiveness of these actions. Therefore, we may not continue to compete effectively against existing or potential producers and preserve our current shares of geographic or product markets, and increased competition may have a material impact on the pricing of our products and services, which could in turn adversely affect our revenues, profitability and financial condition.

Increases in the cost of raw materials, energy and other costs, limitations or disruptions to the supply of raw materials and energy, and price mismatches between raw materials and our products may hurt our profitability.

The manufacture of seamless steel pipe products requires substantial amounts of steelmaking raw materials and energy; welded steel pipe products, in turn, are processed from steel coils and plates. The availability and pricing of a significant portion of the raw materials and energy we require are subject to supply and demand conditions, which can be volatile, and to tariffs and other government regulation, which can affect continuity of supply and prices. In addition, disruptions, restrictions or limited availability of energy resources in markets where we have significant operations could lead to higher costs of production and eventually to production cutbacks at our facilities in such markets. For example, shortages of energy and natural gas in Argentina and the resulting supply restrictions imposed by the government could lead to production cutbacks at our facilities in Argentina. Similarly, in Mexico, the decrease in the national production of natural gas and constraints in natural gas transportation capacity have led to increased imports of natural gas which have resulted in increased natural gas transportation costs and, thus, higher steel pipe products production costs. See "Risks Relating to Our Business – Adverse economic or political conditions in the countries where we operate or sell our products and services may decrease our sales or disrupt our manufacturing operations, thereby adversely affecting our revenues, profitability and financial condition." At any given time, we may be unable to obtain an adequate supply of critical raw materials with price and other terms acceptable to us. The availability and prices of raw materials may also be negatively affected by new laws and regulations, including import controls, allocation by suppliers, interruptions in production, accidents or natural disasters, changes in exchange rates, worldwide price fluctuations, and the availability and cost of transportation. Moreover, we are dependent on a few suppliers for a significant portion of our requirements for steel coils at our welded pipe operations in North America and the loss of any of these suppliers could result in increased production costs, production cutbacks and reduced competitiveness at these operations.

We may not be able to recover, partially or fully, increased costs of raw materials and energy through increased selling prices on our products, or it may take an extended period of time to do so, and limited availability could force us to curtail production, which could adversely affect our sales and profitability.

Our results of operations and financial conditions could be adversely affected by low levels of capacity utilization.

Like other manufacturers of steel-related products, we have fixed and semi-fixed costs (e.g., labor and other operating and maintenance costs) that cannot adjust rapidly to fluctuations in product demand. If demand for our products falls significantly, these costs may adversely affect our profitability and financial condition. For example, during 2015 and 2016, in response to the downturn of the oil and gas industry, we implemented temporary suspensions of certain of our operations, mostly in the United States and Canada. Temporary suspensions of operations generally lead to layoffs of employees which may in turn give rise to labor conflicts and impact operations. Moreover, temporary suspensions may also affect profitability and result in charges for asset impairments.

Risks Relating to Our Business

Adverse economic or political conditions in the countries where we operate or sell our products and services may decrease our sales or disrupt our manufacturing operations, thereby adversely affecting our revenues, profitability

and financial condition.

We have significant operations in various countries, including Argentina, Brazil, Canada, Colombia, Indonesia, Italy, Japan, Mexico, Nigeria, Romania, Saudi Arabia and the United States, and we sell our products and services throughout the world. Therefore, like other companies with worldwide operations, our business and operations have been, and could in the future be, affected from time to time to varying degrees by political, economic and social developments and changes in laws and regulations. These developments and changes may include, among others, nationalization, expropriation or forced divestiture of assets; restrictions on production, imports and exports; interruptions in the supply of essential energy inputs; exchange and/or transfer restrictions, inability or increasing difficulties to repatriate income or capital or to make contract payments; inflation; devaluation; war or other international conflicts; civil unrest and local security concerns, including high incidences of crime and violence involving drug trafficking organizations that threaten the safe operation of our facilities and operations; direct and indirect price controls; tax increases and changes in the interpretation, application or enforcement of tax laws and other retroactive tax claims or challenges; cancellation of contract rights; and delays or denials of governmental approvals. Both the likelihood of such occurrences and their overall impact upon us vary greatly from country to country and are not predictable. Realization of these risks could have an adverse impact on the results of operations and financial condition of our subsidiaries located in the affected country.

For example, our business and operations in Argentina may be materially and adversely affected by economic, political, social, fiscal and regulatory developments. Argentina is subject to high inflation rates and our business and operations in Argentina may be adversely affected by increases in services and labor costs inflation or by the measures that may be adopted by the government to address inflation. In addition, an increased level of labor demands prompted by a growing inflation rate could trigger higher levels of labor conflicts, and eventually result in strikes or work stoppages. Any such disruption of operations could have an adverse effect on our operations and financial results. Other developments that may have an adverse effect on our operations and financial results include increased taxes, exchange controls, restrictions on capital flows, and export and import taxes or restrictions. In addition, in recent years, our operations in Argentina experienced constraints in their electricity and natural gas supply requirements on many occasions. Shortages of energy and natural gas in Argentina have lead in the past (and could lead in the future) to production cutbacks negatively affecting our revenues and profitability; we could also face increased costs when using alternative sources of energy.

In Mexico, our business could be materially and adversely affected by economic, political, social, fiscal and regulatory developments. The Mexican government exercises significant influence over the Mexican economy and, therefore, governmental actions concerning the economy and state-owned enterprises could have a significant impact on Mexico's private sector and on our Mexican-related operations. In addition, changes to the North American Free Trade Agreement, about which there have been discussions among the United States, Mexico and Canada, could adversely affect the investment climate and economic activity in Mexico and/or in the United States and impact our results of operations and net results. Similarly, our Mexican operations could be affected by criminal violence, primarily due to the activities of drug cartels and related organized crime that Mexico has experienced and may continue to experience. The city of Veracruz, where our facility is located, has experienced several incidents of violence. Although the Mexican government has implemented various security measures and has strengthened its military and police forces, drug-related crime continues to exist in Mexico. Our business may be materially and adversely affected by these activities, their possible escalation and the violence associated with them.

If we do not successfully implement our business strategy, our ability to grow, our competitive position and our sales and profitability may suffer.

We plan to continue implementing our business strategy of developing integrated product and service solutions designed to differentiate our offering from those of our competitors and meet the needs of our customers for lower operational costs and reliable performance even in the most demanding environments, as well as continuing to pursue strategic investment opportunities. Any of the components of our overall business strategy could cost more than anticipated, may not be successfully implemented or could be delayed or abandoned. For example, we may fail to create sufficient differentiation in our Rig Direct® services to compensate the added costs of providing such services, or fail to find suitable investment opportunities, including acquisition targets that enable us to continue to grow and improve our competitive position. Even if we successfully implement our business strategy, it may not yield the expected results.

We could be subject to regulatory risks associated with our international operations.

The shipment of goods and services across international borders subjects us to extensive trade laws and regulations. Our import and export activities are governed by customs laws and regulations in each of the countries where we operate. Moreover, the European Union, the United States and other countries control the import and export of certain goods and services and impose related import and export recordkeeping and reporting obligations. Those governments also may impose economic sanctions against certain countries, persons and other entities that may restrict or prohibit transactions involving such countries, persons and entities. Similarly, we are subject to the U.S. anti-boycott laws. These laws and regulations are complex and frequently changing, and they may be enacted, amended, enforced or interpreted in a manner that could materially impact our operations. For example, on March 8, 2018, under Section 232 of the Trade Expansion Act of 1962, the U.S. President imposed a 25% tariff on steel articles imported from all countries; however, the US administration announced that imports from Argentina, Australia, Brazil, Canada, the European Union, Mexico and South Korea, will be temporarily exempted. There is considerable uncertainty surrounding the eventual scope and impact of these measures and its corresponding exemptions.

Finally, failure to comply with applicable legal and regulatory obligations also could result in criminal and civil penalties and sanctions.

Changes in applicable tax regulations and resolutions of tax disputes could negatively affect our financial results.

We are subject to tax laws in numerous foreign jurisdictions where we operate. However, the integrated nature of our worldwide operations can produce conflicting claims from revenue authorities in different countries as to the profits to be taxed in the individual countries, including disputes relating to transfer pricing. The majority of the jurisdictions in which we operate have double tax treaties with other foreign jurisdictions, which provide a framework for mitigating the impact of double taxation on our results. However, mechanisms developed to resolve such conflicting claims are largely untried, and can be expected to be very lengthy.

In recent years, tax authorities around the world have increased their scrutiny of company tax filings, and have become more rigid in exercising any discretion they may have. As part of this, the Organization for Economic Co-operation and Development (OECD) has proposed a number of tax law changes under its Base Erosion and Profit Shifting (BEPS) Action Plans to address issues of transparency, coherence and substance. At the same time, the European Commission is finalizing its Anti Tax Avoidance Directive, which seeks to prevent tax avoidance by companies and to ensure that companies pay appropriate taxes in the markets where profits are effectively made and business is effectively performed.

Changes to tax laws and regulations in the countries where we operate require us to continually assess our organizational structure and could lead to increased risk of international tax disputes. Our interpretations and application of the tax laws could differ from that of the relevant governmental taxing authority, which could result in the payment of additional taxes, penalties or interest, negatively affecting our profitability and financial condition.

Future acquisitions, strategic partnerships and capital investments may not perform in accordance with expectations or may disrupt our operations and hurt our profits.

One element of our business strategy is to identify and pursue growth-enhancing strategic opportunities. As part of that strategy, we regularly make significant capital investments and acquire interests in, or businesses of, various companies. For example, in December 2017, with an investment of $1.8 billion, we inaugurated our new greenfield seamless mill in Bay City, Texas, the United States. We will continue to consider strategic acquisitions, investments and partnerships from time to time. We must necessarily base any assessment of potential acquisitions, joint ventures and capital investments on assumptions with respect to operations, profitability and other matters that may subsequently prove to be incorrect. Our past or future acquisitions, significant investments and alliances may not perform in accordance with our expectations and could adversely affect our operations and profitability. In addition, new demands on our existing organization and personnel resulting from the integration of new acquisitions could disrupt our operations and adversely affect our operations and profitability. Moreover, as part of future acquisitions, we may acquire assets that are unrelated to our business, and we may not be able to integrate these assets or sell them under favorable terms and conditions.

Disruptions to our manufacturing processes could adversely affect our operations, customer service levels and financial results.

Our steel pipe manufacturing processes depend on the operation of critical steel-making equipment, such as electric arc furnaces, continuous casters, rolling mills, heat treatment and various operations that support them, such as our power generation facilities. Despite the investments we make to maintain critical production equipment, such equipment may incur downtime as a result of unanticipated failures or other events, such as fires, explosions, floods, accidents and severe weather conditions.

Similarly, natural disasters or severe weather conditions could significantly damage our production facilities and general infrastructure or affect the normal course of business. For example, our Mexican production facility located in Veracruz is located in or close to regions prone to earthquakes, and our Bay City facility in Texas, United States is located in an area prone to strong winds and hurricanes, and occasional floods. More generally, changing weather patterns and climatic conditions in recent years have added to the unpredictability and frequency of natural disasters.

Our operations may also be adversely affected as a result of stoppages or other labor conflicts. In 2017, our operations in Mexico experienced a few days of union-led stoppages due to an internal dispute within the local union; such internal dispute is ongoing and we cannot assure it will not cause further disruptions in Mexico. In addition, in some of the countries in which we have significant production facilities (e.g., Argentina and Brazil), significant fluctuations in exchange rates, together with inflationary pressures, affect our costs, increase labor demands and could eventually generate higher levels of labor conflicts.

Some of the previously described events could result in death or injury to persons. They could also result in damage to property, delays in production and liability for Tenaris. To the extent that lost production as a result of such events cannot be compensated for by unaffected facilities, such events could have an adverse effect on our profitability and financial condition. Additionally, the insurance we maintain for property damage and general liability may not be adequate or available to protect us under such events, its coverage may be limited, or the amount of our insurance may be less than the related loss. For more information on our insurance coverage see Item 4.B. "Information on Tenaris – B. Business overview – Insurance.

We may be required to record a significant charge to earnings if we must reassess our goodwill or other assets as a result of changes in assumptions underlying the carrying value of certain assets, particularly as a consequence of deteriorating market conditions.

Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Intangible assets with indefinite useful life, including goodwill, are subject to at least an annual impairment test. At December 31, 2017 we had $1,292 million in goodwill corresponding mainly to the acquisition of Hydril, in 2007 ($920 million) and Maverick, in 2006 ($229 million). If our management was to determine in the future that the goodwill or other assets were impaired, particularly as a consequence of deteriorating market conditions, we would be required to recognize a non-cash charge to reduce the value of these assets, which would adversely affect our results of operations.

Our results of operations and financial condition could be adversely affected by movements in exchange rates.

As a global company we manufacture and sell products in a number of countries throughout the world and a portion of our business is carried out in currencies other than the U.S. dollar, which is the Company's functional and presentation currency. As a result, we are exposed to foreign exchange rate risk. Changes in currency values and foreign exchange regulations could adversely affect our financial condition and results of operations. For information on our foreign exchange rate risk, please see Item 11. "Quantitative and Qualitative Disclosure About Market Risk – Foreign Exchange Rate Risk."

If we do not comply with laws and regulations designed to combat governmental corruption in countries in which we sell our products, we could become subject to fines, penalties or other sanctions and our sales and profitability could suffer.

We conduct business in certain countries known to experience governmental corruption. Although we are committed to conducting business in a legal and ethical manner in compliance with local and international statutory requirements and standards applicable to our business, there is a risk that our employees or representatives may take actions that violate applicable laws and regulations that generally prohibit the making of improper payments to foreign government officials for the purpose of obtaining or keeping business, including laws relating to the 1997 OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions such as the U.S. Foreign Corrupt Practices Act, or FCPA.

The cost of complying with environmental regulations and potential environmental and product liabilities may increase our operating costs and negatively impact our business, financial condition, results of operations and prospects.

We are subject to a wide range of local, provincial and national laws, regulations, permit requirements and decrees relating to the protection of human health and the environment, including laws and regulations relating to hazardous materials and radioactive materials and environmental protection governing air emissions, water discharges and waste management. Laws and regulations protecting the environment have become increasingly complex and more stringent and expensive to implement in recent years. Additionally, international environmental requirements vary. While standards in the European Union, Canada, and Japan are generally comparable to U.S. standards, other nations, particularly developing nations, including China, have substantially lesser requirements that may give competitors in such nations a competitive advantage. It is possible that any international agreement to regulate emissions may provide exemptions and lesser standards for developing nations. In such case, we may be at a competitive disadvantage relative to competitors having more or all of their production in such developing nations.

Environmental laws and regulations may, in some cases, impose strict liability rendering a person liable for damages to natural resources or threats to public health and safety without regard to negligence or fault. Some environmental laws provide for joint and several strict liability for remediation of spills and releases of hazardous substances. These laws and regulations may expose us to liability for the conduct of or conditions caused by others or for acts that were in compliance with all applicable laws at the time they were performed.

Compliance with applicable requirements and the adoption of new requirements could have a material adverse effect on our consolidated financial condition, results of operations or cash flows. The costs and ultimate impact of complying with environmental laws and regulations are not always clearly known or determinable since regulations under some of these laws have not yet been promulgated or are undergoing revision. The expenditures necessary to remain in compliance with these laws and regulations, including site or other remediation costs, or costs incurred as a result of potential violations of environmental laws could have a material adverse effect on our financial condition and profitability. While we incur and will continue to incur expenditures to comply with applicable laws and regulations, there always remains a risk that environmental incidents or accidents may occur that may negatively affect our reputation or our operations.

Our oil and gas casing, tubing and line pipe products are sold primarily for use in oil and gas drilling, gathering, transportation, processing and power generation facilities, which are subject to inherent risks, including well failures, line pipe leaks, blowouts, bursts and fires, that could result in death, personal injury, property damage, environmental pollution or loss of production. Any of these hazards and risks can result in environmental liabilities, personal injury claims and property damage from the release of hydrocarbons.

Defects in specialty tubing products could result in death, personal injury, property damage, environmental pollution, damage to equipment and facilities or loss of production.

We normally warrant the oilfield products and specialty tubing products we sell or distribute in accordance with customer specifications, but as we pursue our business strategy of providing customers with additional services, such as Rig Direct®, we may be required to warrant that the goods we sell and services we provide are fit for their intended purpose. Actual or claimed defects in our products may give rise to claims against us for losses suffered by our customers and expose us to claims for damages. The insurance we maintain will not be available in cases of gross negligence or willful misconduct, in other cases may not be adequate or available to protect us in the event of a claim, its coverage may be limited, canceled or otherwise terminated, or the amount of our insurance may be less than the related impact on enterprise value after a loss. Similarly, our sales of tubes and components for the automobile industry subject us to potential product liability risks that could extend to being held liable for the costs of the recall of automobiles sold by car manufacturers and their distributors.

Limitations on our ability to protect our intellectual property rights, including our trade secrets, could cause a loss in revenue and any competitive advantage we hold.

