

Building Solutions



## Tenaris

Tenaris is the new name for what was formerly the DST alliance and represents 8 established manufacturers of steel tubes: AlgomaTubes, Confab, Dalmine, NKKTubes, Siat, Siderca, Tamsa and Tavsä.

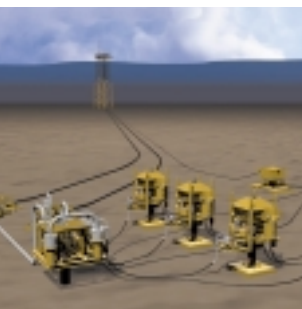
With a combined production capacity of three million tons of seamless and 850,000 tons of welded steel tubes, annual sales of 2.4 billion dollars, and 13,000 employees in five continents, Tenaris is a leading supplier of tubular goods and services to the global energy industry.

## Tenaris Pipeline Services Building Solutions

To provide integrated solutions for your pipeline project, at Tenaris we have developed new services in addition to our traditional offering of quality tubular products. These services are designed to offer customers a complete end to end service, delivering a finished product ready for installation.



Tenaris can provide the technical expertise and assistance to develop the most effective Line Pipe specification



Tenaris can offer complete tubular packages which include: seamless and welded Line Pipe, additional tubular services and accessories



Tenaris can give you a dedicated Project Manager to coordinate activity, from the moment we receive your order right through to final delivery, to ensure that you receive the finished product on time and to specification

Tenaris specializes in producing high performance Line Pipe for Deepwater Projects



## Technical Services

### Line Pipe Design Support

Tenaris offers its customers a wealth of technical experience and knowledge to facilitate and enhance the development of product specifications and material selection.

Our product experts and technical engineers, located around the world, are on hand to share technical information with customers.

We have extensive weldability and special testing databases which we can share with customers and are also available for consultation on-line through our Pipeline Services Portal.

### Tailor - Made Solutions

Because deepwater and offshore pipeline installation is particularly demanding, Tenaris offers a Tailor-Made service whereby we can develop a product to suit specific needs, customizing features such as chemical compositions, mechanical properties and dimensional tolerances (ID). Tenaris also designs and manufactures tailor-made mother pipes for bends.

The product engineering departments in our mills, supported by both their own investigations and R&D institutions in Argentina and Italy, perform the necessary tests and trials to develop a product with the required characteristics that can include:

- Low hardness variations because of a homogenous microstructure throughout the wall thickness
- Restricted tolerances on inside and outside diameters
- Outstanding resistance in corrosive environments
- Effective performance of previously strain-aged material in mechanical and corrosion tests
- Excellent welding characteristics
- Strain Based Design (HT/HP, Reeling, Deepwater)

# Accessory & Service Procurement



Tenaris recognizes the additional labor and stress involved in the contracting and application of pipe accessories. Not to mention the work involved in coordinating a number of 3rd party suppliers. Tenaris can take over that responsibility on the customers behalf by subcontracting internationally recognized tubular services suppliers. Tenaris currently offers:

## External Coating

- Anti-corrosion
- Negative Buoyancy
- Thermal Insulation
- Anti-abrasive
- Internal Flow Lining

## Internal Coating

- Anti-corrosion

## Bends

- Including Mother Pipe Design, Manufacturing & Coating

## Buckle Arrestors

## Anode Pads

- Manufacturing & Installation

## Anode Installation

## Clad Pipe

## Double Jointing

# Project Coordination & Supply Chain Management

## The Tenaris Project Manager

From the moment an order is placed we can provide customers with their own Tenaris Project Manager. The Tenaris Project Manager acts as a single, proactive communication channel throughout the duration of the project.

Once Tenaris has subcontracted the additional tubular accessories & services required, the Project Manager controls that entire supply chain. Your Project Manager resolves any issues that may occur and regularly contacts you with updates and status reports. The Tenaris Project Manager works for you guaranteeing the delivery of your entire package on time and according to specification.

## Adding Value

The combination of our worldwide logistics & manufacturing network, and the large volumes of material moved by the 8 Tenaris Mills every year (over 2 million tons in seamless alone), gives the Project Manager the capacity and capability required to coordinate and deliver on time even the most challenging projects.

