NOVÁ HUŤ

PIPES CATALOGUE

NOVÁ HUŤ

NOVÁ HUŤ s.r.o. is a producer of steel pipes for all major fields of application - oil & gas, exploration and transportation, power generation, mechanical and structural use. It is the biggest producer of seamless and spiral welded pipes in the Czech Republic. Seamless pipes of diameters from 21.3 mm to 273.1 mm are manufactured at two Stiefel Mills. Spiral welded pipes of diameters from 323,9 mm to 1020 mm are manufactured on the Submerged Arc Welding machines.

Tubes and pipes are manufactured in compliance with ISO, EN, API, DIN, ASTM, NF, CSN and other standards.

Quality system and Certifications

API Spec 5CT, API Spec 5L, API SPec 5B,
ISO 9001, ISO 14001, ISO 45001, ISO 50001

SURFACE PROTECTION – SEAMLESS & WELDED

Outside diameter [mm]	Type of coating	Standard for coating	Lengths [m]
159,0 - 1016,0	Outside polyethylene coating (3LPE)	DIN 30670: 2012 (N-n, N-v, S-n, S-v) DIN 30670-1:2024 [1] (N-n, N-v, S-n, S-v) ISO 21809--1:2018 (A1-A3, B1-B3)	9-18,0 9-18,0 9-18,0
159,0 - 1016,0	Outside polypropylene coating (3LPP)	DIN 30678: 2013 [1]	9-18,0
159,0 - 1016,0	Oustide cement mortar coating	KN 420025: 2003 (FZM-N + FZM-S)	9-14,0
89,0 - 273,0	Inside cement lining	EN 10298: 2006 CEM I-N-I	9-13,5
273,0 - 1016,0	Inside cement lining	EN 10298: 2006 CEM I-N-II	9-13,5

Pipes can be protected by temporary surface protection (lacquered).
[1] Supplied by prior agreement.

Note to the wall thickness of the tubes for PE/PP coating
159,0 - 273,0 mm - maximum 20,0 mm
323,9 - 813,0 mm - maximum 12,5 mm
914,0 - 1016,0 mm - maximum 10,0 mm [1]

[1] Thicker WT than 10,0 mm supplied by prior agreement

SEAMLESS HOT ROLLED PIPES

Dimensional range

OD [mm]	WT [mm]																				
	2,3	2,6	2,9	3,2	3,6	4,0	4,5	5	5,6	6,3	7,1	8	8,8	10	11	12,5	14,2	16	17,5	20,0	22,2	25,0
21,3																						
25																						
26,9																						
31,8																						
33,7																						
35																						
38																						
42,4																						
44,5																						
48,3																						
51																						
54																						
57																						
60,3																						
63,5																						
70																						
73																						
76,1																						
82,5																						
88,9																						
101,6																						
108,0																						
114,3																						
127,0																						
133,0																						
139,7																						
152,4																						
159,0																						
168,3																						
177,8																						
193,7																						
219,1																						
244,5																						
273,0																						