Some of our products or services, and the processes we use to produce or provide them, have been granted patent protection, have patent applications pending, or are trade secrets. Our business may be adversely affected if our patents are unenforceable, the claims allowed under our patents are not sufficient to protect our technology, our patent applications are denied or our trade secrets are not adequately protected. Our competitors may be able to develop technology independently that is similar to ours without infringing on our patents or gaining access to our trade secrets, which could adversely affect our financial condition, results of operations and cash flows.

Cyberattacks could have a material adverse impact on our business and results of operation.

We rely heavily on information systems to conduct our business. Although we devote significant resources to protect our systems and data, we have experienced and will continue to experience varying degrees of cyber incidents in the normal conduct of our business, which may occasionally include sophisticated cybersecurity threats such as unauthorized access to data and systems, loss or destruction of data, computer viruses or other malicious code, phishing and/or cyber attacks. These threats often arise from numerous sources, not all of which are within our control, such as fraud or malice from third parties, failures of computer servers or other accidental technological failure, electrical or telecommunication outages or other damage to our property or assets. Given the rapidly evolving nature of cyber threats, there can be no assurance that the systems we have designed to prevent or limit the effects of cyber incidents or attacks will be sufficient to prevent or detect such incidents or attacks, or to avoid a material adverse impact on our systems when such incidents or attacks do occur. While we attempt to mitigate these risks, we remain vulnerable to additional known or unknown threats, including theft, misplacement or loss of data, programming errors, employee errors and/or dishonest behaviour that could potentially lead to the compromising of sensitive information, improper use of our systems or networks, as well as unauthorized access, use, disclosure, modification or destruction of such information, systems and/or networks. If our systems for protecting against cybersecurity risks are circumvented or breached, this could also result in disruptions to our business operations (including but not limited to, defective products or production downtimes), access to our financial reporting systems, the loss of access to critical data or systems, misuse or corruption of critical data and proprietary information (including our intellectual property and customer data), as well as damage to our reputation with our customers and the market, failure to meet customer requirements, customer dissatisfaction and/or other financial costs and losses. In addition, given that cybersecurity threats continue to evolve, we may be required to devote additional resources in the future to enhance our protective measures or to investigate and/or remediate any cybersecurity vulnerabilities. Moreover, any investigation of a cyberattack would take time before completion, during which we would not necessarily know the extent of the actual or potential harm or how best to remediate it, and certain errors or actions could be repeated or compounded before duly discovered and remediated (all or any of which could further increase the costs and consequences arising out of such cyberattack). Tenaris does not maintain any specific insurance coverage to protect against cybersecurity risks.

Risks Relating to the Structure of the Company

As a holding company, the Company's ability to pay cash dividends depends on the results of operations and financial condition of its subsidiaries and could be restricted by legal, contractual or other limitations.

The Company conducts its operations through subsidiaries. Dividends or other intercompany transfers of funds from those subsidiaries are the Company's primary source of funds to pay its expenses, debt service and dividends and to repurchase shares or ADSs.

The ability of the Company's subsidiaries to pay dividends and make other payments to us will depend on the results of operations and financial condition and could be restricted by applicable corporate and other laws and regulations, including those imposing foreign exchange controls or restrictions on the repatriation of capital or the making of dividend payments and agreements and commitments of such subsidiaries. If earnings and cash flows of the Company's operating subsidiaries are substantially reduced, the Company may not be in a position to meet its operational needs or to pay dividends. For information concerning limitations on payments of dividends, see "Risks Relating to Our Business – Adverse economic or political conditions in the countries where we operate or sell our products and services may decrease our sales or disrupt our manufacturing operations, thereby adversely affecting our revenues, profitability and financial condition."

In addition, the Company's ability to pay dividends to shareholders is subject to legal and other requirements and restrictions in effect at the holding company level. For example, the Company may only pay dividends out of net profits, retained earnings and distributable reserves and premiums, each as defined and calculated in accordance with Luxembourg law and regulations.

The Company's controlling shareholder may be able to take actions that do not reflect the will or best interests of other shareholders.

As of the date of this annual report, San Faustin beneficially owned 60.45% of our shares. Rocca & Partners Stichting Administratiekantoor Aandelen San Faustin, or RP STAK, controls a significant portion of the voting power of San Faustin and has the ability to influence matters affecting, or submitted to a vote of, the shareholders of San Faustin. As a result, RP STAK is indirectly able to elect a substantial majority of the members of the Company's board of directors and has the power to determine the outcome of most actions requiring shareholder approval, including, subject to the requirements of Luxembourg law, the payment of dividends. The decisions of the controlling shareholder may not reflect the will or best interests of other shareholders. For example, the Company's articles of association permit the Company's board of directors to waive, limit or suppress preemptive rights in certain cases. Accordingly, the Company's controlling shareholder may cause its board of directors to approve in certain cases an issuance of shares for consideration without preemptive rights, thereby diluting the minority interest in the Company. See "Risks Relating to shares and ADSs – Holders of shares and ADSs in the United States may not be able to exercise preemptive rights in certain cases."

Risks Relating to shares and ADSs

Holders of shares or ADSs may not have access to as much information about us as they would in the case of a domestic issuer.

There may be less publicly available information about us than is regularly published by or about domestic issuers. Also, corporate and securities regulations governing Luxembourg companies may not be as extensive as those in effect in other jurisdictions. Furthermore, IFRS, the accounting standards in accordance with which we prepare our consolidated financial statements, differ in certain significant aspects from local GAAP, including U.S. GAAP.

Holders of ADSs may not be able to exercise, or may encounter difficulties in the exercise of, certain rights afforded to shareholders.

Certain shareholders' rights under Luxembourg law, including the rights to participate and vote at general meetings of shareholders, to include items on the agenda for the general meetings of shareholders, to receive dividends and distributions, to bring actions, to examine our books and records and to exercise appraisal rights may not be available to holders of ADSs, or may be subject to restrictions and special procedures for their exercise, as holders of ADSs only have those rights that are expressly granted to them in the deposit agreement. Deutsche Bank Trust Company Americas, as depositary under the ADS deposit agreement, or the Depositary, through its custodian agent, is the registered shareholder of the deposited shares underlying the ADSs, and therefore only the Depositary can exercise the shareholders' rights in connection with the deposited shares. For example, if we make a distribution in the form of securities, the Depositary is allowed, at its discretion, to sell that right to acquire those securities on your behalf and instead distribute the net proceeds to you. Also, under certain circumstances, such as our failure to provide the Depositary with properly completed voting instructions on a timely basis, you may not be able to vote at general meetings of shareholders by giving instructions to the Depositary. If the Depositary does not receive voting instructions from the holder of ADS by the prescribed deadline, or the instructions are not in proper form, then the Depositary shall deem such holder of ADS to have instructed the Depositary to vote the underlying shares represented by ADSs in favor of any proposals or recommendations of the Company (including any recommendation by the Company to vote such underlying shares on any given issue in accordance with the majority shareholder vote on that issue), for which purposes the Depositary shall issue a proxy to a person appointed by the Company to vote such underlying shares represented by ADSs in favor of any proposals or recommendations of the Company. Under the ADS deposit agreement, no instruction shall be deemed given and no proxy shall be given with respect to any matter as to which the Company informs the Depositary that (i) it does not wish such proxy given, (ii) it has knowledge that substantial opposition exists with respect to the action to be taken at the meeting, or (iii) the matter materially and adversely affects the rights of the holders of ADSs.

Holders of shares and ADSs in the United States may not be able to exercise preemptive rights in certain cases.

Pursuant to Luxembourg corporate law, existing shareholders of the Company are generally entitled to preferential subscription rights (preemptive rights) in the event of capital increases and issues of shares against cash contributions. Under the Company's articles of association, the board of directors has been authorized to waive, limit or suppress such preemptive subscription rights. The validity period of such authorization will expire (unless renewed) on June 5, 2020. The Company may, however, issue shares without preemptive subscription rights only if (i) shares (including without limitation, the direct issuance of shares or upon the exercise of options, rights convertible into shares, or similar instruments convertible or exchangeable into shares) are issued against a contribution other than in cash; (ii) shares (including by way of free shares or at discount), up to an amount of 1.5% of the issued share capital of the Company, are issued to directors, officers, agents, employees of the Company, its direct or indirect subsidiaries or its affiliates (or, collectively, the Beneficiaries), for the purpose of compensation or incentive of the Beneficiaries or in relation thereto (which the board of directors shall be authorized to issue upon such terms and conditions as it deems fit), including without limitation, the direct issuance of shares or upon the exercise of options, rights convertible into shares or similar instruments convertible or exchangeable into shares.

Holders of ADSs in the United States may, in any event, not be able to exercise any preemptive rights, if granted, for shares underlying their ADSs unless additional shares and ADSs are registered under the U.S. Securities Act of 1933, as amended, or the Securities Act, with respect to those rights, or an exemption from the registration requirements of the Securities Act is available. We intend to evaluate, at the time of any rights offering, the costs and potential liabilities associated with the exercise by holders of shares and ADSs of the preemptive rights for shares, and any other factors we consider appropriate at the time, and then to make a decision as to whether to register additional shares. We may decide not to register any additional shares, requiring a sale by the Depositary of the holders' rights and a distribution of the proceeds thereof. Should the Depositary not be permitted or otherwise be unable to sell preemptive rights, the rights may be allowed to lapse with no consideration to be received by the holders of the ADSs.

It may be difficult to enforce judgments against us outside Luxembourg.

The Company is a *société anonyme* organized under the laws of Luxembourg, and most of its assets are located in other jurisdictions. Furthermore, most of the Company's directors and officers named in this annual report reside in different jurisdictions. As a result, investors may not be able to effect service of process upon us or our directors or officers. Investors may also not be able to enforce against us or our directors or officers in the investors' domestic courts, judgments predicated upon the civil liability provisions of the domestic laws of the investors' home countries. Likewise, it may be difficult for investors not domiciled in Luxembourg to bring an original action in a Luxembourg court predicated upon the civil liability provisions of other securities laws, including U.S. federal securities laws, against the Company, its directors and officers. There is also uncertainty with regard to the enforceability of original actions of civil liabilities predicated upon the civil liability provisions of securities laws, including U.S. federal securities laws, outside the jurisdiction where such judgments have been rendered; and enforceability will be subject to compliance with procedural requirements under applicable local law, including the condition that the judgment does not violate the public policy of the applicable jurisdiction.

Item 4. Information on the Company

Overview

We are a leading global manufacturer and supplier of steel pipe products and related services for the world's energy industry and for other industrial applications. Our customers include most of the world's leading oil and gas companies as well as engineering companies engaged in constructing oil and gas gathering, transportation, processing and power generation facilities. Our principal products include casing, tubing, line pipe, and mechanical and structural pipes.

We operate an integrated worldwide network of steel pipe manufacturing, research, finishing and service facilities with industrial operations in the Americas, Europe, Asia and Africa and a direct presence in most major oil and gas markets.

Our mission is to deliver value to our customers through product development, manufacturing excellence, and supply chain management. We seek to minimize risk for our customers and help them reduce costs, increase flexibility and improve time-to-market. Our employees around the world are committed to continuous improvement by sharing knowledge across a single global organization.

A. History and Development of the Company

The Company

Our holding company's legal and commercial name is Tenaris S.A. The Company was established as a *société anonyme* organized under the laws of the Grand Duchy of Luxembourg on December 17, 2001. The Company's registered office is located at 29 avenue de la Porte-Neuve, 3rd Floor, L-2227, Luxembourg, telephone (352) 2647-8978. Its agent for U.S. federal securities law purposes is Tenaris Global Services (U.S.A.) Corporation, located at 2200 West Loop South, Suite 800, Houston, TX 77027.

Tenaris

Tenaris began with the formation of Siderca S.A.I.C., or Siderca, the sole Argentine producer of seamless steel pipe products, by San Faustin's predecessor in Argentina in 1948. We acquired Siat, an Argentine welded steel pipe manufacturer, in 1986. We grew organically in Argentina and then, in the early 1990s, began to evolve beyond this initial base into a global business through a series of strategic investments. As of the date of this annual report, our investments include controlling or strategic interests in:

- Tubos de Acero de México S.A., or Tamsa, the sole Mexican producer of seamless steel pipe products;
- Dalmine S.p.A., or Dalmine, a leading Italian producer of seamless steel pipe products;
- Confab Industrial S.A., or Confab, the leading Brazilian producer of welded steel pipe products;
- NKKTubes, a leading Japanese producer of seamless steel pipe products;
- Algoma Tubes Inc., or AlgomaTubes, the sole Canadian producer of seamless steel pipe products;
- S.C. Silcotub S.A., or Silcotub, a leading Romanian producer of seamless steel pipe products;
- Maverick Tube Corporation, or Maverick, a leading U.S. producer of welded steel pipe products;
- Prudential Steel Ltd., or Prudential, a welded pipe mill producing oil country tubular goods, or OCTG, and line pipe products in Canada;
- Tenaris Tubocaribe Ltda., or Tubocaribe, a welded pipe mill producing OCTG, and line pipe products in Colombia;
- Hydril Company, or Hydril, a leading North American manufacturer of premium connection products for oil and gas drilling production;
- PT Seamless Pipe Indonesia Jaya, or SPIJ, an Indonesian OCTG processing business with heat treatment and premium connection threading facilities;
- Pipe Coaters Nigeria Ltd., the leading company in the Nigerian coating industry;

- Ternium S.A., or Ternium, one of the leading flat steel producers of the Americas with operating facilities in Mexico, Brazil, Argentina, Colombia, the southern United States and Central America;

- Usinas Siderúrgicas de Minas Gerais S.A., or Usiminas, a Brazilian producer of high quality flat steel products used in the energy, automotive and other industries;

- Techgen S.A. de C.V., or Techgen, an electric power plant in Mexico; *and*

- a sucker rod business, in Campina, Romania.

In addition, we have established a global network of pipe finishing, distribution and service facilities with a direct presence in most major oil and gas markets and a global network of research and development centers.

For information on Tenaris's principal capital expenditures and divestitures, see Item 4.B. "Information on the Company – Business Overview – Capital Expenditure Program."

B. Business Overview

Our business strategy is to consolidate our position as a leading global supplier of integrated product and service solutions to the energy and other industries by:

- pursuing strategic investment opportunities in order to further strengthen our presence in local and global markets;

- expanding our comprehensive range of products and developing new products designed to meet the needs of customers operating in challenging environments;

- enhancing our Rig Direct® offer of technical and pipe management services designed to enable customers to optimize their selection and use of our products and reduce their overall operating costs; and

- securing an adequate supply of production inputs and reducing the manufacturing costs of our core products.

Pursuing strategic investment opportunities and alliances

We have a solid record of growth through strategic investments and acquisitions. We pursue selective strategic investments and acquisitions as a means to expand our operations and presence in select markets, enhance our global competitive position and capitalize on potential operational synergies. Our track record on companies' acquisitions is described above (see "History and Development of Tenaris – Tenaris"). In addition, in 2017 we have inaugurated a new greenfield seamless mill in Bay City, Texas. The new facility includes a state-of-the-art rolling mill with a capacity of 600,000 tons per year as well as finishing and heat treatment lines and logistics center. From a budget of approximately $1.8 billion, as of December 31, 2017, approximately $1.7 billion had already been invested.

Expanding our range of products

We have developed an extensive range of high-value products suitable for most of our customers' operations using our network of specialized research and testing facilities and by investing in our manufacturing facilities. As our customers expand their operations, we seek to supply high-value products that reduce costs and enable them to operate safely in challenging environments, including for complex offshore and unconventional operations.

Enhancing our offer of technical and pipe management services - Rig Direct® - and extending their global deployment

We continue to enhance our offer of technical and pipe management services, which we now call Rig Direct® services, and extend their deployment worldwide. For many years, we have provided these services, providing technical advice and assistance on the selection of materials and their use in the field, managing customer inventories and directly supplying pipes to their rigs on a just-in-time basis in markets like Mexico and Argentina. Now, in response to changes in market conditions and the increased focus of customers on reducing costs and improving the efficiency of their operations, we have extended the deployment of our Rig Direct® services throughout North America and in other markets around the world (e.g. North Sea, Romania and Thailand). Through the provision of Rig Direct® services, we seek to enable our customers to optimize their operations, reduce costs and to concentrate on their core businesses. They are also intended to differentiate us from our competitors and further strengthen our relationships with our customers worldwide through long-term agreements.

Securing inputs for our manufacturing operations

We seek to secure our existing sources of raw material and energy inputs, and to gain access to new sources, of low-cost inputs which can help us maintain or reduce the cost of manufacturing our core products over the long term. For example, in February 2014, we entered into an agreement with our affiliates Ternium and Tecpetrol International S.A. (a wholly-owned subsidiary of San Faustin, the controlling shareholder of both Tenaris and Ternium) to build a natural gas-fired combined cycle electric power plant in Mexico for the supply of Tenaris's and Ternium's respective Mexican industrial facilities. The new power plant became fully operational during 2016. For more information on the new power plant, see note 12 c) "*Investments in non-consolidated companies – Techgen S.A. de C.V.*" to our audited consolidated financial statements included in this annual report. For more information on the Company's commitments under the new power plant, see item 5.E. "Operating and Financial Review and Prospects – Off-Balance Sheet Arrangements."

