Pipes for civil and industrial installations

Tenaris

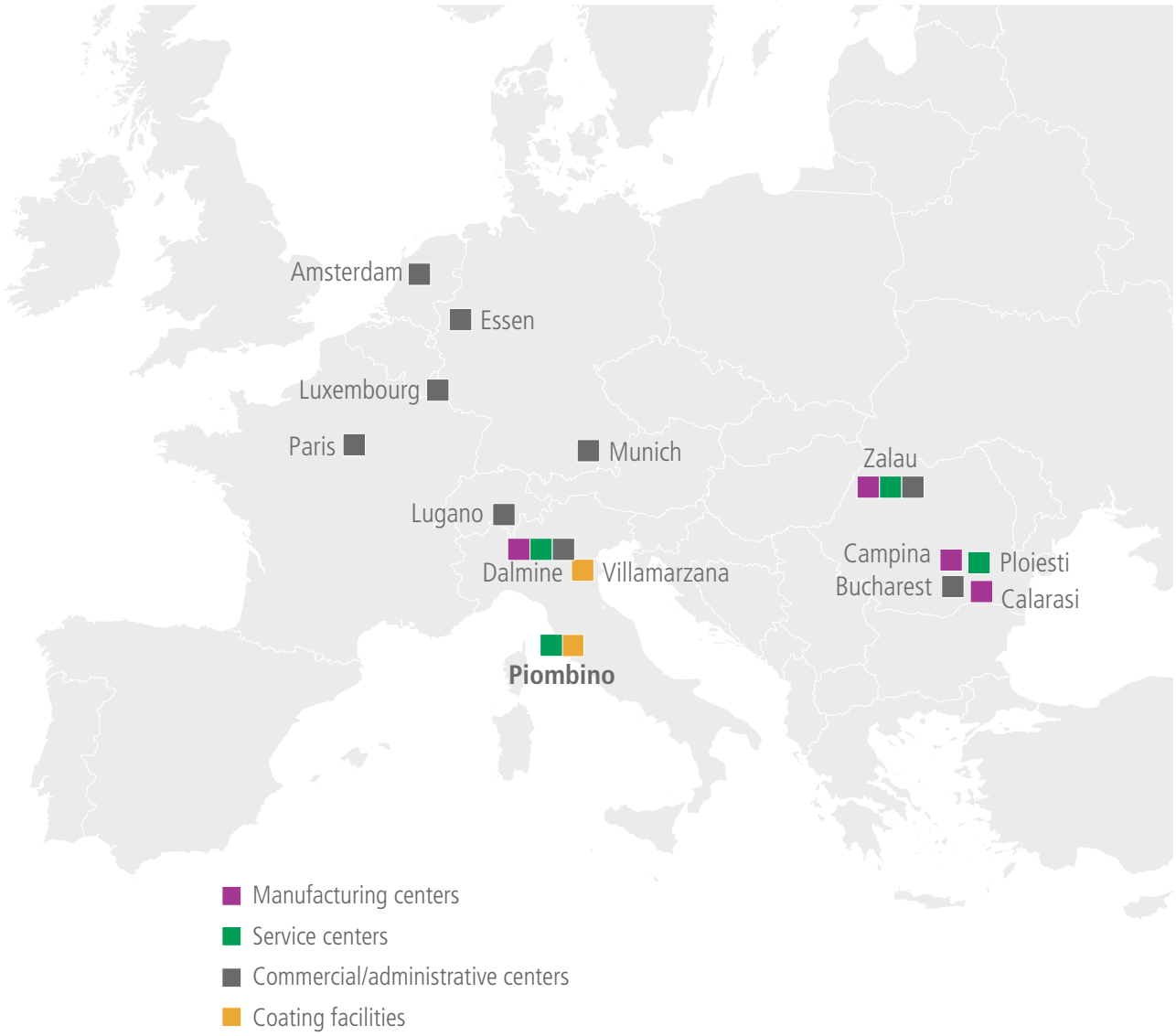
Driving value across the whole supply chain

Tenaris is a leading global manufacturer and supplier of steel pipes and services for the energy and industrial sectors. Through its fully integrated European supply chain, the company produces high-quality seamless pipes for civil and industrial installations.

In Italy, TenarisDalmine brings over 100 years of expertise and a production capacity exceeding 600,000 tons per year, serving markets worldwide while maintaining the highest standards in safety, quality and sustainability.

Our production facility and service center, located in Piombino, offers a wide range of specialized products and services for the civil, commercial, and industrial construction markets. Semi-finished seamless bare pipes are sourced from Tenaris's European industrial system, primarily from the plants in Dalmine and Romania.

The site is a key hub in the Group's supply chain. Its proximity to the port enables close integration of production and logistics, supporting efficiency and reliable service to customers worldwide.



Towards the future of sustainable steel

TENARIS'S COMMITMENT FOR ENVIRONMENT

Develop a long-term sustainable business model

Prevent pollution and use resources more efficiently

Minimize the environmental impact of our products and services

REDUCED AIR EMISSIONS

Low NOx emission combustion systems and advanced filtration systems

RESOURCE SAVINGS

Advanced systems to recycle energy, waste and industrial water

ENVIRONMENTAL MANAGEMENT SYSTEMS

ISO 14001 certified environmental management system

CERTIFICATIONS

EPD® FDES inies UL LISTED DVGW

SYSTEM CERTIFICATIONS

ISO 9001:2015	ISO 14001:2015	OHSAS 45001:2018	ISO 50001:2018
Quality Management System	Environmental Management System	Health & Safety Management System	Energy Management System

Products

Designed for reliability and long-term performance, our general-purpose tubes can be made with various types of coating (galvanized, Thermo® coating or Three Layer Polyethylene), with smooth ends or threaded and supplied with coupling.

We provide:

- Tubes for pressure applications
- Anti-corrosion treatments
- Multilayer coating for increased protection
- Galvanized pipes
- Fast connection grooved-end pipes

The Piombino manufacturing and service center manages both standard production and dedicated solutions tailored to customer requirements for gas, water, air lines, and HVAC applications. Alternative steel grades can also be supplied upon request.