Small Stiefel

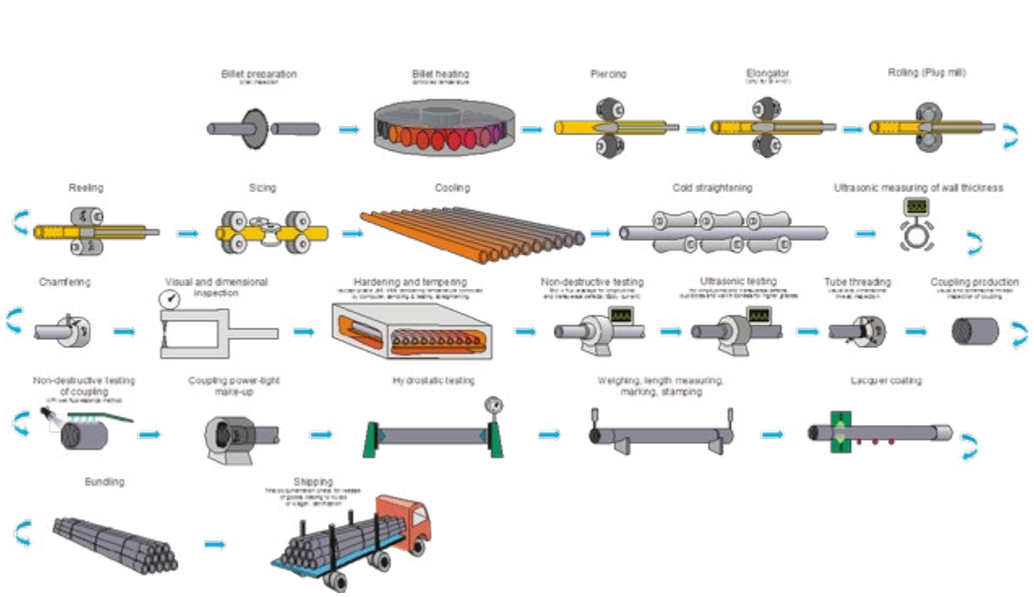
Big Stiefel

SUB-MERGED ARC WELDED (SAW) PIPES

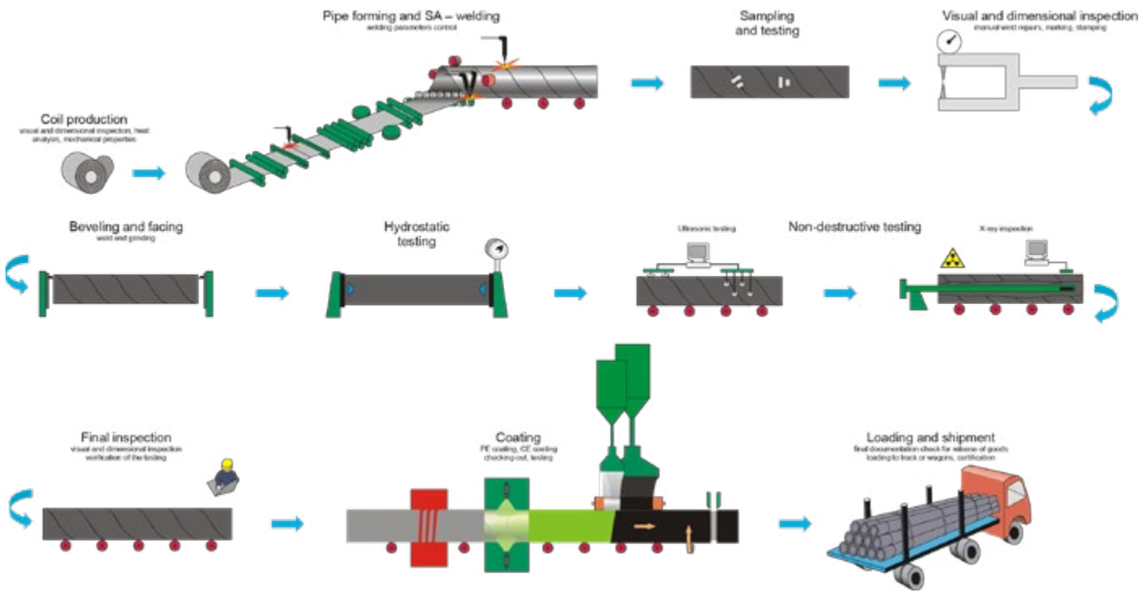
Dimensional range

Diameter [mm]	Wall thickness								
	5	5,6	6,3	7,1	8	8,8	10	11	12,5
323,9									
355,6									
377									
406,4									
426									
457									
508									
530									
559									
610									
630									
660									
711									
720									
762									
813									
820									
864									
914									
920									
965									
1016									
1020									

Technological Flow of Casings



Technological Flow of SAW pipes



1.0
Seamless tubes and pipes

LENGTHS

Plain-end tubes and pipes are supplied from carbon, high-grade carbon or micro-alloyed steel in the following lengths:

Production length:
in a range of 4,5 – 12,8 m, lengths selected by the producer by technological possibilities

Set length:
nominal length selected by the customer from the range of production lengths with a tolerance of ± 500 mm

Exact length:
nominal length selected by the customer following agreement with the producer.

Max. length of tubes:
< Ø 60.3 mm 9.5 m
≥ Ø 60.3 mm 12.5 m by technological possibility – see tables of sizes

ENDS OF TUBES AND PIPES

Tubes and pipes are standardly supplied with square cut and de-burred ends. Other types of pipe end finish can be supplied after agreement with the producer (e.g. bevelled ends).

Pipes with WT ≤ 3,18mm are supplied only with square cut ends.
Pipes with WT > 3,18mm can be supplied either with perpendicularly cut off ends or with beveled ends at an angle of 30° (-0/+5°) as per API Spec 5L, or ISO 3183, or ASTM A 106, or according to other standards (e.g. ASME B16.25, DIN 2559) with prior agreement.

GROOVE FOR VICTAULIC CONNECTION

Application for fast and simple installation and connection of pipelines.
Pipes can be produced in grades acc. to customer requirement.