In addition, the close proximity of coaters to our principal mills means that we can optimize programming schedules, overlap pipe manufacturing with coating application and therefore produce the finished product quicker. That way we can reduce average lead times and have more flexibility to carry out fast-track projects.



[www.tenaris.com/pipeline](http://www.tenaris.com/pipeline)

## On-Line Services

Tenaris has developed a unique B2B portal dedicated to the Pipeline Industry which provides additional technical and commercial support to customers. The portal currently includes:

### Tenaris Tracking

This Internet tracking system gives both the customer and the Project Manager 24hr access to order status information and shipping documentation.

### Discussion Rooms

These on-line discussion forums focus on the industry's most current issues and give Tenaris, customers and research bodies the opportunity to discuss pipeline topics and brainstorm line pipe design-related issues.

### Weldability Database

Customers can access extensive data related to the weldability tests and procedures performed by Tenaris for recent projects.



### The Project Center (Under Construction)

This on-line electronic workspace gives both the customer and the Project Manager access to all project-related documents and information. It allows the Project Manager and customer to hold virtual meetings, chat, view videos, transfer documents and manage agendas.

### Technical Communities

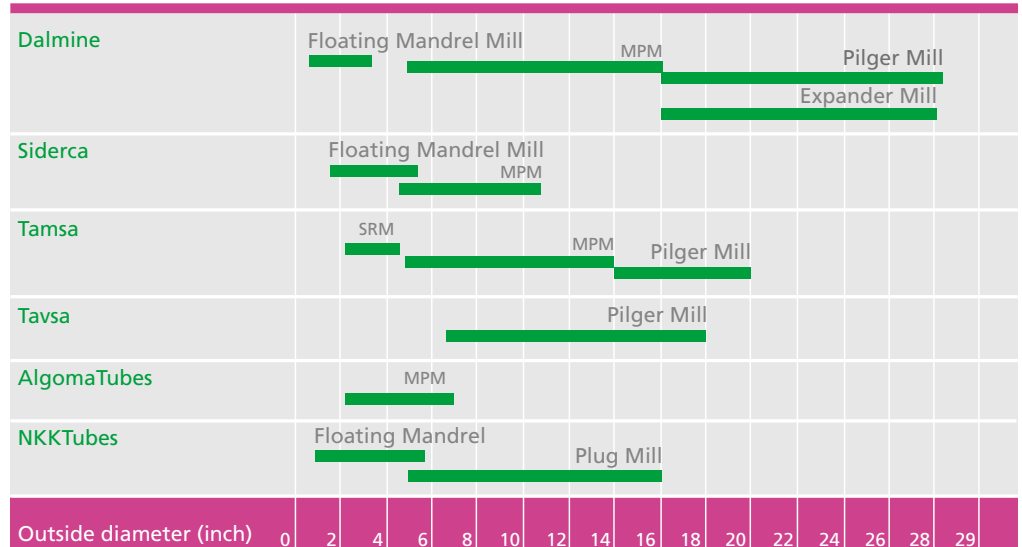
These interactive spaces allow Line Pipe technicians, purchasing and project managers to access the Tenaris applications and information relevant to their job (including Request for Quotation, Product Catalogues, Project List, etc) and discuss Pipeline issues on-line.



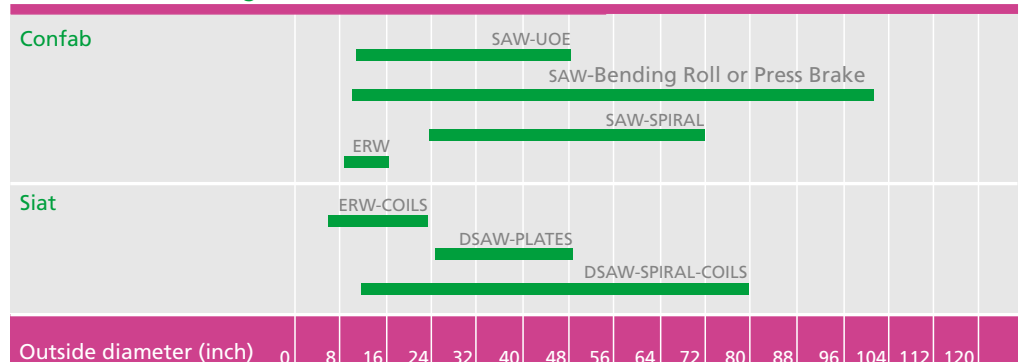
# Product Range and Properties

For both onshore and offshore pipelines Tenaris manufactures a complete range of seamless and welded Line Pipe for use under the most demanding conditions: HT/HP, high collapse, arctic and sour. All Tenaris products are manufactured according to API, ISO, ASTM, EN, EEMUA, DIN, and DNV rules as well as other recognized international standards.