Threadable pipes for plumbing systems and other applications

EN 10255

MECHANICAL AND CHEMICAL PROPERTIES

Steel name **S 195T**

MECHANICAL PROPERTIES

• Ultimate tensile strength (N/mm²)	**320 ÷520**
• Yield strength MIN (N/mm²)	**195**
• Elongation MIN %	**20**

CHEMICAL COMPOSITION % (CAST ANALYSIS)

• C MAX	**0,20**
• Mn MAX	**1,40**
• P MAX	**0,20**
• S MAX	**0,030**

LENGTH

6m. Different lengths available upon request.

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ENDS

- With conical thread and coupling
- With conical thread, without coupling
- Plain
- Grooved

TESTS

Hydrostatic test at 50 bar or equivalent nondestructive electromagnetic test (Eddy Current) according to norm 10893-1.

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CERTIFICATION

3.1 test certificate in compliance with norm EN 10204.

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MARKING

According to norm EN 10255.

TOLERANCES

SERIES	OUTSIDE DIAMETER	WALL THICKNESS	WEIGHT	LENGTH
LIGHT L1	See table of dimensions	+ not limited – 8%	+10% – 8% on each tube	6000 mm + 100 mm - 0 mm
MEDIUM - HEAVY	See table of dimensions	± 12,5%*		6000 mm + 100 mm - 0 mm

* The maximum tolerance is not applied if the bundle is within the weight tolerance

LIGHT SERIES L1 EN 10255 – EN 10226/1 (EX UNI ISO 7/1) THREADABLE*

NOMINAL DIAMETER		OUTSIDE DIAMETER MAX	OUTSIDE DIAMETER MIN	W.T.	NOMINAL WEIGHT – kg/m PLAIN ENDS		NOMINAL WEIGHT – kg/m THREADED WITH COUPLING	
inches	ND	mm	mm	mm	black	galvanized	black	galvanized
3/8	10	17,4	16,7	2,0	0,742	0,780	0,748	0,786
1/2	15	21,7	21,0	2,3	1,08	1,13	1,09	1,17
3/4	20	27,1	26,4	2,3	1,39	1,45	1,40	1,46
1	25	34,0	33,2	2,9	2,20	2,28	2,22	2,30
1 1/4	32	42,7	41,9	2,9	2,82	2,92	2,85	2,95
1 1/2	40	48,6	47,8	2,9	3,24	3,35	3,28	3,39
2	50	60,7	59,6	3,2	4,49	4,63	4,56	4,70
2 1/2	65	76,3	75,2	3,2	5,73	5,91	5,85	6,03
3	80	89,4	87,9	3,6	7,55	7,76	7,72	7,93
4	100	114,9	113,0	4,0	10,80	11,08	11,1	11,40

* with coupling EN 10241 (ex UNI 15050)

MEDIUM SERIES EN 10255 – EN 10226/1 (EX UNI ISO 7/1) THREADABLE

NOMINAL DIAMETER		OUTSIDE DIAMETER MAX	OUTSIDE DIAMETER MIN	W.T.	NOMINAL WEIGHT – kg/m PLAIN ENDS		NOMINAL WEIGHT – kg/m THREADED WITH COUPLING	
inches	ND	mm	mm	mm	black	galvanized	black	galvanized
3/8	10	17,5	16,7	2,3	0,839	0,876	0,845	0,882
1/2	15	21,8	21,0	2,6	1,21	1,26	1,22	1,27
3/4	20	27,3	26,5	2,6	1,56	1,62	1,57	1,63
1	25	34,2	33,3	3,2	2,41	2,49	2,43	2,51
1 1/4	32	42,9	42	3,2	3,10	3,2	3,13	3,23
1 1/2	40	48,8	47,9	3,2	3,56	3,67	3,60	3,71
2	50	60,8	59,7	3,6	5,03	5,17	5,10	5,24
2 1/2	65	76,6	75,3	3,6	6,42	6,60	6,54	6,72
3	80	89,5	88,0	4,0	8,36	8,57	8,53	8,74
4	100	115,0	113,1	4,5	12,2	12,48	12,5	12,80
5	125	140,8	138,5	5,0	16,6	16,94	17,1	17,30
6	150	166,5	163,9	5,0	19,8	20,20	20,4	20,80

HEAVY SERIES EN 10255 – EN 10226/1 (EX UNI ISO 7/1) THREADABLE

NOMINAL DIAMETER		OUTSIDE DIAMETER MAX	OUTSIDE DIAMETER MIN	W.T.	NOMINAL WEIGHT – kg/m PLAIN ENDS		NOMINAL WEIGHT – kg/m THREADED WITH COUPLING	
inches	ND	mm	mm	mm	black	galvanized	black	galvanized
3/8	10	17,5	16,7	2,9	1,02	1,06	1,03	1,07
1/2	15	21,8	21,0	3,2	1,44	1,49	1,45	1,50
3/4	20	27,3	26,5	3,2	1,87	1,93	1,88	1,94
1	25	34,2	33,3	4,0	2,93	3,00	2,95	3,02
1 1/4	32	42,9	42,0	4,0	3,79	3,89	3,82	3,92
1 1/2	40	48,8	47,9	4,0	4,37	4,48	4,41	4,52
2	50	60,8	59,7	4,5	6,19	6,33	6,26	6,40
2 1/2	65	76,6	75,3	4,5	7,93	8,11	8,05	8,23
3	80	89,5	88,0	5,0	10,3	10,51	10,5	10,90
4	100	115,0	113,1	5,4	14,5	14,27	14,8	15,10
5	125	140,8	138,5	5,4	17,9	18,24	18,4	18,70
6	150	166,5	163,9	5,4	21,3	21,70	21,9	22,30

Tubes for pressure applications

EN 10216-1

MECHANICAL AND CHEMICAL PROPERTIES

Steel name **P235TR2***

MECHANICAL PROPERTIES

• Ultimate tensile strength (N/mm²)	**360 ÷500**
• Yield strength (N/mm²)	**235**
• Elongation MIN % (l)	**25**
• Elongation MIN % (t)	**23**

CHEMICAL COMPOSITION % (CAST ANALYSIS)

• C	MAX	**0,16**	• P	MAX	**0,025**
• Mn	MAX	**1,20**	• S	MAX	**0,015**
• Si	MAX	**0,35**	• Al	MIN	**0,020**

* Upon request different steel types in compliance with the norm can be supplied

LENGTH

6m. Different lengths available upon request.