1.0 SEAMLESS TUBES AND PIPES

STANDARD	GRADES	APPLICATION
ASTM A 53 (ASME SA53)	A, B	Standard Specification for Pipe, Steel, Black and hot-Dipped, Zinc-Coated, Welded and Seamless
ASTM A 106 (ASME SA106)	A, B, C	Standard specification for seamless carbon steel pipe for high temperature service
ASTM A 192 (ASME SA192)	A 192	Standard specification for seamless carbon steel boiler tubes for high-pressure service
ASTM A 210 (ASME SA210)	A-1, C	Standard specification for seamless medium-carbon steel boiler and super heater tubes
ASTM A 333 (ASME SA333)	Gr 1, Gr 6	Standard specification for seamless and welded steel pipes for low-temperature service
ASTM A 335 (ASME SA335)	P1, P5, P9, P11, P12, P22	Standard specification for seamless Ferritic Alloy-Steel pipes for High-temperature service
ASTM A 501 (ASME SA501)	Gr A, Gr B	Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing
ASTM A519 (ASME SA519)	MT 1010, MT 1015, MT 1020, 1010,1012, 1015, 1017, 1020, 1518	Standard Specification for Seamless Carbon and Alloy Steel Mechanical Tubing
ČSN 42 0250	11353,0, 11353,1, 11453,0, 11453,1, 11523,0, 11523,1, 11550,0, 11550,1, 11650,0, 11650,1	Hot rolled seamless tubes of class 10 to 16 steels
ČSN 42 0251	12021,1, 12022,1	Seamless steel tubes with guaranteed properties at elevated temperatures
ČSN 42 0165	11369,1, 11503,11	Sheets and pipes of ferrite-pearlite steels with guaranteed impact properties at low temperatures
DIN 1629	St 37,0, St 44,0, St 52,0	Seamless circular tubes of non-alloy steels with special quality requirements
DIN 1630	St 37,4, St 44,4, St 52,4	Seamless circular tubes of non-alloy steels for extra-high requirements
DIN 17121	RSt 37–2, St 37–3, St 44–2, St 44–3, St 52–3	Seamless structural steel circular tubes for structural engineering purposes
DIN 17175	St 35,8, St 45,8 – (only in category I,)	Seamless steel tubes for elevated temperatures" quality grade I
EN 10210-1,2	S235JRH, S275JOH, S275J2H, S275NLH S355JOH, S355J2H, S355K2H, S275NH, S355NH, S355NLH, S420NH, S420NLH, S460NH, S460NLH	Hot finished structural hollow sections of non-alloy and fine grain steels
EN 10216-1	P195TR1, P195TR2, P235TR1, P235TR2, P265TR1, P265TR2	Seamless steel tubes for pressure purposes" Part 1: Non-alloy steel tubes with specified room temperature properties
EN 10216-2	P195GH, P235GH, P265GH, 16Mo3, 10CrMo5-5, 10CrMo9-10, 13CrMo4-5, X11CrMo5+NT1, X11CrMo9-1+NT1	Seamless steel tubes for pressure purposes" Part 2: Non-alloy and alloy steel tubes with specified elevated temperature properties
EN 10216-3	P275NL1, P275NL2, P355N, P355NH, P355NL1, P355NL2; P355NL2, P460N, P460NH, P460NL1, P460NL2	Seamless steel tubes for pressure purposes " Part 3 – Alloy and fine grain steel tubes
EN 10216-4	P215NL, P265NL	Seamless steel tubes for pressure purposes " Part 4 – Non-alloy and alloy steel tubes with specified low temperature properties
EN 10224	L235, L275, L355	Non-alloy steel tubes and fittings for the conveyance of aqueous liquids including water for human consumption
EN 10225	S355G1+N, S355G14+N, S355G15+N	Weldable structural steels for fixed offshore structures – Technical delivery conditions
EN 10225-3	S355NHHO, S355NLHHO, S355QLHHO, S420QLHHO, S460QLHHO, S500QLHHO, S550QLHHO,	Weldable structural steels for fixed offshore structures – Technical delivery conditions Part 3: Hot finished hollow
EN 10297-1	E235, E275, E315, E355, E275K2, E355K2, E420J2, E470	Seamless steel tubes for mechanical and general engineering purposes
ČSN 42 5710 (42 5711)	11 353,0, 11 353,1	"Steel tubes suitable for screwing – medium (heavy) series"
DIN 2440 (DIN 2441)	St 33	"Steel tubes, medium (heavy) weight suitable for screwing"
NF A 49–115	TU 34-1	"Hot-rolled seamless steel tubes suitable for threading"
EN 10255	S195T	"Non-alloyed steel tubes suitable for screwing"
API Spec 5L (ISO 3183)	PSL 1: A, B, X42, X46, X52, X56, X60, X65, X70	Line pipe
	PSL 2 (+R) : BR, X42R,	
	PSL 2 (+N) : BN, X42N, X46N, X52N, X56N, X60N,	
	PSL 2 (+Q) : BQ, X42Q, X46Q, X52Q, X56Q, X60Q, X65Q, X70Q	
	PSL 2 (+N) : BNS, X42NS, X46NS, X52NS,	
	PSL 2 (+Q) : BQS, X42QS, X46QS, X52QS, X56QS, X60QS, X65QS, X70QS	
	PSL 2 (+N) : BNO, X42NO, X46NO, X52NO,	
	PSL 2 (+Q) : BQO, X42QO, X46QO, X52QO, X56QO, X60QO, X65QO, X70QO	
ISO 3183 Annex A:	PSL 2 (+N) : BNE, X42NE, X52NE, L415NE	PSL 2 pipe ordered for European onshore natural gas transmission pipelines

Outside diameter (mm)		Wall thickness (mm)										
		2,3 [1]	2,6	2,9	3,2	3,6	4	4,5	5	5,4 [2]	5,6	6,3
		Weight (kg/m)										
21,3		1,08	1,2	1,32	1,43	1,57	1,71					
22	3,4,5	1,12	1,24	1,37	1,48	1,63	1,78					
25	4,5	1,29	1,44	1,58	1,72	1,9	2,07					
25,4	1,3,4,5,	1,31	1,46	1,61	1,75	1,94	2,11					
26,9		1,4	1,56	1,72	1,87	2,07	2,26	2,49				
30	1,4		1,76	1,91	2,11	2,34	2,56	2,83				
31,8	4		1,87	2,07	2,26	2,5	2,74	3,03	3,31			
33,7			1,99	2,2	2,41	2,67	2,93	3,24	3,54	3,77	3,88	
35	4,5		2,08	2,3	2,51	2,79	3,06	3,38	3,7	3,94	4,06	
38	4		2,27	2,51	2,75	3,05	3,35	3,72	4,07	4,35	4,48	4,93
40	1,3,4,5		2,4	2,65	2,9	3,23	3,55	3,94	4,32	4,61	4,76	5,24
42,4			2,55	2,82	3,09	3,44	3,79	4,21	4,61	4,941	5,09[1]	5,61[1]
44,5	1,4		2,69	2,98	3,26	3,63	4	4,44	4,87	5,221	5,38[1]	5,94[1]
48,3			2,93	3,25	3,56	3,97	4,37	4,86	5,34	5,721	5,91[1]	6,53[1]
51	1,4			3,44	3,77	4,21	4,64	5,16	5,67	6,081	6,28[1]	6,96[1]
54	1,4			3,65	4,01	4,47	4,93	5,49	6,04	6,471	6,68[1]	7,41[1]
57	4,			3,87	4,25	4,74	5,23	5,83	6,41	6,871	7,10[1]	7,89[1]
60,3				4,11	4,51	5,03	5,55	6,19	6,82	7,31	7,55	8,39
63,5	1,4			4,33	4,76	5,32	5,87	6,55	7,21	7,74	8	8,89
70	1,4			4,8	5,27	5,9	6,51	7,27	8,01	8,6	8,89	9,9
73	4,5			5,01	5,51	6,16	6,81	7,6	8,38	9	9,31	10,4
76,1				5,24	5,75	6,44	7,11	7,95	8,77	9,42	9,74	10,8
82,5	4,5				6,26	7	7,74	8,66	9,56	10,3	10,6	11,8
88,9					6,76	7,57	8,38	9,37	10,3	11,1	11,5	12,8
101,6						8,7	9,63	10,8	11,9	12,8	13,3	14,8
108	4,					9,27	10,3	11,5	12,7	13,7	14,1	15,8
114,3						9,83	10,9	12,2	13,5	14,5	15	16,8
127	4,						12,1	13,6	15	16,2	16,8	18,8
133	4						12,7	14,3	15,8	17	17,6	19,7
139,7							13,4	15	16,6	17,9	18,5	20,7
141,3	3,4,5							15,2	16,8	18	18,7	21
152,4	4,5							16,4	18,2	19,6	20,3	22,7
159	4							17,1	19	20,5	21,2	23,7
168,3								18,2	20,1	21,7	22,5	25,2
177,8	5								21,3	23	23,8	26,6
193,7										25,1	26	29,1
219,1												33,1
244,5												37
273												41,4[1]