Our Competitive Strengths

We believe our main competitive strengths include:

- our global production, commercial and distribution capabilities, offering a full product range with flexible supply options backed up by local service capabilities in important oil and gas producing and industrial regions around the world;
- our ability to develop, design and manufacture technologically advanced products;
- our solid and diversified customer base and historic relationships with major international oil and gas companies around the world, and our strong and stable market shares in most of the countries in which we have manufacturing operations;
- our proximity to our customers;

- our human resources around the world with their diverse knowledge and skills;

- our low-cost operations, primarily at state-of-the-art, strategically located production facilities with favorable access to raw materials, energy and labor, and more than 60 years of operating experience; *and*

- our strong financial condition.

Business Segments

Tenaris has one major business segment, Tubes, which is also the reportable operating segment.

The Tubes segment includes the production and sale of both seamless and welded steel tubular products and related services mainly for the oil and gas industry, particularly OCTG used in drilling operations, and for other industrial applications with production processes that consist in the transformation of steel into tubular products. Business activities included in this segment are mainly dependent on the oil and gas industry worldwide, as this industry is a major consumer of steel pipe products, particularly OCTG used in drilling activities. Demand for steel pipe products from the oil and gas industry has historically been volatile and depends primarily upon the number of oil and natural gas wells being drilled, completed and reworked, and the depth and drilling conditions of these wells. Sales are generally made to end users, with exports being done through a centrally managed global distribution network and domestic sales made through local subsidiaries. Corporate general and administrative expenses have been allocated to the Tubes segment.

The Others segment include all other business activities and operating segments that are not required to be separately reported, including the production and selling of sucker rods, industrial equipment, coiled tubing, utility conduits for buildings, energy and raw materials that exceed internal requirements.

For more information on our business segments, see "*II C. Accounting Policies – Segment information*" to our audited consolidated financial statements included in this annual report.

Our Products

Our principal finished products are seamless and welded steel casing and tubing, line pipe and various other mechanical and structural steel pipes for different uses. Casing and tubing are also known as oil country tubular goods or OCTG. We manufacture our steel pipe products in a wide range of specifications, which vary in diameter, length, thickness, finishing, steel grades, coating, threading and coupling. For most complex applications, including high pressure and high temperature applications, seamless steel pipes are usually specified and, for some standard applications, welded steel pipes can also be used.

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

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

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

Mechanical and structural pipes. Mechanical and structural pipes are used by general industry for various applications, including the transportation of other forms of gas and liquids under high pressure.

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

Premium joints and couplings. Premium joints and couplings are specially designed connections used to join lengths of steel casing and tubing for use in high temperature or high pressure environments. A significant portion of our steel casing and tubing products are supplied with premium joints and couplings. We own an extensive range of premium connections, and following the integration of the premium connections business of Hydril, we have marketed our premium connection products under the TenarisHydril brand name. In addition, we hold licensing rights to manufacture and sell the Atlas Bradford range of premium connections outside the United States.

Coiled tubing. Coiled tubing is used for oil and gas drilling and well workovers and for subsea pipelines.

Other Products. We also manufacture sucker rods used in oil extraction activities and industrial equipment of various specifications and diverse applications, including liquid and gas storage equipment. In addition, we sell energy and raw materials that exceed our internal requirements.

Production Process and Facilities

We operate relatively low-cost production facilities, which we believe is the result of:

- state-of-the-art, strategically located plants;
- favorable access to high quality raw materials, energy and labor at competitive costs;
- operating history of more than 60 years, which translates into solid industrial know-how;
- constant benchmarking and best-practices sharing among the different facilities;
- increasing specialization of each of our facilities in specific product ranges; and
- extensive use of information technology in our production processes.

Our seamless pipes production facilities are located in North and South America, Europe and Asia and our welded pipes production facilities are located in North and South America. In addition, we have tubular accessories facilities, such as sucker rods, in Argentina, Brazil, Mexico, Romania, and the United States. We produce couplings in Argentina, China, Colombia, Indonesia, Mexico and Romania, and pipe fittings in Mexico. In addition to our pipe threading and finishing facilities at our integrated pipe production facilities, we also have pipe threading facilities for steel pipes manufactured in accordance with the specifications of the American Petroleum Institute, or API, and premium joints in the United States, Canada, China, Denmark, Ecuador, Kazakhstan, Indonesia, Nigeria, the United Kingdom and Saudi Arabia.

The following table shows our aggregate installed production capacity of seamless and welded steel pipes and steel bars at the dates indicated as well as the aggregate actual production volumes for the periods indicated. The figures for effective annual capacity are based on our estimates of effective annual production capacity under present conditions.

	At or for the year ended December 31,		
	2017	2016	2015
Thousands of tons			
Steel Bars			
Effective Capacity (annual) [1]	3,835	3,835	3,835
Actual Production	2,793	2,010	1,875
Tubes – Seamless			
Effective Capacity (annual) [1]	3,680	3,680	3,820
Actual Production	2,347	1,735	1,780
Tubes – Welded			
Effective Capacity (annual) [1]	2,620	2,620	2,620
Actual Production	544	305	633

(1) Effective annual production capacity is calculated based on standard productivity of production lines, theoretical product mix allocations, the maximum number of possible working shifts and a continued flow of supplies to the production process.

In December 2017, we inaugurated a new greenfield seamless mill in Bay City, Texas. The new facility includes a state-of-the-art rolling mill as well as finishing and heat treatment lines and logistics center. The Bay City mill will add a seamless pipe production capacity of approximately 600,000 tons per year.

Production Facilities – Tubes

North America

In North America, we have a fully integrated seamless pipe manufacturing facility, a threading plant and a pipe fittings facility in Mexico, a seamless pipe rolling mill, three welded pipe manufacturing facilities and three threading plants in the United States, and a seamless pipe rolling mill, a welded pipe manufacturing facility and one threading plant in Canada.

Mexico

In Mexico, our fully integrated seamless pipe manufacturing facility is located near the major exploration and drilling operations of Petróleos Mexicanos S.A. de C.V., or Pemex, about 13 kilometers from the port of Veracruz on the Gulf of Mexico. Situated on an area of 650 hectares, the plant includes two state-of-the-art seamless pipe mills and has an installed annual production capacity of approximately 1,230,000 tons of seamless steel pipes (with an outside diameter range of 2 to 20 inches) and 1,150,000 tons of steel bars. The plant is served by two highways and a railroad and is close to the port of Veracruz, which reduces transportation costs and facilitates product shipments to export markets.

The Veracruz facility comprises:

- a steel shop, including an electric arc furnace, refining equipment, vacuum degassing, five-strand continuous caster and a cooling bed;
- a multi-stand pipe mill, including a rotary furnace, direct piercing equipment, mandrel mill with retained mandrel, sizing mill and a cooling bed;
- a premium quality finishing, or PQF, technology mill (2 ⅜ to 7 inches), including a rotary furnace, direct piercing equipment, mandrel mill with retained mandrel, sizing mill and a cooling bed;
- a pilger pipe mill, including a rotary furnace, direct piercing equipment, a reheating furnace, sizing mill and a cooling bed;
- six finishing lines, including heat treatment lines, upsetting machines and threading and inspection equipment;
- a cold-drawing mill; *and*
- an automotive components production center.

The major operational units at the Veracruz facility and the corresponding effective annual production capacity (in thousands of tons per year, except for the auto components facility, which is in millions of parts) as of December 31, 2017, are as follows:

	Effective Annual Production Capacity **(thousands of tons)** **(1)**
Steel Shop	1,150
Pipe Production	
Multi-Stand Pipe Mill	700
PQF Mill	450
Pilger Mill	80
Cold-Drawing Mill	35
Auto Components Facility	30

(1) Effective annual production capacity is calculated based on standard productivity of production lines, theoretical product mix allocations, the maximum number of possible working shifts and a continued flow of supplies to the production process.

In Veracruz, located near our fully integrated seamless pipe manufacturing facility, we have a threading plant, which produces premium connections and accessories.

In addition to the Veracruz facilities, we operate a manufacturing facility near Monterrey in the state of Nuevo León, Mexico, for the production of weldable pipe fittings. This facility has an annual production capacity of approximately 15,000 tons.

23

United States

In the United States we have the following production facilities:

Hickman, Arkansas: This facility, which is our main U.S. welded production facility and covers an area of 78 hectares, processes steel coils to produce electric resistance welded, or ERW, OCTG and line pipe with an outside diameter range from 2 ⅜ to 16 inches and has an annual production capacity of approximately 900,000 tons. It includes:

- A plant comprising two mills producing 2 ⅜ through 5 ½ inches API products with three finishing lines and three heat treatment lines;
- A plant comprising two mills producing 4 ½ through 16 inches API products with two finishing lines; *and*
- A coating facility coating sizes up to 16 inches.

Conroe, Texas: A plant located on an area of 47 hectares which processes steel coils to produce ERW OCTG, with an outside diameter range of 4 ½ to 8 ⅝ inches and has an annual production capacity of approximately 250,000 tons. The facility includes one mill, one heat treatment line and one finishing line. Since April 2015, Tenaris temporarily suspended operations at this mill, due to the record levels of unfairly traded imports of OCTG from South Korea and the sharp decline in the price of oil and consequential reduction in drilling activity.

Counce, Tennessee: A plant located on an area of 54 hectares which processes steel coils to produce line pipe with an outside diameter range of 4 ½ to 8 ⅝ inches and has an annual production capacity of approximately 90,000 tons. The plant has one mill and a finishing line capable of producing line pipe products. Currently, for efficiency reasons, the plant is not operational and these products are being produced by our Hickman plant.

Houston, Texas: In the Houston area we have the Texas Arai coupling manufacturing facility. Operations at Texas Arai were suspended in March 2016 due to the low price of oil, the continuing reduction in rig activity and the high level of inventory on the ground created mostly by unfairly traded imports of OCTG from South Korea. This facility remains idle as of the filing of this annual report and some of its equipment was disassembled and moved to other facilities.

Additionally, we have the following threading facilities, which are mainly dedicated to the finishing of tubes with premium connections:

- *McCarty*: a threading facility in Houston, Texas, which comprises two main production buildings in an area of approximately 20 hectares;

- *Westwego*: a threading facility located in Louisiana. In June 2015, we suspended operations at the Westwego facility, mainly due to the decline in drilling activity driven by the low price of oil; *and*

- *Bakersfield*: a threading facility in California, mainly used as a repair shop.

In addition, our new 1.2 million square foot greenfield seamless mill in Bay City, Texas was inaugurated in December 2017. The new facility is the result of an investment of $1.8 billion and includes a state-of-the-art rolling mill with a capacity of approximately 600,000 tons per year as well as finishing and heat treatment lines and logistics center.

Tenaris's mill in Bay City is strategically located near key shale plays and reaffirms the Company's commitment to the U.S. market and domestic manufacturing. BayCity mill is a critical piece of infrastructure driving the Company's service-oriented strategy known as Rig Direct®. The direct-to-customer model synchronizes customers' drilling operations with pipe manufacturing, delivering products and services when needed, as needed. To date, nearly two-thirds of Tenaris's oil and gas customers in the U.S. are using Rig Direct®.

Canada

In Canada, we have a seamless steel pipe manufacturing facility located in Sault Ste. Marie, near the mouth of Lake Superior in the province of Ontario. The facility includes a retained mandrel mill, a stretch reducing mill and heat treatment and finishing facilities producing seamless pipe products with an outside diameter range of 3 $^1/_2$ to 9 $^7/_8$ inches. The effective annual production capacity of the facility is approximately 300,000 tons. We use steel bars produced by Rio Tinto Fer et Titane, Inc., a Canadian producer of titanium dioxide and high purity iron, and by our integrated facilities in Romania, Italy, Mexico and Argentina. As the industry started to recover and inventory levels were reduced, we resumed production at this mill in November 2016.

We also own a welded steel pipe manufacturing facility located in Calgary, Alberta, which processes steel coils into ERW OCTG and line pipe with an outside diameter range of 2 ⅜ to 12 ¾ inches. The facility includes a slitter, three welding lines and four threading lines. The effective annual production capacity of this plant is approximately 400,000 tons. We have resumed operations at this facility in the second half of 2017 after a two-year interruption in operations resulting from the high levels of unfairly traded imports of OCTG and line pipe products and the sharp decline in the price of oil and consequential reduction in drilling activity.

In addition, we have a threading facility in Nisku, Alberta, near the center of Western Canadian drilling area. The facility has eleven computer numerical control, or CNC, lathes dedicated to premium connections and accessories including related repairs.

South America

In South America, we have a fully integrated seamless pipe facility in Argentina. In addition, we have welded pipe manufacturing facilities in Argentina, Brazil and Colombia.

Argentina

Our principal manufacturing facility in South America is a fully integrated plant on the banks of the Paraná river near the town of Campana, approximately 80 kilometers from the City of Buenos Aires, Argentina. Situated on over 300 hectares, the plant includes a state-of-the-art seamless pipe facility and has an effective annual production capacity of approximately 900,000 tons of seamless steel pipe (with an outside diameter range of 1 ¼ to 10 ¾ inches) and 1,300,000 tons of steel bars.

The Campana facility comprises:

- a direct reduced iron, or DRI, production plant;
- a steel shop with two production lines, each including an electric arc furnace, refining equipment, four-strand continuous caster and a cooling bed;
- two continuous mandrel mills, each including a rotary furnace, direct piercing equipment and a cooling bed and one of them also including a stretch reducing mill;

- seven finishing lines, including heat treatment lines, upsetting machines, threading and inspection equipment and make-up facilities;
- a cold-drawing mill; *and*
- a port on the Paraná river for the supply of raw materials and the shipment of finished products.

In Argentina, we have a modern gas turbine power generation plant, located in San Nicolás, approximately 150 kilometers from Campana. The 160 megawatt capacity of this power generation plant together with a smaller thermo-electric power generating plant located within the Campana facility is sufficient to supply all of the electric power requirements of the Campana facility.

The major operational units at the Campana facility and corresponding effective annual production capacity (in thousands of tons per year) as of December 31, 2017, are as follows:

	Effective Annual Production Capacity **(thousands of tons)** (1)
DRI	960
Steel Shop	
Continuous Casting I	530
Continuous Casting II	770
Pipe Production	
Mandrel Mill I	330
Mandrel Mill II	570
Cold-Drawing Mill	20

(1) Effective annual production capacity is calculated based on standard productivity of production lines, theoretical product mix allocations, the maximum number of possible working shifts and a continued flow of supplies to the production process.

In addition to our main integrated seamless pipe facility, we also have two welded pipe manufacturing facilities in Argentina. One is located at Valentín Alsina just south of the city of Buenos Aires. The facility includes ERW and submerged arc welding, or SAW, rolling mills with one spiral line. The facility was originally opened in 1948 and processes steel coils and plates to produce welded steel pipes with an outside diameter range of 4 ½ to 80 inches, which are used for the conveying of fluids at low, medium and high pressure and for mechanical and structural purposes. The facility has an annual production capacity of approximately 350,000 tons. The other welded facility is located at Villa Constitución in the province of Santa Fe. The facility has an annual production capacity of approximately 80,000 tons of welded pipes with an outside diameter range of 1 to 8 inches.

Brazil

In Brazil, we have the Confab welded pipe manufacturing facility, located at Pindamonhangaba, 160 kilometers from the city of São Paulo. The facility includes an ERW rolling mill and a SAW rolling mill with one spiral line and one longitudinal line. The facility, which was originally opened in 1974, processes steel coils and plates to produce welded steel pipes with an outside diameter range of 4 ½ to 100 inches for various applications, including OCTG and line pipe for oil, petrochemical and gas applications. The facility also supplies anticorrosion pipe coating made of extruded polyethylene or polypropylene, external and internal fusion bonded epoxy and paint for internal pipe coating. The facility has an annual production capacity of approximately 500,000 tons. In addition to our welded pipe manufacturing facility, in September 2014, we acquired the remaining 50% of Socotherm Brasil S.A. (now known as Tenaris Coating do Brasil S.A.), or Socotherm, a pipe coating services company in which we already had a 50% ownership interest and that performed pipe coating services for us over the years. The pipe coating facility, located beside the Confab welded pipes mill in Pindamonhangaba, was previously managed in partnership by Tenaris and by an affiliate of ShawCor.

Colombia

In Colombia we have the Tenaris Tubocaribe Ltda., or Tubocaribe, pipe manufacturing facility in Cartagena, on an area of 60 hectares, including a state-of-the-art finishing plant for seamless pipes. The total estimated annual finishing capacity of approximately is 250,000 tons, with an estimated annual ERW production capacity of approximately 140,000 tons. The plant produces OCTG and line pipe products with an outside diameter range of 2 $\frac{3}{8}$ to 9 $\frac{5}{8}$ inches, having two ERW mills, one heat treatment line and three threading lines, including premium connections capacity. Inspection lines and materials testing laboratories complete the production facility. A 2 to 42 inches diameter multilayer coating facility complements our line pipe production facilities.

In addition, we have a coupling shop with fifty-four lathes, ten cutting machines, and two phosphatizing lines. Inspection and finishing lines complete this facility. The shop has an estimated annual production capacity of 2.3 million pieces, including API and premium threads.

Ecuador

In Ecuador we have a small threading and finishing service center in Machachi. After Tenaris temporarily suspended operations at this service center in 2015 due to the sharp decline in the price of oil and consequential reduction in drilling activity, operations have resumed in December 2017.