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ENDS

Plain, square cut.

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MARKING

In compliance with norm EN 10216-1.

TESTS

Hydrostatic test at 70 bar or equivalent nondestructive electromagnetic test (Eddy Current) in compliance with norm ISO 10839-1.

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CERTIFICATION

3.1 test certificate in compliance with norm EN 10204.

TOLERANCES

OUTSIDE DIAMETER	TOLERANCE	WALL THICKNESS
O.D. ≤ 219,1 mm	± 1%o ± 0,5mm, the greater of the two values	± 12,5% or ± 0,4 mm, greater of the two values
O.D. > 219,1 mm	± 1%o ± 0,5mm, the greater of the two values	± 20% when the WT/O.D. relationship is ≤ 0,025 ± 15% when the WT/O.D. relationship is > 0,025 ≤ 0,050

DIMENSIONS AND WEIGHT

OUTSIDE DIAMETER	WALL THICKNESS	NOMINAL WEIGHT
mm	mm	kg/m
33,7	2,6	1,99
42,4	2,6	2,55
48,3	2,6	2,93
60,3	2,9	4,11
70	2,9	4,80
76,1	2,9	5,24
88,9	3,2	6,76
101,6	3,6	8,70
108	3,6	9,27
114,3	3,6	9,83
133	4	12,72
139,7	4,0	13,38

OUTSIDE DIAMETER	WALL THICKNESS	NOMINAL WEIGHT
mm	mm	kg/m
159	4,5	17,15
168,3	4,5	18,18
193,7	5,4	25,08
219,1	6,3	33,06
244,5	6,3	37,01
273	6,3	41,44
323,9	7,1	55,47
355,6	8	68,58
406,4	8,8	86,29
457	10	110,24
508	11	134,82
610	12,5	184,19

*Different sizes available upon request

Tubes for transportation systems - Gas

EN ISO 3183

MECHANICAL AND CHEMICAL PROPERTIES

Type of steel **L245R PSL2**

MECHANICAL PROPERTIES

• Ultimate tensile strength (N/mm²)	**415**
• Yield strength MIN (N/mm²)	**245**
• Elongation MIN %	**20**

CHEMICAL COMPOSITION % (CAST ANALYSIS)

• C	MAX	**0,28**	• P	MAX	**0,030**
• Mn	MAX	**1,2**	• S	MAX	**0,030**

LENGTH

6m. Different lengths available upon request.

ENDS

Plain, square cut.

MARKING

In compliance with norm EN ISO 3183.

TESTS

The pipes are subjected to hydrostatic and NDT tests in conformity to production standards, additional tests should be agreed when ordering in compliance with norm ISO 3183.

CERTIFICATION

3.1 test certificate in compliance with norm EN 10204.

TOLERANCES

OUTSIDE DIAMETER	WALL THICKNESS	NOMINAL WEIGHT	LENGTH
a± 0,75 %	Sp < 4 mm +0,6% - 0,5%	according to norm EN ISO 3183: 2012	+ 100 – 0 mm on each tube
a± 0,75 %	Sp > 4 mm < 25 mm + 0,15% - 0,125%	according to norm EN ISO 3183: 2012	+ 100 – 0 mm on each tube

DIMENSIONS - EN ISO 3183

NOMINAL DIAMETER		SPECIFIC OUTSIDE DIAMETER	WALL THICKNESS	NOMINAL WEIGHT	EXECUTION
inches		mm	mm	Kg/m	
3/4	20	26,9	2,3	1,40	SL1
1	25	33,7	2,9	2,21	SL1
1 1/4	32	42,4	2,9	2,83	SL1
1 1/2	40	48,3	2,9	3,26	SL1
2	50	60,3	3,2	4,52	SL1
2 1/2	65	76,1	3,2	5,77	SL1
3	80	88,9	3,6	7,59	SL1
4	100	114,0	4,0	10,9	SL1

*different sizes available upon request

Seamless carbon steel pipes

API 5L; ASTM/ASME A/SA 53; ASTM/ASME A/SA 106

MECHANICAL AND CHEMICAL PROPERTIES

Type of steel	API 5L gr. B/X42 PSL 1; ASTM/ASME A/SA 53, ASTM/ASME A/SA 106 gr. B

MECHANICAL PROPERTIES

• Ultimate tensile strength (N/mm²)	**min 290**
• Yield strength (N/mm²)	**min 415**
• Elongation %	**In compliance with norm**
• Yield-to-ultimate strength ratio	**0,85**
• Maximum hardness	**22 HRC / 237HBW /248 HV10 or equivalent**
• CVN Impact Test temperature (°C)	**-10**
• Individual absorbed energy on full size specimen (J)	**27**

CHEMICAL COMPOSITION % (CAST ANALYSIS)

• C	MAX	**0,20**
• Mn	MAX	**1,20**
• Si		**0,10 - 0,30**
• P	MAX	**0,025**
• S	MAX	**0,010**
• C eq. (I.I.W.)	MAX	**0,40**

LENGTH

6m. Different lengths available upon request.

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ENDS

Square cut or bevelled according to API 5L or ASME B16.25 Fig. 3.1.1 (formerly Fig. 2a)

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TESTS

Hydrostatic testing as per API 5L

MARKING

- API 5L 46th Edition gr. B/X42 PSL1 plus
- ASTM/ASME A/SA 53 gr. B plus
- ASTM/ASME A/SA 106 gr. B

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CERTIFICATION

3.1 test certificate in compliance with norm EN 10204.