## Seamless Product Range



## Welded Product Range



## Quality Assurance

Our 8 mills are all API, Q1 and ISO 9001 certified and work under an integrated program of total quality assurance.

Properties	Offshore service	Arctic service	Sour service
Minimum Toughness	80 J at 14°F (-10°C)	45 J at -58°F (-50°C)	80 J at 14°F (-10°C)
CVN 10 X 10 mm transverse	90% min shear area	60% min shear area	90% min shear area
Yield / Tensile ratio (max)	0.87-0.90	0.87-0.90	0.87-0.90
Hardness (max)	260 Hv10	260 Hv10	240 Hv10
Carbon Equivalent IIW *	0.40	0.40	0.38
PCM*	0.22	0.22	0.21
Sulphur*	0.008	0.005	0.003
Phosphorus*	0.015	0.015	0.015
(Nb + V + Ti) *	0.12	0.12	0.12

\*Maximum weight percentage

Note: These requirements are subject to confirmation by Tenaris on a case by case basis.



# Project Highlights

These are just a few of the projects where Tenaris has recently supplied material.

End user	Contractor	Project name	Country	OD (mm)	Length (Km)
ADMA	Technip	Zakum Gas Injection	UAE	168.3 / 273.1	24.0
AGIP	Saibos	Foukanda	Congo	219.1 / 273.1 / 323.9	58.6
BP Exploration	Kvaerner	Troika	USA (GoM)	273.1	50.4
BP Exploration	Kvaerner	Schiehallion	North Sea	168.3 / 273.1 / 323.9	66.6
Britannia	Stolt Offshore	Britannia	North Sea	88.9 - 355.6	69.5
British Gas	All Seas	NCMA Development*	Trinidad & Tobago	609.6	108.7
British Gas	Bouygues Offshore	Gasoducto Cruz del Sur (Offshore Portion)	Uruguay	609.6	56.0
Conoco	Hyundai	West Natuna	Indonesia	219.8 / 323.9 / 355.6 / 406.4	52.2
Chevron	Global Offshore	Banzala	Angola	219.1 / 273.1 / 323.9	40.0
Exxon Mobil	Coflexip Stena Offshore	Ringhorne	Norway	168.3 / 273.1 / 323.9	38.6
Maersk	DSND	Halfdan	Denmark	168.3 / 323.9 / 355.6 / 406.4	18.6
Mossgas	Dresser Kellog	Mossgas Development	South Africa	457.2	52.7
Petrobel	Petrojet	Baltim East Development	Egypt	609.6	48.5
Petronas Carigali	J. Ray McDermott	ANGSI Development*	Malaysia	609.6	80.2
QGPC	Snamprogetti	NGL4	Qatar	355.6	120.0
Shell	Coflexip Stena Offshore	Nakika North Flowlines*	USA (GoM)	273.1	43.7
Shell	Daewoo	Belema	Nigeria	33.4 - 457.2	113.8
Shell	EMC	Etap	UK	304.5	48.0
Shell	Bouygues Offshore	ODIDI	Nigeria	609.6	6.2
Statoil	Allseas	Norne	Norway	407.0 - 433.8	177.2
Texaco	Coflexip Stena Offshore	Captain	UK	88.9 - 406.4	97.1
Texaco	Allseas	Gemini	USA (GoM)	323.9	89.2
TotalFinaElf	Saipem	Canyon Express*	USA (GoM)	168.3 / 323.9	196.0
TotalFinaElf	Coflexip Stena Offshore	Otter*	UK	273.1	45.2
Triton	Stolt Offshore	La Ceiba	Guinea-Bissau	219.1 / 273.1	98.4
Williams Energy	Coflexip Stena Offshore	Banjo / Seahawk*	USA (GoM)	323.9 / 406.4 /457.2	119.3

\* Projects where Tenaris material is awaiting installation

[www.tenaris.com/pipeline](http://www.tenaris.com/pipeline)

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