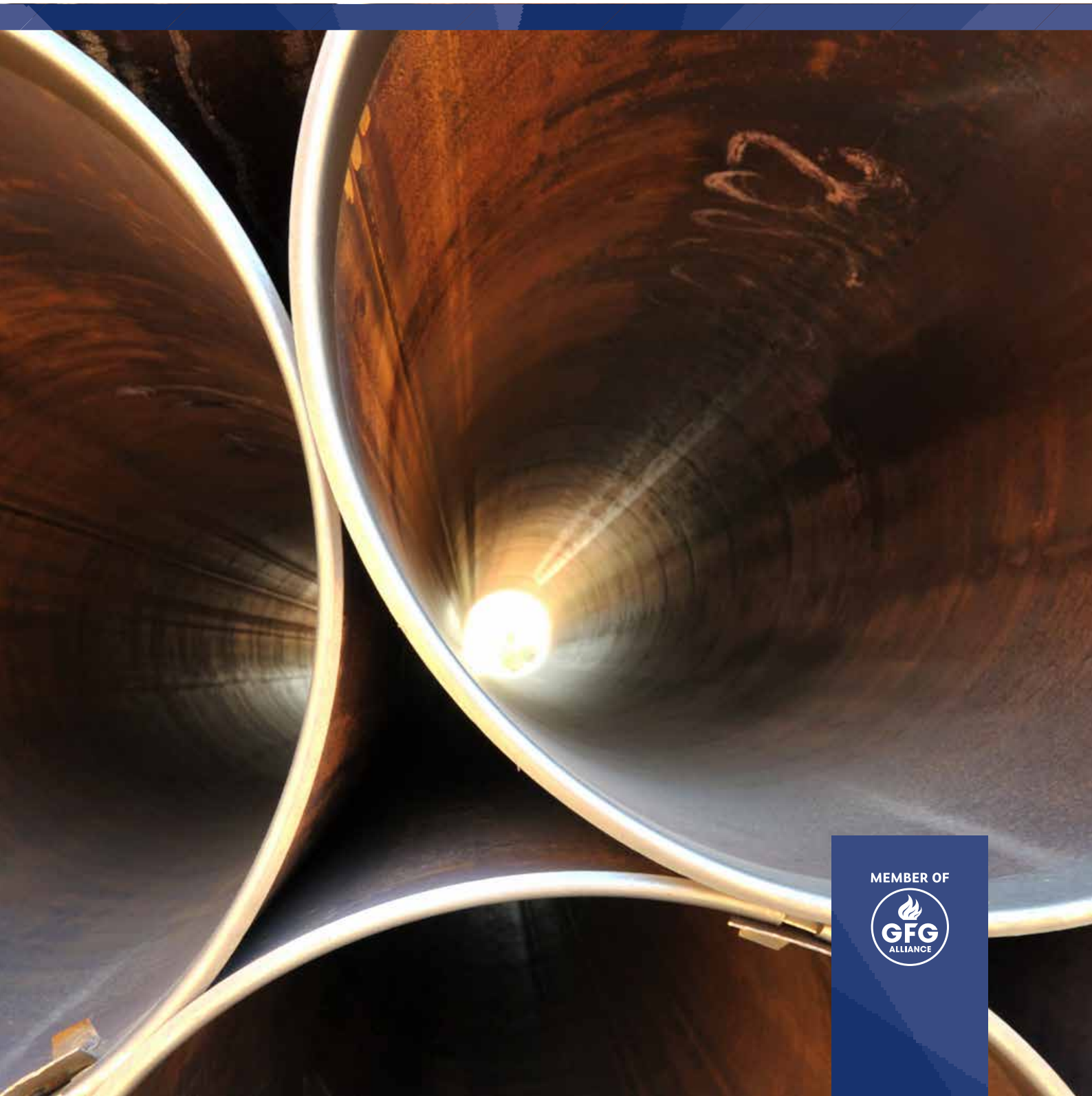


Longitudinally Submerged Arc Welded Pipes



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Applications



Liberty Tubular Products Galati is producing Longitudinal Submerged Arc Welded Steel Pipes (LSAW) for oil&gas industry but also for other industries; pressure applications, structural applications, water transportation.

With a nominal capacity of 50 kto/year and a wide dimensional feasibility, the line is addressing several applications such as: welded steel pipes for use in pipeline transportation systems in the petroleum and natural gas industries, welded steel tubes for pressure purposes: non alloy tubes with specified room and elevated temperature properties, cold formed welded structural hollow sections.



As part of one of the largest European producer of plates, the pipe and tube mill is able to draw on in-house resources for its raw materials. Galati's tubular products are used for some of the most demanding hydrocarbon pipelines in Europe and North America. We also manufacture and supply pipes for pilings and structural casings in critical high strength applications. We consistently endeavor to meet and surpass our customers' expectations and are fully conscious of the high quality and impeccable performance that are essential in the critical oil and gas industries.