TOLERANCES

OD	OUTSIDE DIAMETER	EXTERNAL OUT OF ROUNDNESS	WALL THICKNESS	MASS	LENGTH
<60,3mm	-0,8/+0,4	Pipe body: max 1,2 mm Pipe ends: max 0,9 mm	t <= 4,0mm: -0,5/+0,6mm 4,0mm < t <= 25,0mm: -0,125 t / 0,150 t	According to API 5L and within -3.5%/+10% of the Nominal Mass	-0/+100 mm
60,3mm<= OD <= 168,3	Pipe body: ±0.0075 D Pipe ends: –0.4 / +1.6 mm.	per D/t <=75 Pipe body: max 0,020 D Pipe ends: max 0,015 D			
168,3mm< OD <= 610	Pipe body: +/-0,0075 D Pipe ends: +/-0,005 D (max +/-1,6mm)	Pipe body: max 0,020 D Pipe ends: max 0,015 D			
OD > 610	Pipe body: +/-0,01 D Pipe ends: +/-2mm	for D/t <=75 Pipe body: max 0,015 D (max 15mm) Pipe ends: max 0,01 D (max 13mm)			

Nominal pipe size	Nominal Diameter	Specified Outside Diameter	Wall Thickness	Weight	Identification	Schedule
inches	mm	mm	mm	kg/m	-	-
1/2	15	21,34	2,77	1,27	STD	40
1/2	15	21,34	3,73	1,62	XS	80
1/2	15	21,34	4,78	1,95	-	160
1/2	15	21,34	7,47	2,56	XXS	-
3/4	20	26,67	2,87	1,68	STD	40
3/4	20	26,67	3,91	2,19	XS	80
3/4	20	26,67	5,56	2,89	-	160
3/4	20	26,67	7,82	3,64	XXS	-
1	25	33,40	3,38	2,50	STD	40
1	25	33,40	4,55	3,24	XS	80
1	25	33,40	6,35	4,24	-	160
1	25	33,40	9,09	5,45	XXS	-
1 1/4	32	42,16	3,56	3,39	STD	40
1 1/4	32	42,16	4,85	4,46	XS	80
1 1/4	32	42,16	6,35	5,61	-	160
1 1/4	32	42,16	9,70	7,76	XXS	-
1 1/2	40	48,26	3,68	4,05	STD	40
1 1/2	40	48,26	5,08	5,41	XS	80
1 1/2	40	48,26	7,14	7,24	-	160
1 1/2	40	48,26	10,16	9,55	XXS	-
2	50	60,32	3,91	5,44	STD	40
2	50	60,32	5,54	7,48	XS	80
2	50	60,32	8,74	11,12	-	160
2	50	60,32	11,07	13,45	XXS	-
2 1/2	65	73,02	5,16	8,64	STD	40
2 1/2	65	73,02	7,01	11,41	XS	80
2 1/2	65	73,02	9,52	14,91	-	160
2 1/2	65	73,02	14,02	20,40	XXS	-

Nominal pipe size	Nominal Diameter	Specified Outside Diameter	Wall Thickness	Weight	Identification	Schedule
inches	mm	mm	mm	kg/m	-	-
3	65	88,90	5,49	11,29	STD	40
3	65	88,90	7,62	15,27	XS	80
3	65	88,90	11,13	21,35	-	160
3	65	88,90	15,24	27,68	XXS	-
4	100	114,30	6,02	16,08	STD	40
4	100	114,30	8,56	22,32	XS	80
4	100	114,30	11,13	28,32	-	120
4	100	114,30	13,49	33,54	-	160
4	100	114,30	17,12	41,03	XXS	-
5	125	141,30	6,55	21,77	STD	40
5	125	141,30	9,52	30,94	XS	80
5	125	141,30	12,70	40,28	-	120
5	125	141,30	15,88	49,12	-	160
5	125	141,30	19,05	57,43	XXS	-
6	150	168,28	7,11	28,26	STD	40
6	150	168,28	10,97	42,56	XS	80
6	150	168,28	14,27	54,20	-	120
6	150	168,28	18,26	67,56	-	160
6	150	168,28	21,95	79,21	XXS	-
8	200	219,08	6,35	33,31	-	20
8	200	219,08	7,04	36,81	-	30
8	200	219,08	8,18	42,55	STD	40
8	200	219,08	10,31	53,08	-	60
8	200	219,08	12,70	64,64	XS	80
8	200	219,08	15,09	75,91	-	100
8	200	219,08	18,26	90,43	-	120
8	200	219,08	20,62	100,92	-	140
8	200	219,08	22,22	107,88	XXS	-
8	200	219,08	23,01	111,26	-	160