[1] The tubes can be ordered only by prior agreement.
[2] Wall thickness only acc to EN 10220.
[3] Pipes out of dimensional series of DIN 2448.
[4] Pipes out of dimensional series of EN 10210.
[5] Pipes out of dimensional series of NF A 49 – 112.

1.1 SEAMLESS TUBES AND PIPES > **DIMENSIONAL RANGE AND WEIGHT ACCORDING TO EN 10220 (ISO 4200)**

Outside diameter (mm)		Wall thickness (mm)											
		7,1	8	8,8	10	11	12,5	14,2	16	17,5	20	22,2 [1]	25 [1]
		Weight (kg/m)											
42,4		6,18[1]											
44,5	1,4	6,55[1]											
48,3		7,21[1]											
51	1,4	7,69[1]											
54	1,4	8,21[1]	9,08[1]										
57	4	8,74[1]	9,67[1]	10,46[1]									
60,3		9,32	10,3	11,2	12,46[1]								
63,5	1,4	9,88	11	11,89	13,19[1]								
70	1,4	11	12,2	13,3	14,8[1]								
73	4,5	11,5	12,8	13,95	15,54								
76,1		12,1	13,4	14,6	16,3								
82,5	4,5	13,2	14,7	16	17,9	19,4[1]							
88,9		14,3	16	17,4	19,5	21,1	23,6	26,2[1]					
101,6		16,5	18,5	20,1	22,6	24,6	27,5						
108	4	17,7	19,7	21,5	24,2	26,3	29,4						
114,3		18,8	21	22,9	25,7	28	31,4	35,1	38,8[1]	41,8[1]	46,5[1]		
127	4	21	23,5	25,7	28,9	31,5	35,3	39,5	43,8[1]	47,3[1]	52,8[1]		
133	4	22	24,7	27	30,3	33,1	37,1	41,6	46,2[1]	49,9[1]	55,7[1]		
139,7		23,2	26	28,4	32	34,9	39,2	43,9	48,8[1]	52,7[1]	59,0[1]		
141,3	3,4,5	23,5	26,3	28,8	32,4	35,3	39,7	44,5	49,4[1]	53,4[1]	59,8[1]		
152,4	4,5	25,4	28,5	31,2	35,1	38,4	43,1	48,4	53,8	58,2	65,3	71,3[1]	
159	4	26,6	29,8	32,6	36,7	40,1	45,2	50,7	56,4	61,1	68,6	74,9[1]	82,6[1]
168,3		28,2	31,6	34,6	39	42,7	48	54	60,1	65,1	73,1	80,0[1]	88,4[1]
177,8	5	29,9	33,5	36,7	41,4	45,2	51	57,3	63,8	69,2	77,8	85,2[1]	94,2[1]
193,7		32,7	36,6	40,1	45,3	49,6	55,9	62,9	70,1	76	85,7	93,9[1]	104[1]
219,1		37,1	41,6	45,6	51,6	56,5	63,7	71,8	80,1	87	98,2	1081	120[1]
244,5		41,6	46,7	51,2	57,8	63,3	71,5	80,6	90,2	98	111	122[1]	135[1]
273		46,6	52,3	57,3	64,9	71,1	80,3	90,6	101	110	125[1]	137[1]	

[1] The tubes can be ordered only by prior agreement.
[2] Wall thickness only acc to EN 10220.
[3] Pipes out of dimensional series of DIN 2448.
[4] Pipes out of dimensional series of EN 10210.
[5] Pipes out of dimensional series of NF A 49 – 112.