Europe

In Europe, we have several seamless pipe manufacturing facilities in Italy and one in Romania and premium connection threading facilities in Denmark and the United Kingdom.

Italy

Our principal manufacturing facility in Europe is an integrated plant located in the town of Dalmine in the industrial area of Bergamo, about 40 kilometers from Milan in northern Italy. Situated on an area of 150 hectares, the plant includes a state-of-the-art seamless pipe mill and has an annual production capacity of approximately 650,000 tons of seamless steel pipes and 935,000 tons of steel bars.

The Dalmine facility comprises:

- a steel shop, including an electric arc furnace, two ladle furnaces, one vacuum degassing and two continuous casters with their own cooling beds;
- a continuous floating mandrel mill whose operations have been suspended;
- a retained mandrel mill with two in-line-high-productivity finishing lines including one heat treatment; *and*
- a rotary expander with a finishing line including a heat treatment.

The major operational units at the Dalmine facility and corresponding effective annual production capacity (in thousands of tons per year) as of December 31, 2017, are as follows:

	Effective Annual Production Capacity **(thousands of tons)** **(1)**
Steel Shop	935
Pipe Production	
Retained Mandrel Mill Medium Diameter (plus Rotary Expander for Large Diameter)	650

(1) Effective annual production capacity is calculated based on standard productivity of production lines, theoretical product mix allocations, the maximum number of possible working shifts and a continued flow of supplies to the production process.

The Dalmine facility manufactures seamless steel pipes with an outside diameter range of 21 to 711 mm (0.75 to 28.00 inches), mainly from carbon, low alloy and high alloy steels for diverse applications. The Dalmine facility also manufactures steel bars for processing at our other facilities in Italy.

Our production facilities located in Italy have a collective annual production capacity of approximately 780,000 tons of seamless steel pipes. Aside from the main facility mentioned above, they include:

- the Costa Volpino facility, which covers an area of approximately 31 hectares and comprises a cold-drawing mill and an auto components facility producing cold-drawn carbon, low alloy and high alloy steel pipes with an outside diameter range of 12 to 380 mm (0.47 to 15 inches), mainly for automotive, mechanical and machinery companies in Europe. The Costa Volpino facility has an annual production capacity of approximately 80,000 tons;

- the Arcore facility, which covers an area of approximately 26 hectares and comprises a Diescher mill with associated finishing lines. Production is concentrated in heavy-wall mechanical pipes with an outside diameter range of 48 to 219 mm (1.89 to 8.62 inches). The Arcore facility has an annual production capacity of approximately 150,000 tons; *and*

In addition to these facilities, we operate a manufacturing facility at Sabbio, which manufactures gas cylinders with an annual production capacity of approximately 14,000 tons or 270,000 pieces, and a large vessels plant inside the Dalmine facility, recently revamped, with a production capacity of around 5,000 pieces per year.

In order to reduce the cost of electrical energy at our operations in Dalmine, we constructed a gas-fired, combined heat and power station with a capacity of 120 megawatts at Dalmine. Our operations in Dalmine consume most of the power generated at the power station which is designed to have sufficient capacity to meet the electric power requirements of these operations at peak load. Excess power is sold to third-party consumers and heat is sold for district heating.

Romania

We have a seamless steel pipe manufacturing facility in Romania, located in the city of Zalau, near the Hungarian border, 480 kilometers from Bucharest. The Silcotub facility includes a continuous mandrel mill and has an annual production capacity of approximately 210,000 tons of seamless steel tubes, of which 25,000 tons are cold drawn. The plant produces carbon and alloy steel tubes with an outside diameter range of 8 to 146 mm (0.314 to 5.74 inches). We also have a steelmaking facility in southern Romania, with an annual steelmaking capacity of 450,000 tons. Following investments to convert this capacity to the production of steel bars for seamless pipe production, this facility has been integrated into our Romanian and European operations and supplies steel bars to the Silcotub facility as well as to other rolling mills in our industrial system. The combined Romanian facilities comprise:

- a steel shop including an electric arc furnace, a ladle furnace and a continuous caster;
- a continuous mandrel mill;
- four finishing lines, including heat treatment lines, upsetting machine, line pipe, threading, make-up and inspection equipment facilities;
- a coupling shop;
- a cold-drawing plant with finishing area; *and*
- automotive and hydraulic cylinders components' production machinery.

United Kingdom

In Aberdeen, the United Kingdom, we have a premium connection threading facility and repair shop, which works as a hub to service our customers working in the North Sea region. The facility has an annual production capacity of approximately 24,000 pieces.

Denmark

We have a facility in Esbjerg, Denmark for the manufacturing of casing and tubing accessories and the provision of casing and tubing repairs, with a production range of 2 $^{3}/_{8}$'' to 18 $^{5}/_{8}$'' and production capacity of 3,600 ends per year.

Middle East and Africa

We have a threading facility for the production of premium joints and accessories in Saudi Arabia. The facility has an annual production capacity of 120,000 tons.

Additionally, we have a premium threading facility in Kazakhstan. The state-of-the-art facility has the capacity to produce 45,000 tons of OCTG annually for threading seamless pipes and gas-tight premium connections.

In Nigeria we have a facility dedicated to the production of premium joints and couplings in Onne. This plant comprises a threading facility for both API and premium connections with an annual production capacity of approximately 40,000 tons, inspection facilities and a stockyard. In addition, in October 2011, we acquired 40% of the shares of Pipe Coaters Nigeria Ltd, a leading company in the Nigerian pipe coating industry. Also, located in Onne, Pipe Coaters Nigeria supplies a wide variety of products and services for the oil and gas industry, such as internal, anticorrosion, concrete and thermal insulation coatings for deepwater applications.

Asia Pacific

Our seamless pipe manufacturing facility in Asia, operated by NKKTubes, is located in Kawasaki, Japan, in the Keihin steel complex owned by JFE, the successor company of NKK that resulted from the business combination of NKK with Kawasaki Steel Corporation, or Kawasaki Steel. The facility includes a floating mandrel mill, a plug mill and heat treatment and upsetting and threading facilities producing seamless pipe products with an outside diameter range of 1 to 17 inches. The effective annual production capacity of the facility is approximately 260,000 tons. The plant was operated by NKK until its acquisition by NKKTubes in 2000. Steel bars and other essential inputs and services are supplied by JFE, which retains a 49% interest in NKKTubes through its subsidiary JFE Steel. The NKKTubes facility produces a wide range of carbon, alloy and stainless steel pipes for the local market and high value-added products for export markets.

We own a facility for the production of premium joints and couplings in Qingdao, on the east coast of China. The facility has an annual production capacity of approximately 40,000 tons of premium joints. Additionally, in 2016 we opened a components facility for processing pipes for use in airbags for automotives.

In addition, in Indonesia we have a premium joints threading facility in the state of Batam, which we integrated to our operations following the acquisition of Hydril. We also hold 89.17% of SPIJ, an Indonesian OCTG processing business with heat treatment, premium connection threading facilities, coupling shop and a quality-testing laboratory, including an ultrasonic testing machine, which has an annual processing capacity of approximately 120,000 tons.

Production Facilities – Others

We have facilities for the manufacture of sucker rods in Villa Mercedes, San Luis, Argentina, in Moreira Cesar, São Paulo, Brazil, in Veracruz, Mexico, in Campina, Romania and in Conroe, Texas, the United States. Our total annual manufacturing capacity of sucker rods is approximately 3.8 million units.

In Moreira Cesar, São Paulo, Brazil, we also have facilities for the manufacture of industrial equipment. In many cases, we also provide the assembly service of this equipment at the client's site.

In Italy, we have the Piombino facility, which covers an area of approximately 67 hectares and comprises a hot dip galvanizing line and associated finishing facilities. Production is focused on finishing of small diameter seamless pipe for plumbing applications in the domestic market, such as residential water and gas transport. The Piombino facility has an annual production capacity of approximately 100,000 tons.

In addition, we have specialized facilities in the Houston area producing coiled tubing and umbilical tubing:

- A coiled tubing facility of approximately 150,000 square feet of manufacturing space on 4 hectares. The plant consists of two mills and coating operations capable of producing coiled tubing products in various grades, sizes and wall thicknesses. A new continuous heat treatment line has been recently installed.

- An umbilical tubing facility of approximately 85,000 square feet of manufacturing space on 6 hectares. The facility is capable of producing stainless or carbon steel tubing in various grades, sizes and wall thickness.

Sales and Marketing

Net Sales

Our total net sales amounted to $5,289 million in 2017, compared to $4,294 million in 2016 and $6,903 million in 2015. For further information on our net sales see Item 5.A. "Operating and Financial Review and Prospects – Results of Operations."

The following table shows our net sales by business segment for the periods indicated therein:

Millions of U.S. dollars	For the year ended December 31,					
	2017		2016		2015	
Tubes	4,966	94 %	4,015	94 %	6,444	93 %
Others	323	6 %	278	6 %	459	7 %
Total	5,289	100%	4,294	100%	6,903	100%

Tubes

The following table indicates, for our Tubes business segment, net sales by geographic region:

	For the year ended December 31,					
Millions of U.S. dollars	2017		2016		2015	
Tubes						
- North America	2,362	48 %	1,265	31 %	2,538	39 %
- South America	982	20 %	1,032	26 %	1,858	29 %
- Europe	497	10 %	542	14 %	695	11 %
- Middle East & Africa	921	19 %	1,041	26 %	1,082	17 %
- Asia Pacific	204	4 %	136	3 %	272	4 %
Total Tubes	4,966	100%	4,015	100%	6,444	100%

North America

Sales to customers in North America accounted for 48% of our sales of tubular products and services in 2017, compared to 31% in 2016 and 39% in 2015.

We have significant sales and production facilities in each of the United States, Canada and Mexico, where we provide customers with an integrated product and service offering based on local production capabilities supported by our global industrial system. In the past two years, we have extended our integrated product and service model, which we call Rig Direct®, throughout North America, and in 2017, we started operations at our new seamless pipe mill at Bay City, Texas, which is strategically located to serve the Eagle Ford and Permian regions. Under Rig Direct®, we manage the whole supply chain from the mill to the rig for customers under long-term agreements, integrating mill production with customer drilling programs, reducing overall inventory levels and simplifying operational processes. We first introduced the Rig Direct® model to Pemex in Mexico in 1994, and since then we have supplied them with pipes on a just-in-time basis. At the end of 2017, we supplied the majority of our US and Canadian customers for OCTG products with Rig Direct® services.

Sales to our oil and gas customers in the United States and Canada are highly sensitive to oil prices and natural gas prices in that region. In the past few years, the drilling of productive shale gas and tight oil reserves, made possible by new drilling technology, has transformed drilling activity and oil and gas production in the United States and Canada. Following 25 years of declining production, U.S. crude oil production began to increase in 2009 and has risen significantly, from 5.6 million b/d in 2011 to 9.3 million b/d in 2017. Production of natural gas liquids, or NGLs, has also increased significantly in the past few years in North America. This rapid increase in production, however, contributed to an excess of supply in the global oil market and a consequent collapse in the price of oil, as other producers, notably Saudi Arabia, were for a time unwilling to adjust their production levels to balance the market. Natural gas production has also increased in the United States in four of the last five years, and in 2017 the United States became a net exporter of natural gas for the first time. In Canada, there has been a similar shift towards drilling of shale gas and tight oil reserves. The drop in oil prices since the second half of 2014, however, led to a drastic reduction in drilling activity throughout North America until the second half of 2016 when activity began to recover in the United States and Canada based on sharply lower production costs and an improvement in the outlook for oil prices following the decision by OPEC and other producers to cut production levels to facilitate market supply and demand rebalancing and reduce accumulated excess inventories. In 2017, drilling activity and oil and gas production recovered strongly in the United States and Canada.

Demand for, and our sales of, OCTG products in the United States and Canada plummeted in 2015 and 2016, to less than a quarter of the high level reached in 2014, affected by high inventory levels as well as collapsing drilling activity. In 2017, however, demand and sales recovered strongly as drilling activity increased and inventory levels returned to more normal levels.

Our sales in the United States are also affected by the level of investment of oil and gas companies in exploration and production in offshore projects. The blow-out at the Macondo well in the Gulf of Mexico and the subsequent spillage of substantial quantities of oil resulted in a moratorium that halted drilling activity. The drilling moratorium was lifted in October 2010, when new regulations affecting offshore exploration and development activities were announced. Since then, drilling activity recovered but, with the fall in oil prices, drilling activity has declined and major projects are being postponed.

Oil and gas drilling in Canada is subject to strong seasonality, with the peak drilling season in Western Canada being during the winter months when the ground is frozen. During the spring, as the ice melts, drilling activity is severely restricted by the difficulty of moving equipment in muddy terrain.

In Mexico, we have enjoyed a long and mutually beneficial relationship with Pemex, the Mexican state-owned oil company, and one of the world's largest crude oil and condensates producers. In 1994, we began supplying Pemex with Rig Direct® services. In early 2018, we renewed our JIT agreement with Pemex for a further five-year period.

At the end of 2013, Mexico reformed its constitution to permit increased private and foreign investment in the energy industry. Under the reforms, foreign and private investors are allowed to participate in profit and production sharing contracts and licenses and Pemex has been transformed into a state-owned production company without its previous monopoly on production. A new regulatory framework has been developed and contracts with foreign and private investors are gradually being awarded.

Following the decline in oil prices, drilling activity in Mexico and demand for our OCTG products has plummeted as the financial condition of Pemex has deteriorated and the impact of investments from the energy reform process in Mexico has yet to take effect. Drilling activity at Pemex remains at historically low levels and recovery is not anticipated before 2019.

South America

Sales to customers in South America accounted for 20% of our sales of tubular products and services in 2017, compared to 26% in 2016 and 29% in 2015.

Our largest market in South America is Argentina. We also have significant sales in Brazil and Colombia.

We have manufacturing subsidiaries in Argentina, Brazil and Colombia. Our seamless pipe manufacturing facility in Venezuela was nationalized in 2009.

Our sales in South America are sensitive to the international price of oil and its impact on the drilling activity of participants in the oil and gas sectors, as well as to general economic conditions in these countries. In addition, sales in Argentina, as well as export sales from our manufacturing facilities in Argentina, are affected by governmental actions and policies, such as the taxation of oil and gas exports, measures affecting gas prices in the domestic market, restrictions on transfers of currency abroad, mandatory repatriation of export revenues and other matters affecting the investment climate. Sales in Brazil are also affected by governmental actions and policies and their consequences, such as measures relating to the taxation and ownership of oil and gas production activities and the operations of Petrobras.

A principal component of our marketing strategy in South American markets is the establishment of long-term supply agreements and Rig Direct® services with national and international oil and gas companies operating in those markets.

In Argentina, we have a significant share of the market for OCTG products. We have longstanding business relationships with YPF S.A., or YPF, the Argentine state-controlled company, and with other operators in the oil and gas sector. We strengthened our relationship with YPF in 2013 through a long-term business alliance, which we renewed for an additional five years at the beginning of 2018, under which we provide Rig Direct® services with the objective of reducing YPF's operational costs as it aims to increase production through investments in Argentina's shale oil and gas reserves. In spite of the drop in international oil prices, drilling activity was sustained for most of 2015 and 2016 before falling significantly at the end of the year, when drilling in the southern part of the country came to a halt.

The change in the Argentine government that occurred in December 2015 is resulting in significant changes in domestic energy policies, including the gradual normalization of domestic gas and energy prices. The new policies are encouraging investment in the Vaca Muerta shale play, which is considered to be one of the world's most promising unconventional reserves. In 2017, Tecpetrol announced a significant investment to develop the Fortin de Piedra gas resource in Vaca Muerta.

In Brazil, we have a longstanding business relationship with Petrobras. We supply Petrobras with casing (including premium connections) and line pipe products, most of which are produced in our Brazilian welded pipe facility, for both offshore and onshore applications. With the development of Brazil's deepwater pre-salt complex, our mix of products sold in Brazil has evolved from one including mainly line pipe for onshore pipeline projects to one which includes large diameter conductor and surface casing and line pipe for use in deepwater applications. Consumption of OCTG products in Brazil stabilized in 2017, after falling in each of the three previous years as Petrobras has reduced its investments in response to budgetary constraints, concentrating on developing its most productive reserves in the pre-salt fields and halting other investments. Demand for line pipe for pipeline projects has declined to very low levels with only one major project implemented in the past four years. In response to market-opening measures and the attractiveness of the deepwater reserves, major oil companies are looking to increase their investments in Brazil and this could lead to increased activity in future years. Our sales in the local market are currently concentrated on large diameter conductor and surface casing with connectors for the pre-salt and other offshore developments.

In Colombia, we have established a leading position in the market for OCTG products since 2006, following our acquisition of Tubocaribe, a welded pipe manufacturing facility located in Cartagena. Although the market grew rapidly when oil prices were high as the country encouraged investment in its hydrocarbon industry and opened its national oil company to private investment, drilling activity in Colombia was deeply affected by the collapse in oil prices and fell to a very low level in 2016. However, activity recovered in 2017 in response to the increase in oil prices. Our principal customer in Colombia is Ecopetrol S.A., which we supply with Rig Direct® services and with whom we renewed a long-term agreement in the beginning of 2018. We have recently strengthened our industrial position in Colombia through investing in the installation of modern heat treatment, pipe threading and processing facilities which enables us to serve this market with more local industrial content and our customers with more efficient Rig Direct® services.