Coatings

Anti-corrosion treatments

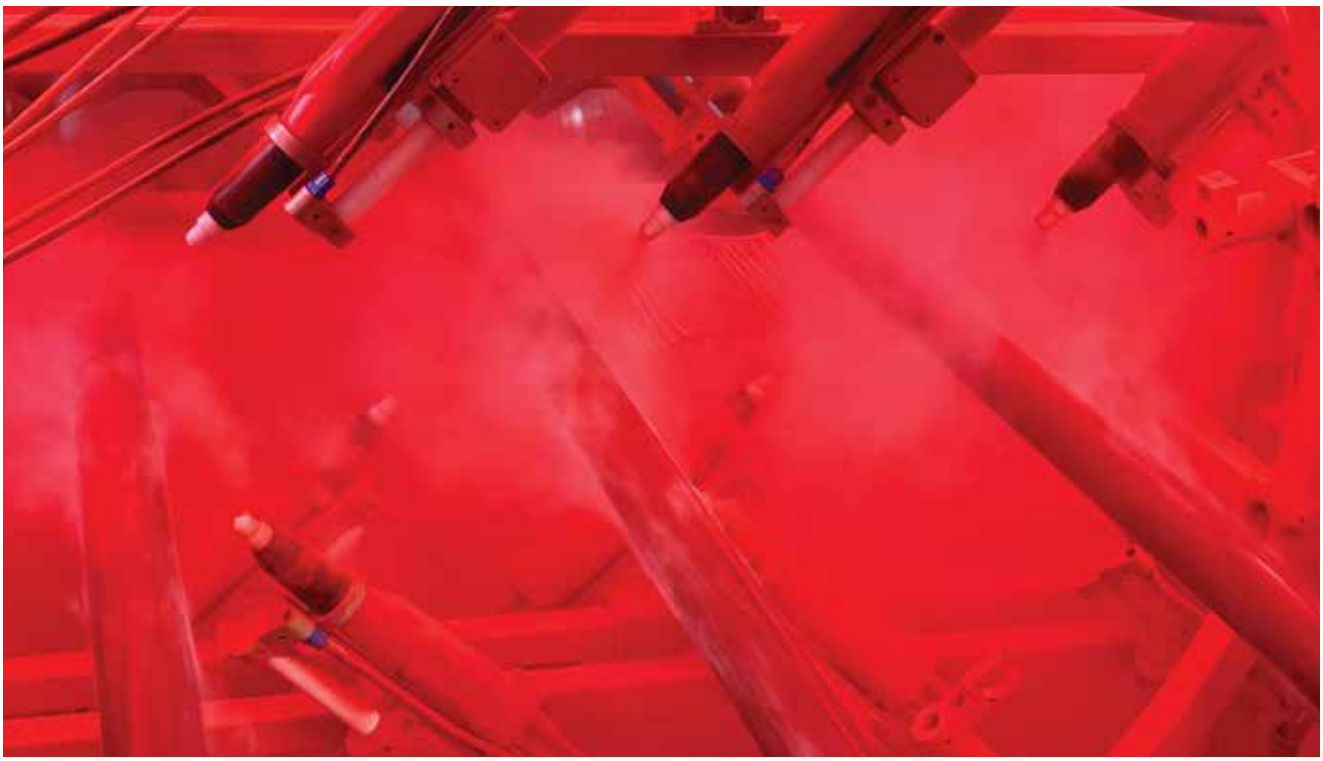
The TenarisDalmine facility in Piombino is able to guarantee a series of pipe coating treatments according to the most stringent international standards.

The choice of applying an anti-corrosion treatment is closely linked to climate and environmental conditions in the foreseen pipe installation site (assessment by the designer).

Through extrusion, electrostatic application and hot-dip galvanizing, we prevent corrosion to preserve the pipe mechanical resistance properties.

All finishes require prior preparation of the surface to be coated either by mechanical (blasting) or chemical (pickling) processes.

- Dalmine Thermo® (Epoxy)
- Dalmine Thermo® - Plus (FBE)
- Dalmine Thermo® Sun (Polystyrene)
- Dalmine Thermo® - Max (Hot-dip galvanizing plus Epoxy powder coating)
- Hot Dip Galvanizing
- Three Layer Polyethylene (3LPE)



Dalmine Thermo® (Epoxy)

Dalmine Thermo® is an epoxy coating engineered to deliver long-lasting reliability, strength, and protection in the most demanding applications. Applied through an advanced electrostatic powder-coating process - including surface blasting, pre-heating to 200°C, and the formation of a uniform protective film- the epoxy layer creates a continuous, defect-free barrier that ensures outstanding resistance to corrosion and mechanical stress.

With a minimum coating thickness of 50 microns, the epoxy finish provides a compact and highly adhesive surface, significantly reducing the risk of peeling and extending the service life of the pipe. Designed to perform in challenging industrial environments, this coating guarantees excellent durability across a wide operating temperature range, from –10°C to +110°C.

Combining the structural strength of seamless steel with the enhanced protection of advanced epoxy technology, Dalmine Thermo® is the perfect solution for fire-fighting systems, hydraulic networks, and a broad range of civil and industrial installations where reliability, aesthetic quality, and long-term performance are essential.

	Dalmine Thermo® **red**	Ral 3000	For civil and industrial installations and fireproof systems.
	Dalmine Thermo® **red**	Ral 3011	For civil and industrial installations.
	Dalmine Thermo® **green**	Ral 6032	For civil and industrial installations.
	Dalmine Thermo® **yellow**	Ral 1021	For natural gas distribution.
	Dalmine Thermo® **white**	Ral 9010	For civil and industrial installations and transport of comburents.

Dalmine Thermo® can be supplied in non-standard colors upon request.

Dalmine Thermo® - Plus (FBE)

Dalmine Thermo® - Plus is a Fusion Bonded Epoxy coating, ideal for customers seeking long-term protection, high reliability, and superior performance. Thanks to an advanced application process where epoxy powder is electrostatically applied and fused onto the pre-heated steel surface, the coating forms a strong, uniform, and highly adherent barrier. This ensures outstanding resistance to corrosion, moisture, chemicals, and mechanical stress, even in the most challenging environments.

Dalmine Thermo® - Plus offers proven durability, excellent adhesion and resistance to abrasion and soil-induced corrosion making it a trusted standard for critical transport lines. By minimizing coating degradation and the need for maintenance, the FBE coating significantly reduces operational costs over the pipeline's service life.

In essence, Dalmine Thermo® - Plus delivers high performance, extended service life, and reduced lifecycle costs, making it the perfect choice for projects requiring dependable protection and long-lasting value.

COATING NORM

EN 21809-2

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ENDS

- Plain or Grooved
- Brushing on length 75 mm
- Ends can be equipped with caps/plugs

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PACKAGING

In hexagonal bundles or load units.

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CORROSION RESISTANCE

Only upon customer's request

- Neutral Salt Spray according to Table 1 ISO 12944-6 (720h)
- Water Condensation ISO 6270-1 according to Table 1 ISO 12944-6 (480h)

Dalmine Thermo® Sun (Polystyrene)

Dalmine Thermo® Sun is a polystyrene coating, an effective solution to ensure protection and long-lasting performance for installations exposed to atmospheric agents.

