

Silcotub mill, with more than 30 years of history in the Romanian tube and pipe industry, became part of Tenaris in 2004. Fully integrated into Tenaris global industrial system, counting on a strong knowledge base and modern equipments, the Romanian facility is becoming one of the company's key centers for the power generation business.

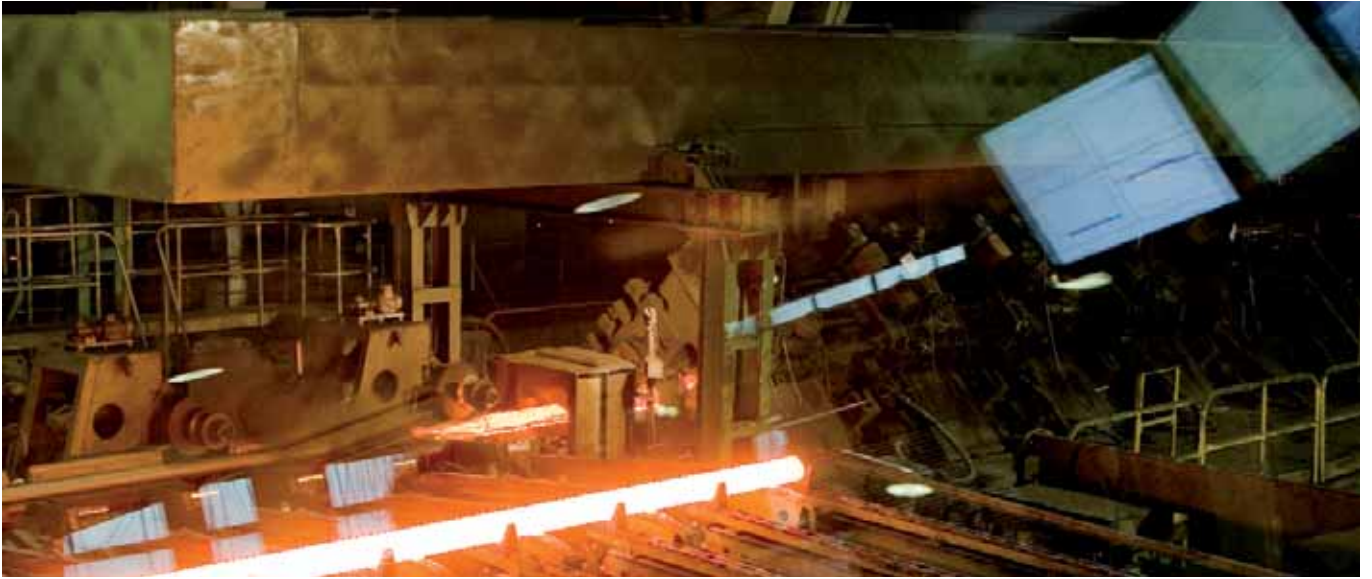
The investments amounting over 150 million USD implemented into Tenaris' operations in Romania, aims at increasing the level of automation in the control of the production processes and quality tests, aligning product quality standards, enhancing operating efficiency, setting up high added value products, designing the logistics, while taking care of health and safety of the people and environmental protection aspects.

Production in TenarisSilcotub mill complies with the highest quality standards in force (for more information about company certification please visit the Tenaris site: <http://www.tenaris.com/en/QHSE/QualityCertifications.aspx>).





*10* Reasons  
for choosing  
TenarisSilcotub



**1 Fully integrated production process**  
 Direct management and control of all production phases: from definition of the steel chemical composition, to steelmaking, hot rolling / cold drawing, heat treatment, finishing, non-destructive tests through to finished product allows full traceability whilst ensuring consistent product quality.

**2 High end products**  
 TenarisSilcotub provides a complete tube range in special steel grades for all power generation applications (HRSG, Boilers, Heat Exchangers, Nuclear, IGCC, Renewable, CCS).  
 In particular for HRSG manufacturers looking for longer tubes to save welding time and cost, we can obtain, thanks to our Free Floating Mandrel Mill, long hollows that enable us to produce long length tubes. Furthermore, in the integrated finishing lines, tubes undergo further operations to fulfil customer's requirements. The recent 50 million USD investment is aiming at integrating the rolling line with a new intermediary gas furnace and setting up a finishing line specially dedicated to boiler tubes.