Parameters

Process	Longitudinally Submerged Arc Welded Steel Pipes
Wall Thickness (mm/inch→)	6.35mm – 25.4mm (0.250" - 1")
Tube diameter (mm/inch)	508mm – 1422mm (20" - 56")
Length (mm/feet)	6000mm – 12050mm(19.68ft-39.53ft)
Coating	3 LPE coating as per DIN 30670; polyethylene HDPE as per EN ISO 21809-1; cement mortar suitable for drinking water. – Subcontractor based
Outside Protection	Water Based Lacquer
Steel grades (range examples)	L245/B/BN/BM – L485/X70, X7-ME, P195TR1-P265GHTC2, P275NL1/2 – P355NL1/2 S235JRH-S33J2H, St3sp, A, B, C, C70, L355
Tolerances	Acc with std.
Product Certifications	API5L-API Q1, PED 2014/68/EU & AD 2000 W0/W4/W10; CPR305; DNV; ZETOM
Management System	ISO 9001, ISO 45001, ISO 14001, ISO 3834-2

Capabilities

LSAW Product	Norm	Grade	Diameter	Wall thickness
Welded steel pipes for use in pipeline transportation systems in the petroleum and natural gas industries	API 5L & ISO3183	L245/B to L485/ X70 (PSL1)	20" ÷ 56" (508 ÷ 1422mm)	0.250" ÷ 1" (6.35 ÷ 25.4mm)
		L245N/BN to L415N/X60N (PSL2)		
		L245M/BM to L485M/X70M (PSL2)		
		L245NS/BNS to L360NS/X52NS (PSL2), Annex H / Sour Service		
		L245MS/BMS to L485MS/X70MS (PSL2), Annex H / Sour Service		
		L245NO/BNO to L360NO/X52NO (PSL2), Annex J / Offshore		
	L245MO/BMO to L485MO/X70MO (PSL2), Annex J / Offshore			
	ISO3183 (Annex A)	BNE/L245NE to X60NE/L415NE		
BME/L245ME to X70ME/L485ME				
Cold formed welded structural hollow sections of non-alloy and fine grain steels	EN 10219-1 EN 10225	S235 JRH; S275 JOH; S275 J2H; 355 JOH; S355 J2H S355 G2 – G10		
Welded steel tubes for pressure purposes; Non alloy tubes with specified room and elevated temperature properties	EN 10217-1/5	P195 TR1; P235 TR1; P265 TR1; P195 TR2; P235 TR2; P265 TR2; P235 GH TC1; P265 GH TC1; P235 GH TC2; P265 GH TC2		



LSAW Product	Norm	Grade	Diameter	Wall thickness
Welded tubes of non alloy steels with special quality requirements	DIN 1626	ST37.0; ST44.0; ST52.0	20" ÷ 56" (508 ÷ 1422mm)	0.250" ÷ 1" (6.35 ÷ 25.4mm)
General purpose electrically welded straight seam steel pipes	GOST 10706	St 3sp		
Electric-Fusion Steel Pipe (Arc)-Welded	ASTM A 134	A; B; C		
Electric-Fusion-Welded Steel Pipe for Atmospheric and Lower Temperatures	ASTM A671/ A671M	CB 60; CB65; CB70; CC 60; CC65; CC70 (class 10÷13)		
Electric-Fusion-Welded Steel Pipe for High-Pressure Service at Moderate Temperatures	ASTM A672/ A672M	A45; A50; B60; B65; B70; C55; C60; C65; C70 (class 10÷13)		
Non-alloy steel tubes for the conveyance of water and other aqueous liquids	EN 10224	L235; L275; L355		
Welded steel tubes for pressure purposes conditions - Alloy fine grain steel tubes	EN 10217-3	P275 NL1 & NL2 P355 N & NH P355 NL1 & NL2 P460 N; P460NL1 (according with certification AD2000+PED)		
NOTE	Longitudinally Submerged Arc Welded Steel Pipes			
PROTECTION	Mill lacquer and bevel end protectors			
COATING	3LPE coating as per DIN 30670 – Subcontractor			

Improvements

- New logistics routing in Romania with controlled procedures (rail wagons, barging, ship loading).
- Mill expenditures to increase capacity / product quality:
 - New ultrasonic testing of welds.
 - New marking machine.
 - New expander tools for diameters 530; 550; 559; 630mm
 - Extension of the manufacturing range with OD 1350 and 1371mm with 2 weld seams
- Product development:
 - Grades as per ASTM 671 with IT up to @-51°C
 - Offshore grades acc. to EN 10225 for HS
 - Steel grade from EN10219-1 Annex B, up to S460NLH" (according with the certification CPR 305)