Thanks to its intrinsic properties, polystyrene offers excellent resistance to UV rays, preventing surface degradation and material embrittlement over time.

This helps maintaining the mechanical performance of the pipe and reduces maintenance costs associated with solar exposure. In addition, the polystyrene coating provides a uniform, lightweight, and stable protective barrier, ideal for outdoor applications where reliability and durability are essential requirements.

Hot Dip Galvanizing

Application of a layer of 99.995% pure electrolytic zinc (55-80 microns), on both inner and external pipe surface, in a single process, to protect the pipe against rust. Furthermore, the TenarisDalmine galvanizing plant in Piombino uses new "Lead-free Galvanizing" technology. Zinc protects the pipe with a dual mechanism: as a barrier effect, between the steel surface and the aggressive atmosphere, and as a cathodic protection, due to the electro-chemical potential difference between the two metals. The result is an exceptionally durable coating, with high mechanical resistance and combined physical and electro-chemical protection.

GALVANIZATION NORM

- EN 10240 A1
- A53
- A123
- ISO1461

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MARKING

Marking in black paint every 40 cm with the following:

- EN 10240 A.1 lead free
- A53 lead free
- A123 lead free

ISO 1461

Three Layer Polyethylene (3LPE)

The Three Layer Polyethylene (3LPE) system provides premium external protection for steel pipelines, combining a Fusion Bonded Epoxy (FBE) primer, a high-performance adhesive layer, and a tough polyethylene topcoat. This three-layer structure ensures excellent corrosion resistance, strong adhesion, and superior mechanical protection even in harsh environments.

The outer PE layer shields the pipe from impact, abrasion, and soil stresses, reducing the risk of damages during handling and installation while extending service life. With outstanding durability in both buried and submerged conditions, 3LPE-coated pipes are widely used in water networks, and demanding infrastructure projects where long-term reliability and reduced maintenance costs are essential.

Additionally, the FBE coating is also compatible with active corrosion protection technologies, such as cathodic protection using both impressed current systems and sacrificial anodes.

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COATING FEATURES

- High resistance against liquid, gas and chemical product corrosion;
- High mechanical resistance in impact and hardness tests;
- High bonding index at various temperatures, from Arctic to tropical zones;
- High deformation resistance, with the possibility of cold bending on site;
- Possibility of topcoat differentiation by installation ground type;
- Possibility to perform local repairings in the event of potential damages during transportation or installation.

COATING NORMS

- ISO 21809 - 1
- DIN 30620
- UNI 9099

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APPLICATIONS

- Gas and liquid transport piping;
- Water supply piping;
- Methane - water connection piping.

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SPECIAL COATINGS

Coatings with thickness up to 5.5 mm can be supplied upon specific customer's request.

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MARKING

Pigmented ink jet white, ensuring durability.

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ENDS

Cutback length from 75 mm to 180 mm, with max 30° angle. The ends can be protected with caps, plugs or connectors upon request.

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FLUID TRANSPORT IDENTIFICATION

3LPE coating can be continuously co-extruded with blue polymer upon customer's request if intended to transport water, or yellow polymer if intended to transport methane. Additional color coding to identify specific items or steel grades are available upon request.

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PACKAGING

In hexagonal bundles or load units.

EN 21809-1 | Petroleum and natural gas industries

Class	A	B
Top material	LDPE (Low density)	MDPE/HDPE (Medium and High density)
Temperature range (°C)	-20 + 60	-40 + 80

TOTAL MINIMUM COATING THICKNESS

PM	Class A1	Class A2	Class A3	Class B1	Class B2	Class B3
kg/m	mm	mm	mm	mm	mm	mm
Pm ≤ 15	1,8	2,1	2,6	1,3	1,8	2,3
15 < Pm ≤ 150	2	2,4	3	1,5	2,1	2,7

Class 1 - light installations (sandy ground); Class 2 - standard installations (clayey ground); Class 3 - installations (rocky ground or sea)

DIN 30670 | Polyethylene coatings on steel pipes and fittings

Class	N	S
Temperature range (°C)	-20 + 60	-40 + 80

TOTAL MINIMUM COATING THICKNESS

Nominal Diameter	Normal (n)	Increased (v)
mm	mm	mm
≤ 100	1,8	2,5
> 100 and ≤ 250	2	2,7