**3 Automated process control**  
 TenarisSilcotub has implemented a high level of automatic control of its production processes, based on the measurement of the field variables and mathematical models. Automatization concerns:

- Furnace management to control the temperature of the billet inside the rotary furnace.
- Process control where the parameters for regulating the rolling process are recorded and proposed automatically to the operators to reduce the process variability.
- In-line continuous measurement of wall thickness.
- The protective atmosphere of ELTI furnace allows pipes to reach uniform temperatures and therefore high uniformity of metallurgical and mechanical characteristics and at the same time avoids formation of oxide scale on the tube surface.
- Ultrasonic controls for the more sophisticated products, according to the customer's specification or to the most common international standards.



## 4 Guaranteed quality

Investments of over 15 million USD were made in recent years to guarantee product quality. Our Quality Management System is certified according to ISO 9001:2008 standard. TenarisSilcotub is an approved supplier for major boilermakers such as Alstom Power, Mitsubishi Heavy Industries, Babcock Power, L&T-MHI Boilers Pvt Ltd, among others. Furthermore, our products for the power generation segment are certified according to PED, TÜV AD2000 and IBR.

Thanks to our dedicated integrated informative systems, we are able to handle all processes in a transparent and consistent way to guarantee full traceability and fast response time.

We are equipped with state of the art laboratory facilities and testing equipments that perform chemical analysis, mechanical tests (tensile, hardness, flattening, flaring, flange) and metallographic analysis over 100% of the production. For tubes used in power generation, tests to withstand high temperature, impact tests and micro structural analysis are carried out.

Our highly sensitive NDT equipment allows us to guarantee the integrity of our products. Furthermore, we can perform ultrasonic tests for added value products, in accordance with customer's specifications and to the most demanding international standards.

## 5 Lower customer's total cost of ownership

By collaborating since an early stage in the identification of the best material for each portion of the power plant, ensuring competitive total cost and fixed project pricing options up to production and dedicated supply chain manager, we can help boiler manufacturers eliminating additional costs during construction by minimizing risk and improving performance.

## 6 Continuous improvements through best practice

Thanks to dedicated teams, a knowledge sharing program of best operative practices within the global industrial system and integrated IT systems, we are implementing best practices at a company level. This has allowed us to improve product quality and compliance,



by reducing defects rate, increasing delivery performance, constantly focusing on safety.

The implemented practices are constantly monitored to ensure they are conforming to specific procedures and to allow identification of improvement areas. Furthermore, continuous improvement groups, involving employees in all areas and at all levels of the organization are committed to identifying and implementing improvements to processes, resulting in better product quality, enhanced safety and efficiency.

## 7 Attention to sustainability

Energy efficiency and environmental care are constant components of our activity. In this sense, a dedicated team is working to rationalize energy consumption reducing the environmental impact of our industrial activities, through a lower level of CO<sub>2</sub> emissions. Investments of about 3 million USD were done in the last years to minimize our impact on the environment.

TenarisSilcotub is the first company in the Romanian steel industry that has been certified by the Energy Institute within the European Commission and that has received the Motor Challenge Award, in April 2011.

**8 Committed, highly trained personnel**  
Our employees' commitment and the investments in their continuous training and professional development are key factors to maintaining the level of excellence. TenarisUniversity is the internal training school created to integrate, align and share the knowledge within all Tenaris companies. The trainings, conceived by company experts, partner universities and specialized institutes, are structured to accompany employees' career development, through classroom training and e-learning, combining theory with practice.

A dedicated curriculum is assigned to each job category, including training on Industrial, Commercial, Administration and Finance, IT, Management and Technical aspects, aiming to increase employees' knowledge and skills.



The annual training plan for the personnel working in the plant includes over 120 training courses on different aspects from production processes, quality, safety, equipments, NDT to IT systems, working instructions and computer skills.

TenarisSilcotub provides around 120,000 training hours every year for its employees.

## 9 High level of compliance

Our on time delivery indicator, measuring the number of items delivered on time to customers, has had an excellent evolution in the recent years. Starting from a level of 86% the indicator has gradually improved, reaching a level of 92% in 2009 - 2010.

The promise ready for shipment indicator, representing the number of items produced in time, increased in the recent years from 75% to an excellent value of 94% in 2009 - 2010, a figure which is particularly remarkable considering the increased product complexity and mix. Thanks to the integration of our mills dedicated to serve the power generation sector (in Japan, Mexico, Argentina, Italy) we can ensure fast deliveries close to customer's sites.

## 10 Increased commercial efficiency through an integrated IT system

TenarisSilcotub is the first seamless pipe mill in Tenaris that implemented SAP system for commercial and logistic processes, that allowed us to increase commercial efficiency in managing customer agreements and services, improve planning and process control, foster accuracy in delivery performance, reducing response time.