We have been present in the Venezuelan OCTG market for many years and we maintain ongoing business relationships with PDVSA and the joint venture operators in the oil and gas sector. In the past three years, our sales in Venezuela have been negatively affected as PDVSA delayed payments to suppliers. See Item 3.D. "Key Information – Risk Factors – Risks Relating to Our Business – Adverse economic or political conditions in the countries where we operate or sell our products and services may decrease our sales or disrupt our manufacturing operations, thereby adversely affecting our revenues, profitability and financial condition"; and note 31 "Nationalization of Venezuelan Subsidiaries" to our audited consolidated financial statements included in this annual report.

Europe

Sales to customers in Europe accounted for 10% of our sales of tubular products and services in 2017, compared to 14% in 2016 and 11% in 2015.

Our single largest country market in Europe is Italy. The market for steel pipes in Italy (as in much of the European Union) is affected by general industrial production trends, especially in the mechanical and automotive industry, and by investment in power generation, petrochemical and oil refining facilities. Sales to the mechanical and automotive industries and for HPI and power generation projects in Italy and the rest of Europe over the past three years have been affected by lower prices reflecting increased competitive pressures, but volumes have been relatively stable.

In Europe, we also have significant sales to the oil and gas sector, which has grown in recent years, with exploration activity taking place in new areas such as unconventional shale plays in Eastern Europe and offshore drilling in the Black Sea, the Eastern Mediterranean and the Barents Sea, together with ongoing investment in the more traditional areas of the North Sea, Romania, Turkey and Russia. Demand from these markets is affected by oil and gas prices in the international markets and their consequent impact on oil and gas drilling activities in these areas. In addition, U.S. and European sanctions are affecting demand for our premium pipe products in Russia and limited exploration success in unconventional shale plays in Eastern Europe has led international operators to cut back on their investments in this area.

Middle East and Africa

Sales to customers in the Middle East and Africa accounted for 19% of our sales of tubular products and services in 2017, compared to 26% in 2016 and 17% in 2015.

Our sales in the region remain sensitive to international prices of oil and gas and their impact on drilling activities as well as to the production policies pursued by OPEC, many of whose members are located in this region. In the past few years, oil and gas producing countries in the Middle East, led by Saudi Arabia, have increased investments to develop gas reserves to fuel regional gas-based industrial development, which have positively affected their consumption of premium OCTG products. Saudi Arabia, in particular, has shown strong growth in sour and high pressure gas field drilling activity. They have also maintained and, in some cases, increased investments to offset decline and add oil production capacity. In Africa, international oil companies increased investments in exploration and production in offshore projects in 2012 and 2013 but began to postpone or reduce their investment commitments in 2014 due to the high cost of offshore project developments and a lower success rate in exploration activity. Since 2015, following the oil price collapse, exploration activity has been sharply cut back and major project commitments have been postponed. The effect on demand was compounded by the high inventory levels held in the region.

In the past few years, uprisings affected drilling activity in countries such as Syria, Libya and Yemen and, in the case of Libya, the oil and gas industry was effectively shut down in 2011. In addition, in recent years, U.S. and E.U. sanctions have affected production and exports in Iran.

Our sales in the Middle East and Africa could be adversely affected by political and other events in the region, such as armed conflicts, terrorist attacks and social unrest, that could materially impact the operations of companies active in the region's oil and gas industry. Our sales in the region can also be affected by the levels of inventories held by the principal national oil companies in the region and their effect on purchasing requirements. For example, Saudi Aramco, after purchasing pipes in excess of its consumption requirements in 2013 and the first half of 2014, subsequently substantially reduced purchases during the second half of 2014 and throughout 2015, notwithstanding increased drilling activity, as it reduced inventory levels. In 2016 and 2017, purchasing has been more in line with consumption patterns.

Over the past three years, our sales in the region have been affected by the lack of offshore exploration and development activity in Africa, and the impact of increased competitive pressures on prices.

In addition, government policies promoting local content in oil and gas purchases in countries such as Saudi Arabia have encouraged investment in regional pipe producers, such as Jubail Energy Services Company (JESCO) and a subsidiary of ArcelorMittal. As these regional producers develop their capabilities they are taking an increasing share of the pipes supplied to Saudi Aramco and within the region.

Asia Pacific

Sales to customers in the Asia Pacific accounted for 4% of our sales of tubular products and services in 2017, compared to 3% in 2016 and 4% in 2015.

We have a significant presence in the region with local production facilities in Indonesia, China and Japan and, in recent years, we have established service centers in Australia and Thailand.

Sales to Indonesia and other markets in South East Asia and Oceania are mainly affected by the level of oil and gas drilling activity, particularly offshore drilling activity. The collapse in the price of oil has deeply affected drilling activity and our sales throughout the region, where drilling is mainly onshore. In 2016, however, we won a significant long-term agreement to provide pipes with Rig Direct® services in Thailand which has made Thailand our largest market in the region.

Our sales in China are concentrated on premium OCTG products used in oil and gas drilling activities. Over the past years, China has significantly reduced its imports of OCTG products as local producers compete ferociously in an oversupplied market. We continue, however, to seek new markets in niche applications and in 2016 we opened a components facility for processing pipes for use in airbags for automotives.

In Japan, our subsidiary, NKKTubes, competes against other domestic producers. The market for steel pipe products in Japan is mostly industrial and depends on general factors affecting domestic investment, including production activity.

Others

Our other products and services include sucker rods used in oil extraction activities, coiled tubes used in oil and gas extraction activities, industrial equipment of various specifications and for diverse applications, including liquid and gas storage equipment and sales of raw materials that exceed our internal requirements, and sales of energy to third parties. In January 2017, we sold our electrical conduit pipes business in the United States. Net sales of other products and services increased 16% in 2017 compared to 2016, mainly due to higher sales of sucker rods, coiled tubes and energy to third parties.

Competition

The global market for steel pipe products is highly competitive. Seamless steel pipe products, which are used extensively in the oil and gas industry particularly for high pressure, high stress and other complex applications, are produced in specialized mills using round steel billets and specially produced ingots. Welded steel pipe products are produced in mills which process steel coils and plates into steel pipes. Steel companies that manufacture steel coils and other steel products but do not operate specialized seamless steel mills are generally not competitors in the market for seamless steel pipe products, although they often produce welded steel pipes or sell steel coils and plates used to produce welded steel pipes.

The production of steel pipe products following the stringent requirements of major oil and gas companies requires the development of specific skills and significant investments in manufacturing facilities. By contrast, steel pipe products for standard applications can be produced in most seamless pipe mills worldwide and sometimes compete with welded pipe products for such applications including OCTG applications. Welded pipe, however, is not generally considered a satisfactory substitute for seamless steel pipe in high-pressure or high-stress applications.

Over the past decade, substantial investments have been made, especially in China but also in other regions around the world, to increase production capacity of seamless steel pipe products. Production capacity for more specialized product grades has also increased. With the downturn between 2014 and 2016 in the price of oil and demand for tubes for oil and gas drilling, the overcapacity in steel pipe and seamless steel pipe production worldwide has become acute, and now extends beyond commodity grades. The competitive environment has, as a result, become more intense, and we expect that this will continue for some time. Effective competitive differentiation will be a key factor for Tenaris.

Our principal competitors in steel pipe markets worldwide are described below.

Vallourec, a French company, has mills in Brazil, China, Germany and the United States. Vallourec has a strong presence in the European market for seamless pipes for industrial use and a significant market share in the international market with customers primarily in Europe, the United States, Brazil, China, the Middle East and Africa. Vallourec is an important competitor in the international OCTG market, particularly for high-value premium joint products, where it operates a technology partnership for VAM® premium connections with Nippon Steel & Sumitomo Metal Corporation, or NSSMC. Prior to the collapse in oil prices in 2014 to 2016, Vallourec increased its production capacity by building a new mill in Brazil jointly with NSSMC, which is aimed primarily at export markets and was commissioned in 2011, and a second seamless pipe rolling mill at its existing facility in Youngstown, Ohio, which began commercial production at the end of 2012. In addition to the construction of the new Youngstown mill, Vallourec has reinforced its positioning in the United States through the acquisition of three tubular businesses from Grant Prideco: Atlas Bradford® Premium Threading & Services, TCA® and Tube-Alloy. Vallourec has also strengthened its position in the Middle East through the acquisition of heat treatment and threading facilities in Saudi Arabia in 2011 and, in 2010, it concluded an agreement with a Chinese seamless steel producer, Tianda Oil Pipe Company, or Tianda, under which it began to distribute products from Tianda in markets outside China. In early 2016, in response to accumulating losses, Vallourec announced a $1 billion capital increase, more than half of which was provided by a French government fund and NSSMC, who each agreed to increase their equity participation to 15%. At the same time, an industrial restructuring program was announced under which Vallourec reduced capacity in Europe, closing its rolling mills in France, combined its operations in Brazil with that of the new mill held with NSSMC, acquired a majority position in Tianda and bought out the remaining minority interest, and strengthened its cooperation with NSSMC for the development and testing of premium connection products and technology.

Japanese players NSSMC and JFE together enjoy a significant share of the international market, having established strong positions in markets in the Far East and the Middle East. They are internationally recognized for their supply of high-alloy grade pipe products. In recent years, NSSMC has increased its capacity to serve international markets through the construction with Vallourec of a new seamless pipe mill in Brazil, and has further strengthened its ties with Vallourec through participating in Vallourec's capital increase and combining their respective Brazilian operations.

In recent years, TMK, a Russian company, has led consolidation of the Russian steel pipe industry, invested to modernize and expand its production capacity in Russia and expanded internationally through acquisitions into Eastern Europe and the United States where it acquired a significant position in the U.S. market through its acquisition of IPSCO's tubular operations comprising both seamless and welded pipe mills and the Ultra family of connections. In 2012, TMK opened a research and development center in Houston and has been expanding its capacity to produce premium connection products. TMK also expanded in the Middle East through the acquisition of a controlling interest in Gulf International Pipe Industry LLC, a welded pipe producer in Oman.

Over the past decade, Chinese producers have increased production capacity substantially and strongly increased their exports of steel pipe products around the world. Due to unfair trading practices, many countries, including the United States, the European Union, Canada, Mexico and Colombia, have imposed anti-dumping restrictions on Chinese imports to those regions. The largest Chinese producer of seamless steel pipes, TPCO, is currently building a new seamless pipe facility in the United States; heat treatment and pipe finishing facilities have been constructed and steelmaking and hot rolling facilities are currently under construction in Corpus Christi, Texas. Although producers from China compete primarily in the "commodity" sector of the market, some of these producers, including TPCO, have been upgrading their facilities and processes with the intention of entering into the market for more specialized products.

- The tubes and pipes business in the United States and Canada experienced a significant consolidation process several years ago. Following the acquisitions of Maverick and Hydril by Tenaris, US Steel Corporation acquired Lone Star Steel Technologies. In 2008, Evraz Group S.A. and TMK, two Russian companies, acquired IPSCO's Tubular division which has both seamless and welded mills in the United States and Canada. Evraz retained IPSCO's operations in Canada while TMK acquired IPSCO's operations in the United States, as mentioned above. More recently, however, many new players have built, or announced plans to build, pipe mills in the United States. These include, in addition to TPCO, Boomerang LLC, a company formed by a former Maverick executive that opened a welded pipe mill in Liberty, Texas, in 2010, Benteler, a European seamless pipe producer that built a new seamless pipe mill in Louisiana, which opened in September 2015, and OCT Pipe, LLC, a company building a seamless pipe mill with heat treatment and OCTG threading facilities in Norfolk, Nebraska. North American pipe producers are largely focused on supplying the U.S. and Canadian markets, where they have their production facilities.

- Korean welded pipe producers, who have a limited domestic market, have expanded capacity in recent years and targeted the U.S. market for standard applications. They have gained a relevant market position, despite the application of anti-dumping duties for unfair trading practices.

34

- Tubos Reunidos S.A. of Spain, Benteler A.G. of Germany and Voest Alpine AG of Austria each have a significant presence in the European market for seamless steel pipes for industrial applications, while the latter also has a relevant presence in the international OCTG market, and in 2016, Tubos Reunidos S.A. opened an OCTG threading facility targeting international markets. In 2006, ArcelorMittal created a tubes division through several acquisitions and has mills in North America, Eastern Europe, Venezuela, Algeria and South Africa and has built a seamless pipe mill in Saudi Arabia.

- In the Middle East, particularly in Saudi Arabia, which has implemented policies to encourage local production for its oil and gas industry, a number of pipe mills have been established including a seamless pipe mill built by Jubail Energy Services Company (JESCO), a company established with majority participation from a state-backed industrial development company, and the seamless pipe mill built by ArcelorMittal. These local players have been strengthening their capabilities and are taking an increasing share of the pipes supplied to Saudi Aramco as well as exporting to other countries in the Middle East and the rest of the world.

Producers of steel pipe products can maintain strong competitive positions in markets where they have their pipe manufacturing facilities due to logistical and other advantages that permit them to offer value-added services and maintain strong relationships with domestic customers, particularly in the oil and gas sectors. Our subsidiaries have established strong ties with major consumers of steel pipe products in their home markets, reinforced by Rig Direct® services, as discussed above.

Capital Expenditure Program

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

In 2017, in addition to capacity expansion in the United States, we focused on improving our finishing capabilities, mainly heat treatment and threading facilities, including premium products lines and investments at our R&D centers. The major highlights of our capital spending program during 2017 included:

- the construction of our new greenfield seamless facility in Bay City, Texas, in the United States, which was inaugurated in December 2017;

- the completion of the construction of a new state-of-the-art threading line for premium products and new heat treatment line at our Veracruz facility in Mexico;

- created logistic yards in Canada (Grande Prairie) and the United States (Midland and Oklahoma City);
- the beginning of the revamping and debottlenecking of the steel shop in Calarasi (Romania);
- the revamping of our heavy wall line pipe and coating capacity at our Pindamonhangaba mill in Brazil (Zohr Project);
- the increase in production capacity in our coupling shop in Colombia; *and*
- the beginning of the expansion of heat treatment capacity at our mill in Italy.

Capital expenditures in 2018 are expected to be lower than the level reached in 2017, mainly focus on enhancing automation at our industrial process, product differentiation, increasing local finishing capabilities, as well as enhancing plant's safety and minimizing environmental impact.

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

Raw Materials and Energy

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, DRI, hot briquetted iron, or HBI, pig iron and ferroalloys. In Argentina, we produce our own DRI from iron ore using natural gas as a reductant. Our integrated steelmaking operations consume significant quantities of electric energy, a significant portion of which we generate in our own facilities. Our welded steel pipe products are processed from purchased steel coils and plates. Although the weight of the different steelmaking raw materials and steel, vary among the different production facilities in our industrial system, depending on the specifications of the final products and other factors, on average steel scrap, pig iron, HBI and DRI represent approximately 20% of our steel pipe products' costs, while steel in the form of billets or coils represents approximately 15%, with direct energy accounting for approximately 5%.

The aforementioned inputs of raw material are subject to price volatility caused by supply, political and economic situations, financial variables and other unpredictable factors. For further information on price volatility, see Item 3.D. “Key Information – Risk Factors – Risks Relating to Our Industry – Increases in the cost of raw materials, energy and other costs, limitations or disruptions to the supply of raw materials and energy, and price mismatches between raw materials and our products may hurt our profitability.” The costs of steelmaking raw materials and of steel coils and plates increased during 2017 with high levels of volatility.

Steel scrap, pig iron and HBI

Steel scrap, pig iron and HBI for our steelmaking operations are sourced from local, regional and international sources. In Argentina, we produce our own DRI and source ferrous scrap domestically through a wholly owned scrap collecting and processing subsidiary. In Italy, we purchase pig iron and ferrous scrap from local and regional markets. In Mexico, we import our pig iron and HBI requirements and purchase scrap from domestic and international markets. In Romania, we source ferrous scrap from the domestic market.

International prices for steel scrap, pig iron and HBI can vary substantially in accordance with supply and demand conditions in the international steel industry. Overall costs for these materials increased in 2017, following steady increases in world steel prices. As a reference, prices for Scrap Shredded U.S. East Coast, published by CRU, averaged $218 per ton in 2016 and $284 per ton in 2017, reaching above $330 per ton at the beginning of 2018.

Iron ore

We consume iron ore, in the form of pellets and lump ore, for the production of DRI in Argentina. Our annual consumption of iron ore in Argentina during 2017 was close to 1 million tons, after a significant reduction in 2016 due to the reduction in steel production and temporary mill shut down. Iron ore is supplied from Brazil primarily by Vale S.A. Prices also showed high volatility during 2017 specially in the first semester when they peaked above $90 per ton and then dropped to approximately $55 per ton. As a reference, prices for Iron Ore IODEX 62% Fe (CFR North China), published by Platts, averaged $58 per metric ton in 2016 and $71 per metric ton in 2017.

Round steel bars

We purchase round steel bars and ingots for use in our seamless steel pipe facilities in Canada, Japan and Mexico.