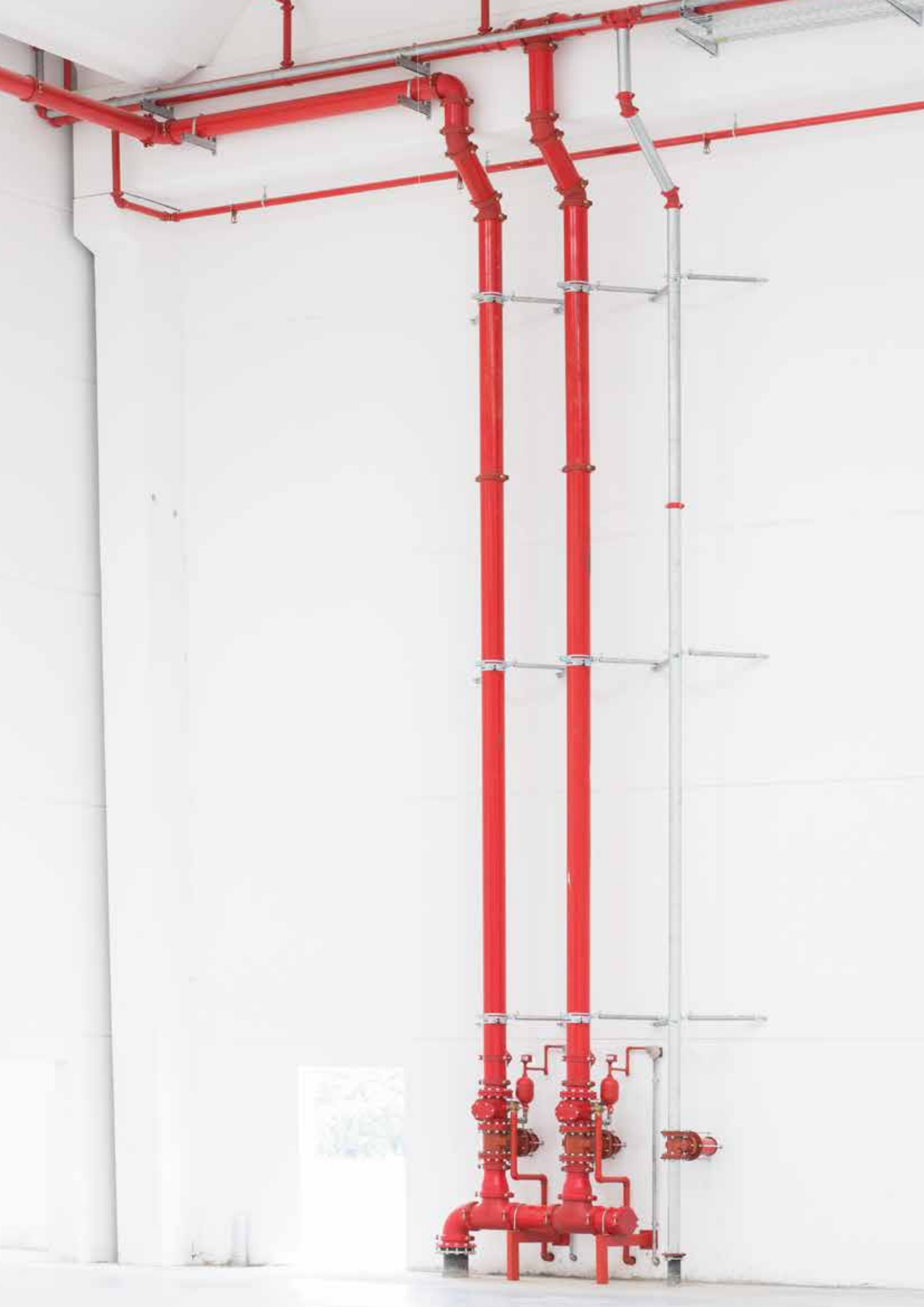
UNI 9099 | Steel pipe used for underground or underwater piping

Top material	**Copolymers or Homopolymers with black smoke content** (2,5 ± 0,5% in weight)
Temperature range (°C)	-30 + 60

TOTAL MINIMUM COATING THICKNESS

Nominal Diameter	Specified OD		Class N	Class R	Class S
mm	Over	mm	mm	mm	mm
≤ 100	-	114,3	1,2	1,8	2,5
> 100 and ≤ 250	114,3	273	1,5	2,0	2,5

Class N - R3N - triple layer Normal coating; Class R - R3R - triple layer Reinforced coating; Class S - R3S - triple layer Special coating



Services

Tenaris leverages its fully integrated European network to ensure product reliability and complete process control throughout the entire manufacturing cycle, from the definition of steel chemical properties to the production of the finished pipes, as well to the stock management and the final delivery.

Through advanced manufacturing expertise and continuous quality monitoring, Tenaris guarantees full material traceability and consistent quality standards. The company is structured to respond quickly and effectively to customers' specific requirements, offering customized solutions and product optimization that simplify the manufacturing process, improve efficiency, and help reduce overall costs for clients.

At the Piombino manufacturing and service center, dedicated services include:

- Prefabrication processes
- Packing solutions
- Stock management and logistics

These capabilities ensure flexibility, operational efficiency and reliable supply for civil and industrial installations, while supporting customers in optimizing time and total project costs.

Prefabrication services

PREFABRICATION

Tenaris pipes – available in black, galvanized and epoxy-coated versions – offer reliability and versatility for fire-fighting systems, gas and water distribution networks, and a wide range of civil and industrial applications.

The product range covers diameters from 1" to 16" and lengths from 3 to 6 meters, with the option of supplying pipes with grooved ends for fast-connection systems.

Thanks to the advanced prefabrication activities carried out at the Piombino facility – including cut-to-length, grooving, on-axis and off-axis drilling, and threading – each pipe can be customized and delivered ready for assembly, in full compliance with project specifications.

MAIN PREFABRICATION ACTIVITIES

- Grooving for fast-connection systems
- Drilling
- Sprinkler outlet preparation
- Dedicated packaging

Tenaris seamless pipes are engineered to maintain their structural integrity during grooving operations: the material continuity and the absence of welds ensure a uniform and controlled deformation.

Black, galvanized and epoxy-coated pipes are available to meet different requirements in terms of durability, corrosion protection and on-site practicality. The epoxy coating, in particular, eliminates the need for painting on site and ensures quick and safe identification of each component during installation and maintenance.

KEY BENEFITS

- Reduced level of required specialization
- Lower labor costs
- Limited budget deviations
- Shorter execution times
- Reduced need for highly specialized workforce

FIELDS OF APPLICATION

- Fire-fighting systems – sprinkler networks
- Water and service air distribution systems
- Heating, air-conditioning and plumbing systems for commercial, industrial, healthcare, educational and sports facilities
- Tunnels, research centers and laboratories

DIMENSIONAL RANGE & STANDARDS

ASTM

NPS	OD	WT	SCH	Mass per unit of length
inches	mm	mm		kg/m
1	33,4	3,38	STD/40	2,50
1	33,4	4,55	XS/80	3,24
1 1/4	42,2	3,56	STD/40	3,39
1 1/4	42,2	4,85	XS/80	4,47
1 1/2	48,3	3,68	STD/40	4,05
1 1/2	48,3	5,08	XS/80	5,41
2	60,3	3,91	STD/40	5,44
2	60,3	5,54	XS/80	7,48
2 1/2	73,0	5,16	STD/40	8,63
2 1/2	73,0	7,01	XS/80	11,41
3	88,9	5,49	STD/40	11,29
3	88,9	7,62	XS/80	15,27
4	114,3	6,02	STD/40	16,07
4	114,3	8,56	XS/80	22,32
5	141,3	6,55	STD/40	21,77
5	141,3	9,52	XS/80	30,94
6	168,3	7,11	STD/40	28,26
6	168,3	10,97	XS/80	42,56
8	219,1	8,18	STD/40	42,55
8	219,1	12,70	XS/80	64,64