Specified diameter	Size NPS (ASTM)	Outside diameter		Wall thickness		Weight category	Schedule No,	Weight of pipe with plain ends	
in	-	in	mm	in	mm		(ASTM)	lb/ft	kg/m
1,2	1,2	0,84	21,34	0,109	2,77	STD	40	0,85	1,27
				0,147	3,73	XS	80	1,09	1,62
3,4	3,4	1,05	26,67	0,113	2,87	STD	40	1,13	1,69
				0,154	3,91	XS	80	1,48	2,2
1	1	1,315	33,4	0,133	3,38	STD	40	1,68	2,5
				0,179	4,55	XS	80	2,17	3,24
1 1/4	1 1/4	1,66	42,16	0,14	3,56	STD	40	2,27	3,39
				0,191	4,85	XS	80	3	4,47
1 1/2	1 1/2	1,9	48,26	0,145	3,68	STD	40	2,72	4,05
				0,2	5,08	XS	80	3,63	5,41
2 3/8	2	2, 375	60,32	0,125	3,18	...	30	3,01	4,48
				0,141	3,58	...	...	3,37	5,01
				0,154	3,91	STD	40	3,66	5,44
				0,172	4,37	...	...	4,05	6,03
				0,188	4,78	...	...	4,4	6,54
				0,218	5,54	XS	80	5,03	7,48
				0,25	6,35	...	...	5,68	8,45
				0,281	7,14	...	...	6,29	9,36
				0,344	8,74	...	160	7,47	11,11
2 7/8	2 1/2	2,875	73,02	0,125	3,18	...	...	3,67	5,48
				0,141	3,58	...	...	4,12	6,13
				0,156	3,96	...	...	4,53	6,74
				0,172	4,37	...	...	4,97	7,4
				0,188	4,78	...	30	5,4	8,04
				0,203	5,16	STD	40	5,8	8,63
				0,216	5,49	...	...	6,14	9,14
				0,25	6,35	...	...	7,02	10,44
				0,276	7,01	XS	80	7,67	11,41
				0,375	9,53	...	160	10,02	14,92
3 1/2	3	3,5	88,9	0,125	3,18	...	...	4,51	6,72
				0,141	3,58	...	...	5,06	7,53
				0,156	3,96	...	...	5,58	8,3
				0,172	4,37	...	...	6,12	9,11
				0,188	4,78	...	30	6,66	9,92
				0,216	5,49	STD	40	7,58	11,29
				0,25	6,35	...	...	8,69	12,93
				0,281	7,14	...	...	9,67	14,4
				0,3	7,62	XS	80	10,26	15,27
				0,438	11,13	...	160	14,34	21,35
4	3 1/2	4	101,6	0,141	3,58	...	...	5,82	8,65
				0,156	3,96	...	...	6,41	9,54
				0,172	4,37	...	...	7,04	10,48
				0,188	4,78	...	30	7,66	11,41
				0,226	5,74	STD	40	9,12	13,57
				0,25	6,35	...	...	10,02	14,92
				0,281	7,14	...	...	11,17	16,63
				0,318	8,08	XS	80	12,52	18,64
4 1/2	4	4,5	114,3	0,141	3,58	...	...	6,57	9,78
				0,156	3,96	...	...	7,24	10,78
				0,172	4,37	...	...	7,96	11,85
				0,188	4,78	...	30	8,67	12,91
				0,203	5,16	...	...	9,32	13,89
				0,219	5,56	...	...	10,02	14,91
				0,237	6,02	STD	40	10,8	16,08
				0,25	6,35	...	...	11,36	16,91
				0,281	7,14	...	...	12,67	18,87
				0,312	7,92	...	...	13,97	20,78
				0,337	8,56	XS	80	15	22,32
				0,438	11,13	...	120	19,02	28,32
				0,531	13,49	...	160	22,51	33,54

1.2 SEAMLESS TUBES AND PIPES > **DIMENSIONAL RANGE AND WEIGHT ACCORDING TO ASME B36.10M**

Specified diameter	Size NPS (ASTM)	Outside diameter		Wall thickness		Weight category	Schedule No,	Weight of pipe with plain ends	
in	in	in	mm	in	mm		(ASTM)	lb/ft	kg/m
5 9/16	5	5,563	141,3	0,156	3,96	...	...	9,02	13,41
				0,188	4,78	...	...	10,8	16,09
				0,219	5,56	...	...	12,51	18,61
				0,258	6,55	STD	40	14,63	21,77
				0,281	7,14	...	...	15,87	23,62
				0,312	7,92	...	...	17,51	26,05
				0,344	8,74	...	...	19,19	28,57
				0,375	9,53	XS	80	20,8	30,97
				0,5	12,7	...	120	27,06	40,28
6 5/8	6	6,625	168,28	0,188	4,78	...	...	12,94	19,28
				0,203	5,16	...	...	13,94	20,76
				0,219	5,56	...	...	15	22,31
				0,25	6,35	...	...	17,04	25,36
				0,28	7,11	STD	40	18,99	28,26
				0,312	7,92	...	...	21,06	31,33
				0,344	8,74	...	...	23,1	34,39
				0,375	9,53	...	...	25,05	37,31
				0,432	10,97	XS	80	28,6	42,56
				0,5	12,7	...	...	32,74	48,73
				0,562	14,27	...	120	36,43	54,21
				0,625	15,88	...	...	40,09	59,69
				0,719	18,26	...	160	45,39	67,57
8 5/8	8	8,625	219,08	0,25	6,35	...	20	22,38	33,32
				0,277	7,04	...	30	24,72	36,82
				0,312	7,92	...	...	27,73	41,25
				0,322	8,18	STD	40	28,58	42,55
				0,344	8,74	...	...	30,45	45,34
				0,375	9,53	...	...	33,07	49,25
				0,406	10,31	...	60	35,67	53,09
				0,438	11,13	...	...	38,33	57,08
				0,5	12,7	XS	80	43,43	64,64
				0,562	14,27	...	...	48,44	72,08
				0,594	15,09	...	100	51	75,92
				0,625	15,88	...	...	53,45	79,59
				0,719	18,26	...	120	60,77	90,44
10 3/4	10	10,75	273	0,25	6,35	...	20	28,06	41,76
				0,279	7,09	...	...	31,23	46,49
				0,307	7,8	...	30	34,27	51,01
				0,344	8,74	...	...	38,27	56,96
				0,365	9,27	STD	40	40,52	60,29
				0,438	11,13	...	...	48,28	71,88
				0,5	12,7	XS	60	54,79	81,53
				0,562	14,27	...	...	61,21	91,05
				0,594	15,09	...	80	64,49	95,98
				0,625	15,88	...	...	67,65	100,69
				0,719	18,26	...	100	77,1	114,71