In Japan, we purchase these materials from JFE, our partner in NKKTubes. These purchases are made under a supply arrangement pursuant to which the purchase price varies in relation to changes in the cost of production. As a result of their location within a larger production complex operated by the supplier, our operations in Japan are substantially dependent on these contracts for the supply of raw materials and energy. JFE uses imported iron ore, coal and ferroalloys as principal raw materials for producing steel bars at Keihin.

In Canada, we purchase some of these materials from Rio Tinto Fer et Titane, Inc., a Canadian producer of titanium dioxide and high purity iron. We also use steel bars produced in our integrated facilities in Romania, Italy, Mexico and Argentina for the remainder of our round steel bar requirements.

In Mexico, we have been sourcing steel bars from Ternium's Mexican facilities since 2011, under a long term contract that grants us, during an eight-year period, preferential right to purchase up to 250,000 tons of round steel bars per year.

Steel coils and plates

For the production of welded steel pipe products, we purchase steel coils and steel plates principally from domestic producers for processing into welded steel pipes. We have welded pipe operations in Argentina, Brazil, Canada, Colombia and the United States.

Steel coil market prices increased in 2017. As a reference, prices for hot rolled coils, HRC Midwest USA Mill, published by CRU, averaged $571 per ton in 2016 and $680 per ton in 2017, reaching $921 per ton in March 2018.

For our welded pipe operations in the United States, a significant part of our requirements for steel coils are supplied by Nucor Steel which is our principal supplier in the United States. Nucor Steel has a steel coil manufacturing facility in Hickman, Arkansas, near to our principal welded pipe facility in the United States. To secure a supply of steel coils for our U.S. facilities, in January 2018 we renewed a long-term purchase agreement with Nucor Steel which is due to expire at the end of 2020.

In Canada, we have long-term agreements with our main steel suppliers for our welded pipe operations with prices referenced to market levels in U.S. dollars (i.e., CRU HRC index). Among the suppliers is ArcelorMittal Dofasco, which has steel coil manufacturing facilities in Hamilton, Ontario. Additionally, we purchase steel on a spot basis from Essar Steel Algoma, which has steel coil manufacturing facilities in Sault Ste. Marie, Ontario.

We also purchase steel coils and plates for our welded pipe operations in South America (Colombia, Brazil and Argentina) principally from Usiminas and Gerdau in Brazil, from Ternium Argentina S.A., or Ternium Argentina, a subsidiary of Ternium S.A. in Argentina, and from Ternium's facilities in Mexico. In addition, in Brazil we also source plates and coils from international suppliers when not produced domestically.

Energy

We consume substantial quantities of electric energy at our electric steel shops in Argentina, Italy, Mexico and Romania. In Argentina, we have a 160 megawatt power generation plant located at San Nicolás, approximately 150 kilometers from Campana, which together with a smaller thermo-electric power generating plant located within the Campana facility, is sufficient to supply the requirements of our steelmaking facility at Campana. In Dalmine, Italy, we have a 120 megawatt power generation facility, which is designed to have sufficient capacity to meet most of the electric power requirements of the operations at peak load, and excess power is sold to third-party consumers and heat is sold for district heating. In Mexico, our electric power requirements are mainly furnished by Techgen, a natural gas-fired combined cycle electric power plant in the Pesquería area of the State of Nuevo León, while a small portion of our power requirements are furnished by the Mexican government-owned *Comisión Federal de Electricidad*, or the Federal Electric Power Commission, and in Romania, we source power from the local market.

We consume substantial volumes of natural gas in Argentina, particularly in the generation of DRI and to operate our power generation facilities. YPF and Metroenergía are our principal suppliers of natural gas in Argentina. The balance of our natural gas requirements is supplied by several companies, including Tecpetrol, a subsidiary of San Faustin, which supplies us under market conditions and according to local regulations.

We have transportation capacity agreements with Transportadora de Gas del Norte S.A., or TGN, a company in which San Faustin holds a significant but non-controlling interest, corresponding to capacity of 1,000,000 cubic meters per day until April 2027. In order to meet our transportation requirements for natural gas above volumes contracted with TGN, we also have agreements with Gas Natural Ban S.A., or Gasban, for a maximum interruptible transportation capacity corresponding to approximately 970,000 cubic meters per day. For the final transportation phase, we have a supply contract with Gasban that will be in force until April 2019.

In addition to the normal amount of gas consumed at our Italian plants, we also consume substantial quantities of natural gas in connection with the operation of our power generation facility in Italy. Our natural gas requirements in

Italy are supplied by various suppliers.

Our costs for electric energy and natural gas vary from country to country. While in the last few years energy costs showed an upward trend, in the period 2015-2017 costs declined following the collapse in oil prices. However, energy costs in Argentina did not decline and over the course of the last several years, demand for electricity has increased substantially, resulting in shortages of electricity to residential and industrial users during periods of high demand. Similarly, the cost of natural gas for industrial use in Argentina increased significantly during the last years driven by increased local demand, changes in governmental policies and higher gas prices. The demand for natural gas continues to outpace supply, therefore supply to industrial users has often been restricted during the Argentine winter. See Item 3.D. "Key Information – Risk Factors – Risks Relating to Our Industry – Increases in the cost of raw materials, energy and other costs, limitations or disruptions to the supply of raw materials and energy; and price mismatches between raw materials and our products may hurt our profitability" and Item 3.D. "Key Information – Risk Factors – Risks Relating to Our Business – Adverse economic or political conditions in the countries where we operate or sell our products and services may decrease our sales or disrupt our manufacturing operations, thereby adversely affecting our revenues, profitability and financial condition."

Ferroalloys

For each of our steel shops we coordinate our purchases of ferroalloys worldwide. The international costs of ferroalloys can vary substantially, within a short period. Our average costs of ferroalloys increased in 2017 compared to 2016.

Product Quality Standards

Our steel pipes are manufactured in accordance with the specifications of API, the American Society for Testing and Materials, or ASTM; the International Standardization Organization, or ISO, and the Japan Industrial Standards, or JIS, among other standards. The products must also satisfy our proprietary standards as well as our customers' requirements. We maintain an extensive quality assurance and control program to ensure that our products continue to satisfy proprietary and industry standards and are competitive from a product quality standpoint with products offered by our competitors.

We currently maintain, for all our pipe manufacturing facilities, the Quality Management System Certification ISO 9001:2008 granted by Lloyd's Register Quality Assurance, and the API product licenses granted by API-U.S., which are requirements for selling to the major oil and gas companies, which have rigorous quality standards. Our quality management system, based on the ISO 9001 and API Q1 specifications assures that products comply with customer requirements from the acquisition of raw materials to the delivery of the final product, and are designed to ensure the reliability and improvement of both the product and the processes associated with the manufacturing operations.

All our mills involved in the manufacturing of material for the automotive market are certified according to the standard ISO/TS 16949 by Lloyd's Register Quality Assurance.

Research and Development

Research and development, or R&D, of new products and processes to meet the increasingly stringent requirements of our customers is an important aspect of our business.

R&D activities are carried out primarily at our specialized research facilities located at Campana in Argentina, at Veracruz in Mexico, at Dalmine in Italy, and at the product testing facilities of NKKTubes in Japan. We strive to engage some of the world's leading industrial research institutions to solve the problems posed by the complexities of oil and gas projects with innovative applications. In addition, our global technical sales team is made up of experienced engineers who work with our customers to identify solutions for each particular oil and gas drilling environment.

Product R&D currently being undertaken are focused on the increasingly challenging energy markets and include:

- proprietary premium joint products including Dopeless® technology;
- heavy-wall deepwater line pipe, risers and welding technology;
- proprietary steels;
- tubes and components for the car industry and mechanical applications;
- tubes for boilers;
- welded pipes for oil and gas and other applications;
- sucker rods;
- coiled tubing; *and*
- coatings.

In addition to R&D aimed at new or improved products, we continuously study opportunities to optimize our manufacturing processes. Recent projects in this area include modeling of rolling and finishing process and the development of different process controls, with the goal of improving product quality and productivity at our facilities.

We seek to protect our innovation, through the use of patents, trade secrets, trademarks and other intellectual property tools that allow us to differentiate ourselves from our competitors.

We spent $64 million in R&D in 2017, compared to $69 million in 2016 and $89 million in 2015.

Environmental Regulation

We are subject to a wide range of local, provincial and national laws, regulations, permit requirements and decrees relating to the protection of human health and the environment, including laws and regulations relating to hazardous materials and radioactive materials and environmental protection governing air emissions, water discharges and waste management. Laws and regulations protecting the environment have become increasingly complex and more stringent and expensive to implement in recent years. International environmental requirements vary from one jurisdiction to another.

The ultimate impact of complying with existing laws and regulations is not always clearly known or determinable since regulations under some of these laws are not yet effective or are undergoing revision. The expenditures necessary to remain in compliance with these laws and regulations, including site or other remediation costs, or costs incurred from potential environmental liabilities, could have a material adverse effect on our financial condition and profitability. While we incur and will continue to incur, in expenditures to comply with applicable laws and regulations, there always remains a risk that environmental incidents or accidents may occur that may negatively affect our reputation or our operations.

Compliance with applicable environmental laws and regulations is a significant factor in our business. We have not been subject to any material penalty for any material environmental violation in the last five years, and we are not aware of any current material legal or administrative proceedings pending against us with respect to environmental matters which could have an adverse material impact on our financial condition or results of operations.

Insurance

We carry property damage, general liability and certain other insurance coverage in line with industry practice. Our current general liability coverage includes third party, employers, sudden and accidental seepage and pollution and product liability, up to a limit of $300 million. Our current property insurance has indemnification caps up to $250 million for direct damage, depending on the different plants; and a deductible of $100 million.

Disclosure Pursuant to Section 13(r) of the Exchange Act

Tenaris

The Iran Threat Reduction and Syria Human Rights Act of 2012, or ITRA, created a new subsection (r) in Section 13 of the U.S. Securities Exchange Act of 1934, as amended, or the Exchange Act, which requires a reporting issuer to provide disclosure if the issuer or any of its affiliates engaged in certain enumerated activities relating to Iran, including activities involving the Government of Iran. Tenaris is providing the following disclosure pursuant to Section 13(r).

Previous pending payments:

- In January 2010, Tenaris Global Services S.A., or TGS, a Tenaris subsidiary, entered into an agreement with the National Iranian Drilling Company, or NIDC, a company controlled by the Government of Iran, for a total value of EUR9.4 million (approximately $10.1 million). TGS made all deliveries and collected most of its account receivables under the NIDC agreement prior to 2012. In 2012, TGS collected an amount of EUR0.8 million (approximately $0.8 million) for products delivered to NIDC in prior years. As of December 31, 2017, an outstanding balance of EUR0.2 million (approximately $0.2 million) was still due to TGS. Tenaris expects to collect all or part of such outstanding amounts during 2018. During April 2017, TGS performed its outstanding contractual obligation to allow technical visits to the mills of certain Tenaris non-U.S. Affiliates by NIDC experts at TGS's cost, in compliance with applicable U.S. and other international export control and economic sanctions laws and regulations.

- TGS is also a party to an April 2011 agreement with Global Procurement General Trading FZE, or Global FZE, a company incorporated in United Arab Emirates, for the provision of OCTG for an amount of AED16.5 million (approximately $4.5 million). TGS has been informed by Global FZE that the end users of the products delivered under this agreement are Oil Industries Engineering and Construction Group and Pars Oil and Gas Company, which are controlled by the Government of Iran. In 2012, TGS delivered products under the Global FZE agreement for a total value of AED16.3 million (approximately $4.4 million), and collected a total amount of AED15.4 million (approximately $4.2 million). All sales of goods and services to Iran under the agreement with Global FZE have ceased. As of December 31, 2017, an outstanding balance of AED0.9 million (approximately $0.2 million) was still due to Tenaris. Tenaris expects to collect all or part of the outstanding amounts during 2018.

Tenaris recorded no sales revenue or profit in 2017 related to the activities described above.

2017 transactions and related activities:

Following the partial lifting and suspension of several international sanctions and restrictions against Iran in mid-January 2016 (in particular, the lifting of most U.S. secondary sanctions against such country under the Joint Comprehensive Plan of Action or 'JCPOA' entered into by the P5+1 and the Islamic Republic of Iran), Tenaris's non-U.S. affiliates considered commercial opportunities in Iran during the year ended December 31, 2017 and engaged in certain transactions or dealings involving Iran or nationals of such country (as more particularly described below). Tenaris intends to continue exploring commercial opportunities in Iran in compliance with applicable U.S. and other international export control and economic sanctions laws and regulations.

- In 2017, TGS participated in several tenders issued by the National Iranian Oil Company, or NIOC, and its subsidiaries for the supply of OCTG Casing, Tubing, Line Pipe and Accessories for oil and gas projects in Iran. Moreover, during 2017 TGS and other non-U.S. affiliates of Tenaris have issued offers to NIOC and other Iranian companies for the provision of goods and/or services. Except as otherwise specified below, none of such tenders or offers were accepted as of December 31, 2017. Tenaris intends to continue participating in tenders and issuing offers to NIOC, its subsidiaries or other Iranian companies through TGS or other of its non-U.S. affiliates, in compliance with applicable law.

- In October 2016, TGS entered into an agreement for the provision of technical field service assistance to Petropars Ltd, or Petropars, for its project located in the Salman gas field in Iran, for a total value of EUR0.04 million (approximately $0.04 million). TGS has been informed that Petropars operates the Salman project pursuant to a service contract with Iranian Offshore Oil Company, a subsidiary of NIOC. All services required to be performed by Tenaris for the benefit of Petropars were completed during October 2016. As of December 31, 2017, EUR0.03 million (approximately $0.04 million) has been collected. TGS intends to collect all or part of the outstanding amounts during 2018.

- In May 2016, TGS was awarded by Toos Payvand Co., a Tehran-based company, a spot purchase order for carbon steel pipes for the Isfahan Refinery project, for a total value of EUR3.5 million (approximately $3.7 million). TGS delivered most of the items requested under such purchase order and collected most sums due thereunder during 2017. As of December 31, 2017, a small portion of the items remained undelivered and an outstanding amount of EUR0.06 million (approximately $0.07 million) was pending collection. TGS intends to collect all or part of the outstanding amounts and to perform its outstanding obligations under the above-referred purchase order during 2018.

- In November 2017, Dalmine booked a purchase order with Buhlmann RFS Gmbh (a distributor located in Germany) for the provision of Line Pipes for use in downstream activities in Iran for Esfahan Oil Refinery Project (end user NIOC), for a total value of EUR0.6 million (approximately $0.7 million). No invoices were issued during 2017 and, therefore, no revenues were recorded for such order as of December 31, 2017. The requested material is under production and delivery is expected for 2018. Dalmine intends to perform its undischarged obligations and collect all or part of the outstanding amounts during 2018.

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During 2017, Dalmine booked four orders with Commerciale Tubi Acciaio (a distributor located in Italy) for the provision of line pipes for use in downstream activities in Iran, Kangan Project, for a total value of EUR0.9 million (approximately $1.1 million). As of December 31, 2017, a portion of these orders was delivered and payment thereof collected, with EUR0.5 million (approximately $0.6 million) outstanding as of December 31, 2017. Materials not invoiced during 2017 are under production and delivery is expected for 2018. Dalmine intends to perform its undischarged obligations and collect all or part of the outstanding amounts during 2018.

- In July 2017, TGS was awarded a spot order from Azar Ab Industries Co., for seamless tubes for manufacturing of Industrial Boiler for Esfahan Refinery in Iran, for a total value of approximately EUR1.2 million (approximately $1.4 million), of which EUR0.2 million (approximately $0.2 million) were collected as of December 31, 2017. TGS expects to continue performing its undischarged obligations and to collect all or part of the outstanding amounts under the above order during 2018.

- During 2017, Dalmine was awarded some spot orders from Mapna International FZE, for carbon steel and low alloyed pipes and tubes delivered to Mapna Boiler and Equipment Engineering and Manufacturing Co., or Mapna, for the manufacturing of boilers for conventional power plants in Iran for a total value of approximately EUR2 million (approximately $2.4 million), of which EUR0.3 million (approximately $0.4 million) were collected as of December 31, 2017. Moreover, during 2017 certain employees of Mapna visited the manufacturing mills of Dalmine and Silcotub (located in Italy and Romania, respectively) for the purposes of inspecting the material under production for the above-referred orders. Dalmine expects to continue performing its undischarged obligations and to collect all or part of the outstanding amounts under the above orders during 2018.

- In December 2016, TGS entered into a distribution agreement with "Fanavaran Energy Part Co. (Part Technologist of Energy Company)", or PTEC, a private Iranian company, for pipes used in downstream activities, such as refineries, petrochemical and gas processing. On December 21, 2016, PTEC placed one purchase order for a total value of EUR2.2 million (approximately $2.3 million), which was shipped and collected during 2017. Furthermore, in August 2017, PTEC placed another purchase order for a total value of EUR1.5 million (approximately $1.8 million). TGS made no shipments and recorded no revenues in connection with the August 2017 order for the year ended December 31, 2017. TGS intends to fulfill its undischarged obligations and collect all or part of the outstanding amounts under the August 2017 order during 2018.