EN 10255 LS/MS

NPS	OD	WT	Mass per unit of length
inches	mm	mm	kg/m
1/2	21,3	2,30	1,08
3/4	26,9	2,30	1,40
1	33,7	2,90	2,20
1	33,7	3,20	2,41
1 1/4	42,4	2,90	2,82
1 1/4	42,4	3,20	3,09
1 1/2	48,3	2,90	3,25
1 1/2	48,3	3,20	3,56
2	60,3	3,20	4,51
2	60,3	3,60	5,03
2 1/2	76,1	3,20	5,75
2 1/2	76,1	3,60	6,44
3	88,9	3,60	7,57
3	88,9	4,00	8,37
4	114,3	4,00	10,88
4	114,3	4,50	12,18
5	139,7	5,00	16,61
6	165,1	5,00	19,74

EN10216

NPS	OD	WT	Mass per unit of length
inches	mm	mm	kg/m
1	33,7	2,60	1,99
1 1/4	42,4	2,60	2,55
1 1/2	48,3	2,60	2,93
2	60,3	2,90	4,10
2 1/2	76,1	2,90	5,23
3	88,9	3,20	6,76
3 1/2	101,6	3,60	8,70
-	108,0	3,60	9,27
4	114,3	3,60	9,83
-	133,0	4,00	12,72
5	139,7	4,00	13,39
-	159,0	4,50	17,14
6	168,3	4,50	18,18
-	193,7	5,40	25,07
8	219,1	6,30	33,06
-	244,5	6,30	37,01
10	273,0	6,30	41,43
12	323,9	7,10	55,47
14	355,6	8,00	68,57
16	406,4	8,80	86,28

Packing

Pipes are packed in hexagonal bundles with four steel bands with a green seal showing the Tenaris logo.

PIPES FOR CIVIL AND INDUSTRIAL APPLICATIONS

DIAMETER		EN 10255 SL1		EN 10255 SM		EN 10216-1 S		THERMO SL1		3LPE SM		3LPE SL1	
		LIGHT SERIES 1		MEDIUM SERIES				LIGHT SERIES 1		MEDIUM SERIES		LIGHT SERIES 1	
inches	mm	n° pipes	kg	n° pipes	kg	n° pipes	kg	n° pipes	kg	n° pipes	kg	n° pipes	kg
1/2	21,3	127	820	127	920	–	–	127	820	127	1010	127	910
3/4	26,9	127	1060	127	1190	–	–	127	1065	127	1300	127	1170
1	33,7	91	1200	91	1315	–	–	91	1205	91	1300	91	1300
1 1/4	42,4	61	1030	61	1135	61	933	61	1035	61	1410	61	1110
1 1/2	48,3	61	1190	61	1300	61	1073	61	1190	61	1400	61	1280
2	60,3	37	1000	37	1115	37	912	37	1000	37	1190	37	1070
2 1/2	76,1	19	653	19	735	19	598	19	1280	19	1510	19	1360
3	88,9	19	860	19	960	19	771	19	865	19	1000	19	910
4	114,3	19	1230	19	1390	19	1125	19	1240	19	1460	19	1300
5	139,7	–	–	7	700	7	650	–	–	7	730	–	–
6	165,1	–	–	7	830	7	764*	–	–	7	870	–	–
8	219,1	–	–	–	–	7	1390	–	–	–	–	–	–
10	273,0	–	–	–	–	7	1745	–	–	–	–	–	–

Length 6 m | The bundle weight is indicative. The actual weight is shown on a label applied to each bundle | * Diameter 168,3 mm | S = SEAMLESS

RSF stock and logistics

Beside our extensive experience in the production of seamless steel pipes for civil and industrial installations, TenarisDalmine mill in Piombino offers a complete range of finished products characterized by high reliability and full compliance with the industry's most widely adopted standards. The immediate availability of a broad assortment of diameters, wall thicknesses, and steel grades enables our customers to reduce installation time and streamline the planning of their operations.

Alongside finished products, we maintain a dedicated stock of semifinished materials, allowing us to increase supply flexibility, rapidly perform customized processing, and meet urgent or highly specific market demands.

Furthermore, the direct integration with Tenaris's industrial rolling mills ensures a constant material flow, consistent quality, and reduced lead times throughout the entire supply chain, providing customers with reliable, readily available solutions.

BIM Building Information Modeling

The European Parliament approved the European Union Public Procurement Directive that introduces the BIM method to design buildings and infrastructures, including the systems installed therein.
The European Directive 2014/24//EU on Public Procurement includes the use of specific electronic instruments such as electronic simulation instruments for building information or similar instruments and clearly expresses the instruction to introduce BIM (Building Information Modeling) within Member States' procurement procedures.

BIM is a collaborative design method the integrates the working information of each design phase in a single model: architectural, structural, system, energy and management. For this reason, it is used by system engineers, building engineers, architects, constructors, assemblers, inspectors, etc.

This three-dimensional model includes information concerning volume and dimensions, material, aspect and technical specifications that are not lost in communications to other firms and other computer platforms.
BIM technology offers multiple examples such as: greater efficiency and productivity, less errors, less downtime, lower costs, greater interoperability, maximum information sharing, more accurate and consistent design control.

CHOOSE TENARIS FOR YOUR BIM PROJECTS

Tenaris has joined the digital revolution involving the building sector and has decided to provide designers with BIM objects according to its product lines.
Information and on-line data reliability is guaranteed by Tenaris.
To access BIM materials please visit Tenaris.com/Gas, water & fire extinguishing section.

Tenaris

For additional information, please visit
www.tenaris.com

For technical assistance, please contact
gaswaterandfireextinguishing@tenaris.com