WT (mm)	2,3	2,6	2,9	3,2	3,6	4	4,5	5	5,6	6,3	7,1
OD (mm)		-2,65	(2,77-2,87)	(3,18 - 3,38)	(3,56 - 3,73)	(3,91 - 4,24)	(4,37 - 4,55)	(4,78 - 5,16)	(5,21 - 5,74)	(6,02 - 6,55)	(6,88-7,14)
21,3	A	AFPN	AFPN	AFPN	AFPN	AFPN					
25	A	AFPN	AFPN	AFPN	AFPN	AFPN					
26,9	A	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN				
31,8		AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN			
33,7		AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN		
35		AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN		
38		AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	
42,4		AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN
44,5		AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN
48,3		AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN
51			AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN
54			AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN
57			AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN	AFPN
60,3			AFPLN	AFPLN	AFPLNEJ	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU
63,5			AFPLN	AFPLN	AFPLNEJ	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU
70			AFPLN	AFPLN	AFPLNEJ	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU
73			AFPLN	AFPLN	AFPLNEJ	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU
76,1			AFPLN	AFPLN	AFPLNEJ	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU
82,5				AFPLN	AFPLNEJ	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU
88,9				AFPLN	AFPLNEJ	AFPLNEZJU	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUSTQ	AFPLNEZJUSTQ
101,6					AFPLNEJ	AFPLNEZJU	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUSTQ	AFPLNEZJUSTQ
108					AFPLNEJ	AFPLNEZJU	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUSTQ	AFPLNEZJUSTQ
114,3					AFPLNEJ	AFPLNEZJU	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUSTQ	AFPLNEZJUSTQ
127						AFPLNEZJU	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUSTQ	AFPLNEZJUSTQ
133						AFPLNEZJU	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUSTQ	AFPLNEZJUSTQ
139,7						AFPLNEZJU	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUSTQ	AFPLNEZJUSTQ
152,4							AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUSTQ	AFPLNEZJUSTQ
159							AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUSTQ	AFPLNEZJUSTQ
168,3							AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUSTQ	AFPLNEZJUSTQ
177,8								AFPLNEZJUS	AFPLNEZJUS	AFPLNEZJUSTQ	AFPLNEZJUSTQ
193,7									AFPLNEZJUS	AFPLNEZJUSTQ	AFPLNEZJUSTQ
219,1										AFPLNEZJUSTQ	AFPLNEZJUSTQ
244,5										AFPLNEZJUSTQ	AFPLNEZJUSTQ
273										AFPLNEZJUST	AFPLNEZJUST

1.3 SEAMLESS TUBES AND PIPES > PRODUCTION POSSIBILITIES - SIZES OFFERED FOR PRODUCT GROUP

	structural	boiler	LP-PSL1	LP-PSL2
Ar / N / Q+T (NDT 12,5%, 10% or 5%)	OK	OK	OK	OK
Ar / N / N+T (NDT 12,5%, 10% or 5%)	OK	OK	OK	OK
Ar / N (NDT 12,5%, 10% or 5%)	OK	OK	OK	OK
Ar / N (NDT 12,5% or 10%)	OK	OK	OK	OK
PSL2 - Ar/N (NDT 12,5%)	OK	OK	OK	OK
Structural - Ar/N (NDT 12,5%, 10% or 5%)	OK	OK	-	-
Structural - Ar/N (NDT 12,5%)	OK	OK	-	-
PSL1 (NDT 12,5%)	OK	OK	OK	-
YS = max 320MPa (NDT 12,5%)	OK	OK	OK	-

WT (mm)	8	8,8	10	11	12,5	14,2	16	17,5	20	22,2	25
OD (mm)	(7,62 - 8,18)	(8,56 - 9,27)	(9,52 - 10,54)	-11,13	-12,7	(13,49 - 14,27)	-15,88	(18,0 - 18,26)			
54	AFPN										
57	AFPN	AFPN									
60,3	AFPLNEZJU	AFPLNEZ	AF								
63,5	AFPLNEZJU	AFPLNEZ	AF								
70	AFPLNEZJU	AFPLNEZJU	AF								
73	AFPLNEZJU	AFPLNEZJU	AFPLNEZ								
76,1	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU								
82,5	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU	AFPLNEZJU							
88,9	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZ	AFNZ					
101,6	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ						
108	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ						
114,3	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZQ	AFPNZ	AFPNZ		
127	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZ	AFPNZ		
133	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUST	AFPNZ		
139,7	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUST	AFNZ		
152,4	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUST	AFNZU	AF	
159	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUST	AFPLNEZJUST	AFNZ	AFNZ
168,3	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUST	AFPLNEZJUST	AFNZJUT	AFNZ
177,8	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUST	AFPLNEZJUST	AFNZJUT	AFNZ
193,7	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUST	AFPLNEZJUST	AFNZJUT	AFNZU
219,1	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUST	AFPLNEZJUST	AFNZJUT	AF
244,5	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUSTQ	AFPLNEZJUST	AFNZJUT	AF	AF
273	AFPLNEZJUST	AFPLNEZJUST	AFPLNEZJUST	AFPLNEZJUST	AFPLNEZJUST	AFPLNEZJUST	AFPLNEZJUST	AFPLNEZJUST	AF	AF	