- During the course of the year ended December 31, 2017, TGS entered into several confidentiality agreements for the purpose of sharing information with potential Iranian business partners, some of which were companies controlled by the Government of Iran, with the aim of exploring commercial opportunities relating to the supply of goods and services to NIOC or its subsidiaries. No revenues were attributable to these activities. TGS, as well as other Tenaris non-U.S. subsidiaries, intend to continue to explore commercial opportunities with such potential Iranian business partners in compliance with applicable law.

- In June 2017, TGS renewed its Agency Agreement (initially entered into in June 2016) with Industrials SGC Ltd., or SGC, (a U.K.-based company) for an additional one-year period (i.e. now expiring on June 12, 2018). The purpose of such agreement is to promote and market certain products manufactured by non-U.S. affiliates of Tenaris in the territory of Iran. As of December 31, 2017, no revenues or net profits were attributable to the Agency Agreement. TGS intends to continue promoting and marketing Tenaris products in Iran under the Agency Agreement with SGC.

- During 2017, certain non-U.S. employees of some non-U.S. affiliates of Tenaris visited Iran in order to discuss potential commercial opportunities with Iranian public and private entities. Moreover, during May 2017, certain of the above-referred employees attended trade shows in Iran. These included an oil & gas industry trade show (the Iran Oil Show) organized by NIOC. No fees were paid to NIOC or other Iranian state-owned companies in connection with such activities, other than routine amounts such as travel-related taxes and fees. No revenues were attributable to the above-referred activities. Certain of Tenaris's non-U.S. affiliates intend to continue visiting Iran in order to develop further commercial opportunities in the country in compliance with applicable law.

Tenaris's total sales revenue for 2017 with regard to the foregoing transactions amounted to approximately $6.8 million. The estimated net profits from such transactions, after internal cost allocation and taxes, were in the range of $2.6 million.

Tenaris believes that its activities concerning Iran do not violate any U.S. or foreign law, and has procedures in place designed to ensure that such activities comply with all applicable U.S. and other international export control and economic sanctions laws and regulations.

Tenaris's Affiliates

Pursuant to Section 13(r) of the Exchange Act, Tenaris is also required to disclose whether any of its affiliates have engaged in certain Iran-related activities and transactions. Tenova S.p.A., or Tenova, an Italian supplier of equipment for the mining and the steelmaking industry, as well as Techint – Compagnia Tecnica Internazionale S.p.A., or Techint CTI; an Italian provider of engineering, procurement, construction, operation and management services mainly in the oil & gas, refining, petrochemical, power, industrial and infrastructure sectors, are indirectly controlled by San Faustin and, accordingly, are deemed "affiliates" of Tenaris, as that term is defined in Exchange Act Rule 12b-2.

In response to our inquiry, Tenova informed us that:

- During 2017, Tenova or its subsidiaries supplied equipment and performed engineering services for the steel-making and raw material handling industries to companies believed by Tenova to be subsidiaries of development agencies of the Government of Iran. Tenova or its subsidiaries also issued offers to Iranian counterparties, none of which were accepted as of December 31, 2017. Moreover, certain employees of Tenova visited Iran during 2017 in order to discuss prospective commercial opportunities with potential Iranian business partners.

- None of the activities performed is connected to the activities described in Sections 5(a) or (b) of the Iran Sanctions Act of 1996, or Section 105A(b)(2) of the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010, nor were any such activities performed in favor of persons whose property and interests in property are blocked pursuant to Executive Order 13224 (terrorists and terrorist supporters) or 13382 (weapons of mass destruction proliferators and supporters).

- Tenova's Iran-related contracts that were signed before 2016, are still currently being performed; any future contract between Tenova or its subsidiaries and customers controlled by the Government of Iran will continue to be made in compliance with all laws applicable to Tenova or its relevant subsidiaries.

Tenova informed us that its total sales revenue for 2017 with regard to the foregoing transactions amounted to $12.4 million, compared to $14.7 million in 2016. Tenova also estimated that its net profits from such transactions, after internal cost allocation and taxes, were in the range of $1.8 million.

In response to our inquiry, Techint CTI informed us that:

- In December 18, 2017, Techint CTI entered into an agreement for the provision of technical assistance services (e.g. feasibility studies, technology selection) with Ardabil Petrochemical Co. for an estimated total amount of EUR0.25 million (approximately $0.3 million). As of December 31, 2017, the performance of certain services remained outstanding, as the contract became effective only in February 2018 and payment thereof has not yet been collected. Techint CTI intends to collect all or part of the outstanding amounts during 2018.

- During 2017 Techint CTI entered into additional ancillary documents (such as confidentiality agreements, memorandums of understanding and letters of intent) for the purpose of sharing information, among others, with the above-referred Iranian customer and others. No revenues were attributable to these specific activities, other than the ones described in the above items. Techint CTI intends to continue to explore commercial opportunities with potential Iranian business partners in compliance with applicable law.

- Moreover, during 2017 certain non-U.S. employees of Techint CTI visited Iran in connection with the above-referred agreements and in order to discuss potential commercial opportunities with other Iranian public and private entities. No fees were paid in connection with such activities, other than routine amounts such as travel-related taxes and fees. No revenues were attributable to the above-referred activities. Techint CTI intends to continue visiting Iran in order to develop further commercial opportunities in the country in compliance with applicable law.

Techint CTI informed us that it recorded no revenues for the above activities as of December 31, 2017.

C. Organizational Structure and Subsidiaries

We conduct all our operations through subsidiaries. The following table shows the significant operating subsidiaries of the Company and its direct and indirect ownership in each subsidiary as of December 31, 2017, 2016 and 2015.

Company	Country of Organization	Main activity	Percentage of ownership		
			2017	2016	2015
ALGOMA TUBES INC.	Canada	Manufacturing of seamless steel pipes	100%	100%	100%
CONFAB INDUSTRIAL S.A.	Brazil	Manufacturing of welded steel pipes and capital goods	100%	100%	100%
DALMINE S.p.A.	Italy	Manufacturing of seamless steel pipes	100%	100%	99%
EXIROS B.V.	Netherlands	Procurement of raw materials and other products or services	50%	50%	50%
HYDRIL COMPANY	USA	Manufacture and marketing of premium connections	100%	100%	100%
MAVERICK TUBE CORPORATION	USA	Manufacturing of welded steel pipes	100%	100%	100%
METALMECANICA S.A.	Argentina	Manufacturing of sucker rods	100%	100%	100%
NKKTUBES	Japan	Manufacturing of seamless steel pipes	51%	51%	51%
P.T. SEAMLESS PIPE INDONESIA JAYA	Indonesia	Manufacturing of seamless steel products	89%	77%	77%
PRUDENTIAL STEEL LTD.	Canada	Manufacturing of welded steel pipes	100%	100%	100%
S.C. SILCOTUB S.A.	Romania	Manufacturing of seamless steel pipes	100%	100%	100%
SIAT SOCIEDAD ANONIMA	Argentina	Manufacturing of welded and seamless steel pipes	100%	100%	100%
SIDERCA S.A.I.C.	Argentina	Manufacturing of seamless steel pipes	100%	100%	100%
TENARIS BAY CITY, INC.	USA	Manufacturing of seamless steel pipes	100%	100%	100%
TENARIS COILED TUBES LLC	USA	Manufacturing of coiled tubing	100%	100%	100%
TENARIS CONNECTIONS B.V.	Netherlands	Development, management and licensing of intellectual property	100%	100%	100%
TENARIS FINANCIAL SERVICES S.A.	Uruguay	Financial company	100%	100%	100%
TENARIS GLOBAL SERVICES S.A.	Uruguay	Holding company and marketing of steel products	100%	100%	100%
TENARIS TUBOCARIBE LTDA.	Colombia	Manufacturing of welded and seamless steel pipes	100%	100%	100%
TUBOS DE ACERO DE MEXICO S.A.	Mexico	Manufacturing of seamless steel pipes	100%	100%	100%

Other Investments

Ternium

We have a significant investment in Ternium, a Luxembourg company controlled by San Faustin, whose securities are listed on the NYSE. As of December 31, 2017, the Company held 11.46% of Ternium's share capital (including treasury shares).

The Company is a party to a shareholders' agreement with Techint Holdings S.àr.l., or Techint Holdings, a wholly owned subsidiary of San Faustin, pursuant to which Techint Holdings will take all actions in its power to cause one of the members of Ternium's board of directors to be nominated by the Company and any directors nominated by the Company only to be removed pursuant to written instructions by the Company. The Company and Techint Holdings also agreed to cause any vacancies on Ternium's board of directors to be filled with new directors nominated by either the Company or Techint Holdings, as applicable. The shareholders' agreement will remain in effect as long as each of the parties holds at least 5% of the shares of Ternium or until it is terminated by either the Company or Techint Holdings pursuant to its terms. Carlos Condorelli was nominated as a director of Ternium pursuant to this shareholders' agreement.

Usiminas

On January 16, 2012, Confab, acquired 5.0% of the shares with voting rights and 2.5% of the total share capital in Usiminas, a leading Brazilian producer of high quality flat steel products used in the energy, automotive and other industries. The acquisition was part of a larger transaction pursuant to which Confab and Ternium's subsidiaries Ternium Investments S.àr.l., Ternium Argentina S.A. and Prosid Investments S.A., or the Ternium entities, formed the so-called T/T Group and joined Usiminas' existing control group through the acquisition of ordinary shares representing 27.7% of Usiminas' total voting capital and 13.8% of Usiminas' total share capital. In addition, the T/T Group entered into a shareholders' agreement with the NSSMC Group (formed by Nippon Steel & Sumitomo Metal Corporation, or NSSMC, Mitsubishi Corporation do Brasil S.A. and Metal One Corporation) and Previdência Usiminas, an Usiminas employee fund, governing the parties' rights within the Usiminas control group.

Following the subscription in 2016 to 1.3 million Usiminas preferred shares and 11.5 million Usiminas ordinary shares by Confab, as of December 31, 2017, Confab owned 36.5 million ordinary shares and 1.3 million preferred shares of Usiminas, representing 5.2% of Usiminas' total voting capital and 3.1% of Usiminas' total share capital.

In 2014, a conflict arose within the T/T Group and NSSMC with respect to the governance of Usiminas, including with respect to the rules applicable to the appointment of senior managers, the application of the shareholders' agreement in matters involving fiduciary duties, and generally with respect to Usiminas' business strategy.

On February 8, 2018, the dispute with NSSMC was resolved, and on April 10, 2018, the T/T Group entities (including Confab), the NSSMC Group entities and Previdência Usiminas entered into a new shareholders' agreement for Usiminas, amending and restating the previously existing shareholders' agreement, or the New SHA. Usiminas' control group now holds, in the aggregate, 483.6 million ordinary shares bound to the New SHA, representing approximately 68.6% of Usiminas' voting capital, with the T/T Group holding approximately 47.1% of the total shares held by the control group (39.5% corresponding to the Ternium entities and the other 7.6% corresponding to Confab); the NSSMC Group holding approximately 45.9% of the total shares held by the control group; and Previdência Usiminas holding the remaining 7% of the total shares held by the control group.

The New SHA reflects the agreed-upon corporate governance rules for Usiminas, including, among others, an alternation mechanism for the nomination of each of the chief executive officer and the chairman of the board of directors, as well as a mechanism for the nomination of other members of Usiminas' executive board. The New SHA also incorporates an exit mechanism consisting of a buy-and-sell procedure, exercisable at any time during the term of the New SHA after the fourth-and-a-half-year anniversary from the coming election of Usiminas' executive board in May 2018. Such exit mechanism shall apply with respect to shares held by the NSSMC Group and the T/T Group, and would allow either Ternium (on behalf of the T/T Group) or NSSMC to purchase all or a majority of the Usiminas shares held by the other shareholder group.

In connection with the execution of the New SHA, the Ternium entities and Confab amended and restated their separate shareholders' agreement governing their respective rights and obligations as members of the T/T Group to include provisions relating to the exit mechanism and generally to conform such separate shareholders' agreement to the other provisions of the New SHA.

Techgen

Techgen is a joint venture company owned 48% by Ternium, 30% by Tecpetrol International S.A. and 22% by Tenaris. Techgen built a natural gas-fired combined cycle electric power plant in the Pesquería area of the State of Nuevo León, Mexico. The plant became fully operational in December 2016 producing and providing energy to Tenaris's and Ternium's Mexican facilities.

D. Property, Plants and Equipment

For a description of our property, plants and equipment, please see B. "– Business Overview – Production Process and Facilities" and "– Business Overview – Capital Expenditure Program."

Item 4A. Unresolved Staff Comments

None.

Item 5. Operating and Financial Review and Prospects

The following discussion and analysis of our financial condition and results of operations are based on, and should be read in conjunction with, our audited consolidated financial statements and the related notes included elsewhere in this annual report. This discussion and analysis presents our financial condition and results of operations on a consolidated basis. We prepare our consolidated financial statements in conformity with IFRS. IFRS differ in certain significant respects from U.S. GAAP.

Certain information contained in this discussion and analysis and presented elsewhere in this annual report, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. See “Cautionary Statement Concerning Forward-Looking Statements.” In evaluating this discussion and analysis, you should specifically consider the various risk factors identified in Item 3.D. “Key Information – Risk Factors”, other risk factors identified elsewhere in this annual report and other factors that could cause results to differ materially from those expressed in such forward-looking statements.

Overview

We are a leading global manufacturer and supplier of steel pipe products and related services for the energy industry and other industries.

We are a leading global manufacturer and supplier of steel pipe products and related services for the world’s energy industry as well as for other industrial applications. Our customers include most of the world’s leading oil and gas companies as well as engineering companies engaged in constructing oil and gas gathering and processing and power facilities. We operate an integrated worldwide network of steel pipe manufacturing, research, finishing and service facilities with industrial operations in the Americas, Europe, Asia and Africa and a direct presence in most major oil and gas markets.

Our main source of revenue is the sale of products and services to the oil and gas industry, and the level of such sales is sensitive to international oil and gas prices and their impact on drilling activities.

Demand for our products and services from the global oil and gas industry, particularly for tubular products and services used in drilling operations, represents a substantial majority of our total sales. Our sales, therefore, depend on the condition of the oil and gas industry and our customers’ willingness to invest capital in oil and gas exploration and development as well as in associated downstream processing activities. The level of these expenditures is sensitive to oil and gas prices as well as the oil and gas industry’s view of such prices in the future. Crude oil prices fell from over $100 per barrel in June 2014 to less than $30 per barrel in February 2016, before recovering to around $60 per barrel at the end of 2017. Such price increase was mainly due to an agreement between OPEC and some non-OPEC countries to cut production in order to accelerate the rebalancing of supply and demand and to reduce excess inventory levels. North American natural gas prices (Henry Hub), which were around $4 per million BTU in 2014, also briefly fell below $2 per million BTU at the beginning of 2016, before recovering to average levels of $3 per million BTU during 2017.

In 2017, worldwide drilling activity, as represented in the number of active drilling rigs published by Baker Hughes, a GE company, increased 27% compared to the level of 2016, with the increase concentrated in North America. In the United States the rig count in 2017 increased by 72%, with an average of 875 active rigs. Drilling activity in the United States rose strongly in the first half of the year before stabilizing above 900 active rigs in the second half and has since begun to increase again at the beginning of 2018. In Canada, the rig count in 2017 increased by 62% compared with 2016, while in the rest of the world, it declined 1%.

Prior to the most recent downturn in oil prices, a growing proportion of exploration and production spending by oil and gas companies had been directed at offshore, deep drilling and non-conventional drilling operations in which high-value tubular products, including special steel grades and premium connections, are usually specified. The success, however, of shale drilling operators, with their inherently short investment cycles, in adapting to lower oil and gas costs and increasing production, has led to a slowdown in new developments of complex offshore projects with long investment lead times in a context of low and more volatile oil prices, consequently affecting the level of product differentiation.

Our business is highly competitive.

The global market for steel pipes is highly competitive, with the primary competitive factors being price, quality, service and technology. We sell our products in a large number of countries worldwide and compete primarily against European and Japanese producers in most markets outside North America. In the United States and Canada, we compete against a wide range of local and foreign producers. Over the past decade, substantial investments have been made, especially in China but also in other regions around the world, to increase production capacity of seamless steel pipe products. Production capacity for more specialized product grades has also increased. With the downturn between 2014 and 2016 in the price of oil and demand for tubes for oil and gas drilling, the overcapacity in steel pipe and seamless steel pipe production worldwide has become acute, and now extends beyond commodity grades. The competitive environment has, as a result, become more intense, and we expect that this will continue for some time. Effective competitive differentiation will be a key factor for Tenaris.

In addition, there is an increased risk of unfairly traded steel pipe imports in markets in which we produce and sell our products. In September 2014, the United States imposed anti-dumping duties on OCTG imports from various countries, including South Korea. Despite the duties imposed, imports from South Korea continue at a very high level. As a result, U.S. domestic producers have requested successive reviews of South Korea's exports, which are ongoing. At the same time South Korean producers have appealed the duties imposed. Similarly, in Canada, the Canada Border Services Agency introduced anti-dumping duties on OCTG imports from South Korea and other countries in April 2015.

In addition to anti-dumping duties, a 25% tariff on steel articles imported from all countries was imposed under Section 232 of the Trade Expansion Act of 1962. However, the U.S. administration announced that imports from Argentina, Australia, Brazil, Canada the European Union, Mexico and South Korea, will be temporarily exempted.