Manufacturing Capability Chart

Galati Capability Product for grade B - grade X70 and equivalent

OD (mm)	Wall thickness (mm)																	OD (inch)
	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	
508/530	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3								20
559/550	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9							22
610/630	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5						24
660	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5						26
711/720	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5						28
762	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2			30
813/820	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2		32
864	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2		34
914	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	36
1016/1020			7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	40
1067				8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	42
1118				8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	44
1219/1220				8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	48
1321						10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	52
1350/1371	Two weld seam					10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	54
1422						10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	56
	0.25	0.281	0.312	0.344	0.375	0.406	0.438	0.469	0.5	0.562	0.625	0.688	0.75	0.787	0.874	0.91	1	

Wall thickness (inch)

- Usual for grade B- X70 or equivalent
- Consult the factory for grade B-X70 or equivalent

Galati Capability Product for grade B - X42 and equivalent grades

OD (mm)	Wall thickness (mm)																	OD (inch)
	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	
508	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3								20
559	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9							22
610	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5						24
660	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5						26
711	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1					28
762	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2			30
813	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2		32
864	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2		34
914	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	36
1016			7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	40
1067				8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	42
1118				8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	44
1219				8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	48
1321					9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	52
1350/1371	Two weld seam					10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	54
1422						10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	56
	0.25	0.281	0.312	0.344	0.375	0.406	0.438	0.469	0.5	0.562	0.625	0.688	0.75	0.787	0.874	0.91	1	

Wall thickness (inch)

- Usual manufacturing for grade B- X42
- Consult the factory for grade B- X42
- Consult the plate mill for grade B- X42

Manufacturing Capability Chart continued...

Galati Capability Product for maximum grade X52 and equivalent

OD (mm)	Wall thickness (mm)																	OD (inch)
	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	
508	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3								20
559	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3								22
610	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5						24
660	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5						26
711	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20				28
762	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2			30
813	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2		32
864	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2		34
914	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	36
1016			7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	40
1067				8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	42
1118				8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	44
1219				8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	48
1321					9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	52
1350/1371	Two weld seam					10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	54
1422						10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	56
	0.25	0.281	0.312	0.344	0.375	0.406	0.438	0.469	0.5	0.562	0.625	0.688	0.75	0.787	0.874	0.91	1	

Wall thickness (inch)

- Usual manufacturing for grade X52
- Consult the factory for grade X52
- Consul the plate mill for grade X52

Galati Capability Product for maximum grade X 60 and equivalent

OD (mm)	Wall thickness (mm)																	OD (inch)
	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	
508	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7									20
559	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7									22
610	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3								24
660	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3								26
711	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9							28
762	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1					30
813	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20				32
864	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2			34
914	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2		36
1016			7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	40
1067				8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	42
1118					9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	44
1219					9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	48
1321						10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	52
1350/1371	Two weld seam					10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	54
1422						10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2	23.2	25.4	56
	0.25	0.281	0.312	0.344	0.375	0.406	0.438	0.469	0.5	0.562	0.625	0.688	0.75	0.787	0.874	0.91	1	

Wall thickness (inch)

- Usual manufacturing for grade up to X60
- Consult the factory for grade up to X60
- Consult the plate mill for grade X60

Manufacturing Capability Chart continued...

Galati Capability Product for maximum grade X 65

OD (mm)	Wall thickness (mm)																OD (inch)
	6.35	7.1	7.9	8.7	9.5	10.3	11.1										
508/530	6.35	7.1	7.9	8.7	9.5	10.3	11.1										20
559/550	6.35	7.1	7.9	8.7	9.5	10.3	11.1										22
610/630	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3							24
660	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.0						26
711/720	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9						28
762	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5					30
813/820	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1				32
864	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20			34
914	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		36
1016/1020			7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		40
1067				8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		42
1118					9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		44
1219/1220					9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		48
1321						10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		52
1350/1371		Two weld seam				10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		54
1422						10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		56
	0.25	0.281	0.312	0.344	0.375	0.406	0.438	0.469	0.5	0.562	0.625	0.688	0.75	0.787	0.874		

Wall thickness (inch)

Usual manufacturing for grade up to X65

Consult the factory for grade up to X65

Consult the plate mill for grade X65

Galati Capability Product for maximum grade X70

OD (mm)	Wall thickness (mm)																OD (inch)
	6.35	7.1	7.9	8.7	9.5	10.3											
508/530	6.35	7.1	7.9	8.7	9.5	10.3											20
559/550	6.35	7.1	7.9	8.7	9.5	10.3											22
610/630	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	13.5							24
660	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	13.5							26
711/720	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3							28
762	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5					30
813/820	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5					32
864	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1				34
914	6.35	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20			36
1016/1020			7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		40
1067				8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		42
1118					9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		44
1219/1220					9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		48
1321						10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		52
1350/1371		Two weld seam				10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		54
1422						10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20	22.2		56
	0.25	0.281	0.312	0.344	0.375	0.406	0.438	0.469	0.5	0.562	0.625	0.688	0.75	0.787	0.874		

Wall thickness (inch)

Usual manufacturing for grade up to X70

Consult the factory for grade up to X70

Consult the plate mill for grade X70

Contact with the mill

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