				OD≥ 60,3mm		OD≥ 60,3 and WT≥ 3,6
Size-grade group	A	F	P	L	N	E
Norm	Re<320MPa (NDT 12,5%)	+AR / +NR (NDT 12,5%)	LP-PSL1 (NDT 12,5%)	LP - PSL2 (NDT 12,5%)	+NR / +N (KCV NDT 12,5%)	Onshore +NR (NDT 10%)
ČSN 411353	11353,0, 11353,1					
ČSN 411453		11453,0, /,1				
ČSN 411503					11503,1	
ČSN 411523					11523,1	
ČSN 411550		11550			11550,1	
ČSN 411650		11650			11650,1	
ČSN 412021	12021,1					
ČSN 412022	12022,1					
DIN 1629	St 37,0, St 44,0	St 52,0				
DIN 1630	St 37,4, St 44,4,	St 52,4				
DIN 17121	RSt 37-2, St 37-3, St 44-2, St 44-3				St 52 - 3	
DIN 17175	St 35,8, St 45,8					
EN 10208-1			L210GA, L235GA, L245GA, L290GA, L360GA			
EN 10208-2						L245NB, L290NB, L360NB, L415NB
EN 10210-1	S235JRH, S275J0H				S275J2H, S275NH, S355J0H, S355J2H, S355K2H, S355NH	
EN 10216-1	P195TR1, P235TR1, P265TR1, P195TR2, P235TR2, P265TR2					
EN 10216-2	P195GH, P235GH, P265GH					
EN 10216-3					P355N, P355NH	
EN 10216-4						
EN 10224	L235, L275	L355				
EN 10225						
EN 10297-1	E235, E275, E315	E355			E275K2, E355K2, E470	
NF A 49-112	TUE220A, TUE235A					
ASTM A 53/A53M	A, B					
ASME SA53/SA53M	A, B					
ASTM A106/A106M	A, B	C				
ASME SA106/SA106M	A, B	C				
ASTM A333/A333M					Gr,1, Gr,6	
ASME SA333/SA333M					Gr,1, Gr,6	
ASTM A335/A 335M						
ASME SA335/A 335M						
API 5L + ISO 3183 -PSL1			A, B, X42, X46, X52, X56, X60, X65 (+Ar)			
API 5L + ISO 3183 -PSL1			L245, L290, L320, L360, L390, L415, L450 (+Ar)			
API 5L + ISO 3183 -PSL2				BR, X42R and BN, X42N, X46N, X52N, X56N, X60N		
API 5L + ISO 3183 -PSL2				L245R, L290R and L245N, L290N, L320N, L360N, L390N, L415N		
API 5L +ISO 3183 -PSL2 +Annex H						
API 5L +ISO 3183 -PSL2 +Annex H						
API 5L +ISO 3183 -PSL2 +Annex J						
API 5L +ISO 3183 -PSL2 +Annex J						
ISO 3183 -PSL2 +Annex A						L245NE, L290NE, L360NE, L415NE

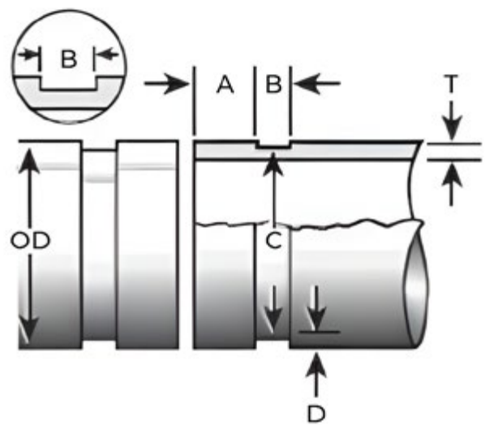
1.4 SEAMLESS TUBES AND PIPES > **PRODUCTION POSSIBILITIES - PRODUCT GROUP**

OD≥ 60,3 and WT≥ 4,0	OD≥ 60,3; WT≥3,6	OD=≥ 60,3 and WT≥4,0	OD≥ 88,9; WT≥ 4,5	OD≥ 88,9; WT≥6,3	OD= 88,9 - 245 and WT≥ 6,3
Z	J	U	S	T	Q
+N (add, +N + NDT 12,5%)	TC2 +Nr (NDT 5%)	TC2 + add +N (NDT 5%)	LP-Spec (NDT 5%)	+NT (TC2)	+QT / spec +NT (TC2)
S275NLH, S355NLH, S420NH, S420NLH, S460NH, S460NLH					
	P195GH, P235GH, P265GH, 16Mo3			10CrMo5-5, 10CrMo9-10, 13CrMo4-5	X11CrMo5+NT1 (NT2), X11CrMo9-1+NT/ only WT=min,8,0mm)
P275NL1, P275NL2, P355NL1, P355NL2, P460NL1, P460NL2		P275NL1 /NL2, P355N, P355NH, P355NL1 /NL2, P460NL1 /2			
P215NL, P265NL		P215NL, P265NL			
		S355G1+N, S355G14+N, S355G15+N			
E420J2					34CrMo4 (Q+T) only WT=min,8,0mm
				P1, P11, P12, P22	P5, P9, P91 (= +NT) only WT=min,8,0mm
				P1, P11, P12, P22	P5, P9, P91 (= +NT) only WT=min,8,0mm
					X65, X70
					L450, L485
					BQ, X42Q, X46Q, X52Q, X56Q, X60Q, X65Q, X70Q
					L245Q, L290Q, L320Q, L360Q, L390Q, L415Q, L450Q, L485Q
			BNS, X42NS, X46NS, X52NS		BQS, X42QS, X46QS, X52QS, X56QS, X60QS, X65QS, X70QS
			L245NS, L290NS, L320NS, L360NS		L245QS, L290QS, L320QS, L360QS, L390QS, L415QS, L450QS, L485QS
			BNO, X42NO, X46NO, X52NO		BQO, X42QO, X46QO, X52QO, X56QO, X60QO, X65QO, X70QO
			L245NO, L290NO, L320NO, L360NO		L245QO, L290QO, L320QO, L360QO, L390QO, L415QO, L450QO, L485QO
					L360QE, L415QE, L450QE, L485QE