Our production costs are sensitive to prices of steelmaking raw materials and other steel products.

We purchase substantial quantities of steelmaking raw materials, including ferrous steel scrap, direct reduced iron (DRI), pig iron, iron ore and ferroalloys, for use in the production of our seamless pipe products. In addition, we purchase substantial quantities of steel coils and plates for use in the production of our welded pipe products. Our production costs, therefore, are sensitive to prices of steelmaking raw materials and certain steel products, which reflect supply and demand factors in the global steel industry and in the countries where we have our manufacturing facilities.

The costs of steelmaking raw materials and of steel coils and plates increased during 2017. As a reference, prices for hot rolled coils, HRC Midwest USA Mill, published by CRU, averaged $680 per ton in 2017 compared to $571 per ton in 2016.

Sale of North American Electric Conduit Business to Nucor

On January 19, 2017, we completed the sale of our steel electric conduit business in North America, known as Republic Conduit, to Nucor Corporation for a total consideration of $328 million, net of transaction costs. The after-tax gain from this sale amounted to $90 million. The result of the sale as well as those results relative to the conduit business for the 19 days of January 2017 and the financial years ended December 31, 2016 and 2015 were classified as a discontinued operation.

Summary of results

In 2017, our net sales rose steadily through the year, rising 23% compared to 2016, with the fourth quarter up 52% compared to the fourth quarter of 2016. While sales rose strongly during the year to Rig Direct® customers in United States, Canada, Colombia and Thailand as well as in Saudi Arabia, there were significant declines in sales of line pipe in Brazil, shipments of OCTG to other national oil company customers in the Middle East and sales for offshore projects in sub-Saharan Africa. EBITDA rose 58% year on year, with margins recovering on higher volumes and better absorption of fixed costs. Shareholders' net income rose strongly to $545 million, benefitting from higher operating income, a good return on our investment in Ternium, a tax benefit due to the reduction in tax rates in Argentina and the United States, and a gain on the sale of our Republic Conduit business at the beginning of the year.

Our net cash position declined during the year to $680 million at December 31, 2017, compared to $1.4 billion at December 31, 2016, as we completed construction of our Bay City mill, built up working capital to support our growth in sales and maintained dividend payments.

Outlook

As we enter 2018, shale drilling activity in the United States and Canada, which had fallen slightly in the fourth quarter of 2017, has resumed growth. In the rest of the world, more projects are moving forward and conditions in markets like the Middle East and the North Sea have been improving but any recovery in 2018 will be gradual. In Latin America, drilling activity in Colombia and in the Vaca Muerta shale play in Argentina has been picking up. In Mexico, however, despite further positive results of the energy reform program, a significant recovery in activity remains unlikely this year. Growth in global OCTG demand, following a 40% increase in 2017, will be more modest in 2018 and concentrated in the major markets of United States, China, Russia and the Middle East.

We expect our sales in 2018 to increase in most regions and product lines compared to 2017, with strong year on year growth in each quarter. Raw material costs have risen significantly in the last few months and we expect that there will be a compensating increase in prices as demand gradually increases.

The recent U.S. governmental ruling to implement Section 232 tariffs at a rate of 25% on steel imports could create a structural change in our most dynamic market. To the extent, however, that it is aimed at reducing imports, it should be positive for us given our extensive domestic capacity. However, there is considerable uncertainty surrounding the eventual scope and impact of these tariffs.

Functional and presentation currency

The functional and presentation currency of the Company is the U.S. dollar. The U.S. dollar is the currency that best reflects the economic substance of the underlying events and circumstances relevant to Tenaris's global operations.

Except for the Brazilian and Italian subsidiaries whose functional currencies are their local currencies, Tenaris determined that the functional currency of its other subsidiaries is the U.S. dollar, based on the following principal considerations:

- Sales are mainly negotiated, denominated and settled in U.S. dollars. If priced in a currency other than the U.S. dollar, the sales price considers exposure to fluctuation in the exchange rate versus the U.S. dollar;
- Prices of their critical raw materials and inputs are priced and settled in U.S. dollars;
- Transaction and operational environment and the cash flow of these operations have the U.S. dollars as reference currency;
- Significant level of integration of the local operations within Tenaris's international global distribution network;
- Net financial assets and liabilities are mainly received and maintained in U.S. dollars; *and*
- The exchange rate of certain legal currencies has long been affected by recurring and severe economic crises.

Critical Accounting Estimates

This discussion and analysis of our financial condition and results of operations are based on our audited consolidated financial statements, which have been prepared in accordance with IFRS. IFRS differs in certain significant respects from U.S. GAAP.

The preparation of our audited consolidated financial statements and related disclosures in conformity with IFRS requires us to make estimates and assumptions that might affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities and the reported amounts of revenue and expenses. Management evaluates its accounting estimates and assumptions, including those related to: impairment of long-lived tangible and intangible assets; assets useful lives; deferred income tax; obsolescence of inventory; doubtful accounts and loss contingencies, and revises them when appropriate. Management bases its estimates on historical experience and on various other assumptions it believes to be reasonable under the circumstances. These estimates form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Although management believes that these estimates and assumptions are reasonable, they are based upon information available at the time they are made. Actual results may differ significantly from these estimates under different assumptions or conditions.

Our most critical accounting estimates are those that are most important to the portrayal of our financial condition and results of operations, and which require us to make our most difficult and subjective judgments, often as a result of the need to make estimates of matters that are inherently uncertain. Our most critical accounting estimates and judgments are the following:

Accounting for business combinations

To account for our business combinations we use the acquisition method, which requires the acquired assets and assumed liabilities to be recorded at their respective fair value as of the acquisition date. The determination of fair values of assets acquired, liabilities and contingent liabilities assumed and determination of useful lives, requires us to make estimates and use valuation techniques, including the use of independent valuators, when market value is not readily available. The excess of the aggregate of the consideration transferred and the amount of any non-controlling interest in the acquiree over the fair value of the identifiable net assets acquired is recorded as goodwill. If this is less than the fair value of the net assets of the subsidiary acquired, the difference is recognized directly in the income statement.

Impairment and recoverability of goodwill and other assets

Long-lived assets including identifiable intangible assets are reviewed for impairment at the lowest level for which there are separately identifiable cash flows (cash generating units, or CGU). Most of Tenaris's principal subsidiaries that constitute a CGU have a single main production facility and, accordingly, each such subsidiary represents the lowest level of asset aggregation that generates largely independent cash inflows.

Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Intangible assets with indefinite useful life, including goodwill, are subject to at least an annual impairment test.

In assessing whether there is any indication that a CGU may be impaired, external and internal sources of information are analyzed. Material facts and circumstances specifically considered in the analysis usually include the discount rate used in Tenaris's cash flow projections and the business condition in terms of competitive and economic factors, such as the cost of raw materials, oil and gas prices, capital expenditure programs for Tenaris's customers and the evolution of the rig count.

An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of the asset's value in use and fair value less costs to sell. Any impairment loss is allocated to reduce the carrying amount of the assets of the CGU in the following order:

a) first, to reduce the carrying amount of any goodwill allocated to the CGU; and

b) then, to the other assets of the unit (group of units) pro rata on the basis of the carrying amount of each asset in the unit (group of units), with a view to avoid reducing the carrying amount of the asset below the highest of its fair value less cost to sell, its value in use or zero.

The value in use of each CGU is determined on the basis of the present value of net future cash flows which would be generated by such CGU. Tenaris uses cash flow projections for a five-year period with a terminal value calculated based on perpetuity and appropriate discount rates.

For purposes of calculating the fair value less costs of disposal Tenaris uses the estimated value of future cash flows that a market participant could generate from the corresponding CGU.

Management judgment is required to estimate discounted future cash flows. Actual cash flows and values could vary significantly from the forecasted future cash flows and related values derived using discounting techniques.

Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal at each reporting date.

In 2015, we recorded an impairment charge of $400 million on the goodwill of our welded pipe assets in the United States, reflecting the decline in oil prices and their impact on drilling activity and the demand outlook for welded pipe products in the United States. No impairment charge was recorded in 2016 or 2017.

2015 Impairment on non-consolidated companies – Usinas Siderúrgicas de Minas Gerais S.A. (Usiminas)

The Company reviews periodically the recoverability of its investment in Usiminas. To determine the recoverable value, the Company estimates the value in use of the investment by calculating the present value of the expected cash flows or its fair value less costs of disposal.

In 2015 the Company assessed the recoverable value of its investment in Usiminas based on the December 2015 average market price of Usiminas ordinary shares and impaired its investment by $29 million.

Usiminas' financial restructuring process, which started in April 2016 with a capital increase, was completed by the end of August 2017. The completion of this process, together with the increase in the share price since June 2016 and the improvement in business conditions, may lead to an increase in the carrying value of the investment in Usiminas in future periods.

See note 12 "*Investments in non-consolidated companies – b) Usiminas S.A.",* to our audited consolidated financial statements included in this annual report. For more information on the investment in Usiminas, see "Item 4. Information on the Company – C. Organizational Structure and Subsidiaries – Other Investments – Usiminas."

Reassessment of Property, Plant and Equipment Assets Useful Lives

Property, plant and equipment are stated at directly attributable historical acquisition or construction cost less accumulated depreciation and impairment losses, if any. Property, plant and equipment acquired through acquisitions accounted for as business combinations are valued initially at fair market value of the assets acquired. Depreciation of the cost of the asset (apart from land, which is not depreciated) to its residual value over its estimated useful life, is done using the straight-line method. The depreciation method is reviewed at each year end. Estimating useful lives for depreciation is particularly difficult as the service lives of assets are also impacted by maintenance and changes in technology, and our ability to adapt technological innovation to the existing asset base. In accordance with IAS 16 "Property, Plant and Equipment", the depreciation method, the residual value and the useful life of an asset must be reviewed at least at each financial year-end, and, if expectations differ from previous estimates, the change must be treated as a change in an accounting estimate. Management's re-estimation of asset useful lives performed in accordance with IAS 16 did not materially affect depreciation expense for 2017. However, if management's estimates prove incorrect, the carrying value of plant and equipment and its useful lives may be required to be reduced from amounts currently recorded. Any such reductions may materially affect asset values and results of operations.

Reassessment of Useful Lives of Customer Relationships

In accordance with IFRS 3"Business combinations" and IAS 38 "Intangible assets", Tenaris has recognized the value of customer relationships separately from goodwill attributable to the acquisition of Maverick and Hydril groups. Customer relationships acquired in a business combination are recognized at fair value at the acquisition date, have a finite useful life and are carried at cost less accumulated amortization. Amortization is calculated using the straight line method over the expected life of approximately 14 years for Maverick and 10 years for Hydril. In 2015 the Company reviewed the useful life of Prudential's customer relationships, related to Maverick's acquisition, and decided to reduce the remaining amortization period from 5 years to 2 years, ending in December 2017. As of December 2017, the residual values of Maverick's customer relationships amount to $193 million and the residual useful life is 3 years, while Hydril's customer relationships is fully amortized.

Allowance for Obsolescence of Supplies and Spare Parts and Slow-Moving Inventory

We write down our inventory for estimated obsolescence or unmarketable inventory equal to the difference between the cost of inventory and the net realizable value taking into consideration assumptions about future demand and market conditions. If actual market conditions are less favorable than those projected by management, additional inventory write-downs may be required.

In relation to finished goods, we establish an allowance for obsolete or slow-moving inventory based on management's analysis of product aging. For this purpose, stocks of finished goods produced by us, more than one year prior to the reporting date are valued at their estimated recoverable value. In addition, we establish an allowance for obsolete or slow-moving supplies and spare parts, based on management's analysis of such items to be used as intended and the consideration of their potential obsolescence due to technological changes, aging and consumption patterns.

Historically, losses due to obsolescence and scrapping of inventory have been within expectations and the allowances established. If, however, circumstances were to materially change, such as significant changes related to the technology used in the mills, management's estimates of the recoverability of the value of aged inventories could be materially affected. In this case, our results of operations, financial condition and net worth could be materially and adversely affected.

Allowances for Doubtful Accounts and Customer Claims

Management estimates the ultimate collectability of accounts receivable. We maintain allowances for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. If the financial condition of our customers were to deteriorate, negatively impacting their ability to make payments, additional allowances may be required.

Trade account receivables are analyzed on a regular basis and when we become aware of a customer's inability to meet its financial commitments to us, the value of the receivable is reduced through a charge to an allowance for doubtful accounts. We also record a charge to the allowance for doubtful accounts upon receipt of customer claims in connection with sales that management estimates are unlikely to be collected in full. In addition, our allowance for doubtful accounts is adjusted periodically in accordance with the aging of overdue accounts. For this purpose, trade accounts receivable overdue by more than 180 days which are not covered by a credit collateral, guarantee, insurance or similar surety, are provisioned.

Historically, losses from uncollectible accounts receivables have been low and within the allowances established. If, however, circumstances were to materially change, such as higher than expected defaults or an unexpected material adverse change in a major customer's ability to meet its financial obligation to us, management's estimates of the recoverability of amounts due could be materially reduced. In this case, our results of operations, financial condition, net worth and cash flows could be materially and adversely affected.

Deferred income tax

Deferred income tax is recognized applying the liability method on temporary differences arising between the tax basis of assets and liabilities and their carrying amounts in the financial statements. The principal temporary differences arise from fair value adjustments of assets acquired in business combinations, the effect of currency translation on depreciable fixed assets and inventories, depreciation on property, plant and equipment, valuation of inventories and provisions for pension plans. Deferred tax assets are also recognized for net operating loss carry-forwards. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the time period when the asset is realized or the liability is settled, based on tax laws that have been enacted or substantively enacted at the reporting date.

Deferred tax assets are recognized to the extent that it is probable that future taxable income will be available against which the temporary differences can be utilized. At the end of each reporting period, Tenaris reassesses unrecognized deferred tax assets. Tenaris recognizes a previously unrecognized deferred tax asset to the extent that it has become probable that future taxable income will allow the deferred tax asset to be recovered.

Deferred tax liabilities and assets are not recognized for temporary differences between the carrying amount and tax basis of investments in foreign operations where the company is able to control the timing of the reversal of the temporary differences and it is probable that the differences will not reverse in the foreseeable future.

Contingencies

We are from time to time subject to various claims, lawsuits and other legal proceedings, including customer claims, in which third parties are seeking payment for alleged damages, reimbursement for losses or indemnity. Management with the assistance of legal counsel periodically reviews the status of each significant matter and assesses potential financial exposure. Our potential liability with respect to such claims, lawsuits and other legal proceedings cannot be estimated with certainty.

Some of these claims, lawsuits and other legal proceedings involve highly complex issues, and often these issues are subject to substantial uncertainties and, therefore, the probability of loss and an estimation of damages are difficult to ascertain. Accordingly, with respect to a large portion of such claims, lawsuits and other legal proceedings Tenaris is unable to make a reliable estimate of the expected financial effect that will result from ultimate resolution of the proceeding. In those cases, Tenaris has not accrued a provision for the potential outcome of these cases. If a potential loss from a claim, lawsuit or other proceeding is considered probable and the amount can be reasonably estimated, a provision is recorded. Accruals for loss contingencies reflect a reasonable estimate of the losses to be incurred based on information available to management as of the date of preparation of the financial statements, and take into consideration litigation and settlement strategies. In a limited number of ongoing cases, Tenaris was able to make a reliable estimate of the expected loss or range of probable loss and has accrued a provision for such loss, but believes that publication of this information on a case-by-case basis would seriously prejudice Tenaris's position in the ongoing legal proceedings or in any related settlement discussions. Accordingly, in these cases, the Company has disclosed information with respect to the nature of the contingency, but has not disclosed its estimate of the range of potential loss.

These estimates are primarily constructed with the assistance of legal counsel, and management believes that the aggregate provisions recorded for potential losses in the consolidated financial statements are adequate based upon currently available information. However, if management's estimates prove incorrect, current reserves could be inadequate and we could incur a charge to earnings which could have a material adverse effect on our results of operations, financial condition, net worth and cash flows. As the scope of liabilities becomes better defined, there may be changes in the estimates of future costs which could have a material adverse effect on our results of operations, financial condition, net worth and cash flows.

A. Results of Operations

The following discussion and analysis of our financial condition and results of operations are based on our audited consolidated financial statements included elsewhere in this annual report. Accordingly, this discussion and analysis present our financial condition and results of operations on a consolidated basis. See "Presentation of Certain Financial and Other Information - Accounting Principles" and "*II. Accounting Policies A. Basis of presentation*" and "*B. Group accounting*" to our audited consolidated financial statements included in this annual report. The following discussion should be read in conjunction with our audited consolidated financial statements and the related notes included in this annual report.

	For the year ended December 31,		
Thousands of U.S. dollars (except number of shares and per share amounts)	2017	2016	2015
Selected consolidated income statement data			
Continuing operations			
Net sales	5,288,504	4,293,592	6,903,123
Cost of sales	(3,685,057)	(3,165,684)	(4,747,760)
Gross profit	1,603,447	1,127,908	2,155,363
Selling, general and administrative expenses	(1,270,016)	(1,196,929)	(1,593,597)
Other operating income (expenses), net [1]	1,157	9,964	(395,971)
Operating income (loss)	334,588	(59,057)	165,795
Finance income			