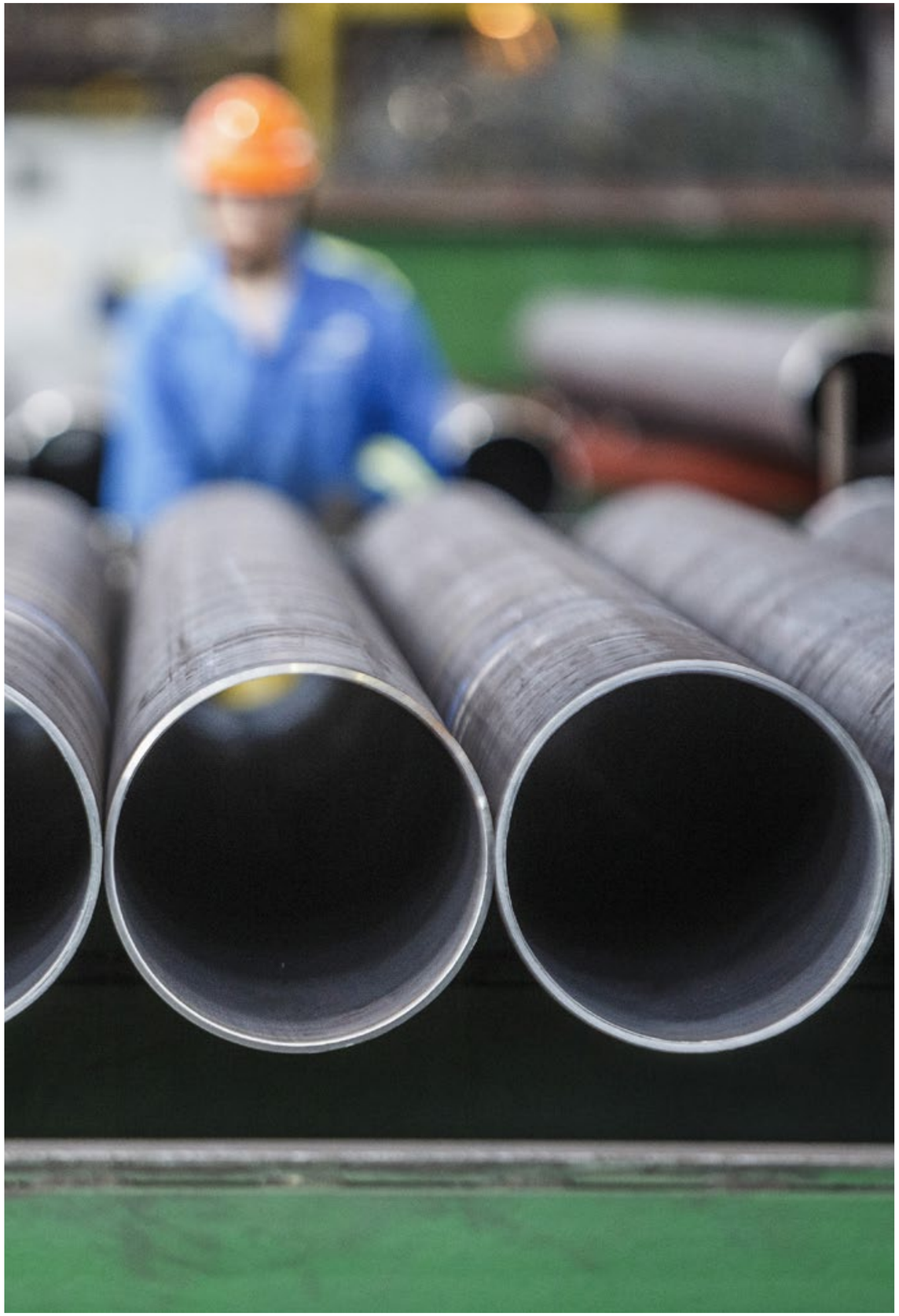
GROOVE FOR VICTAULIC CONNECTION

Application for high universal connection with fast and simple instalation of pipeline.
Pipes can be produced in grades acc. to customer requirement.

OD	min t	OD tol.	A (±0,76mm)	B (±0,76mm)	C	C tol.	D ref.
114,3	5,16	-0,79 / +1,14	15,88	9,53	110,08	-0,51 / +0,00	2,11
127	5,4	-0,79 / +1,27	15,88	9,53	122,78	-0,51 / +0,00	2,11
139,7	5,4	-0,79 / +1,42	15,88	9,53	135,48	-0,51 / +0,00	2,11
141,3	5,56	-0,79 / +1,42	15,88	9,53	137,03	-0,51 / +0,00	2,13
152,4	5,6	-0,79 / +1,42	15,88	9,53	148,08	-0,56 / +0,00	2,16
159	6,3	-0,79 / +1,6	15,88	9,53	153,2	-0,76 / +0,00	2,77
168,3	5,56	-0,79 / +1,6	15,88	9,53	163,96	-0,56 / +0,00	2,16
219,1	6,35	-0,79 / +1,6	19,05	11,13	214,4	-0,64 / +0,00	2,34
273	6,35	-0,79 / +1,6	19,05	12,7	268,28	-0,69 / +0,00	2,39



Note: values in mm
Pipes are delivered without connection components and seal



2.0
Boiler Pipes

STANDARD	GRADES	APPLICATION
ASTM A 106 (ASME SA106)	A, B, C	Standard specification for seamless carbon steel pipe for high temperature service
ASTM A 192 (ASME SA192)	A 192	Standard specification for seamless carbon steel boiler tubes for high-pressure service
ASTM A 210 (ASME SA210)	A-1, C	Standard specification for seamless medium-carbon steel boiler and super heater tubes
ASTM A 333 (ASME SA333)	Gr 1, Gr 6	Standard specification for seamless and welded steel pipes for low-temperature service
ASTM A 335 (ASME SA335)	P1, P5, P9, P11, P12, P22	Standard specification for seamless Ferritic Alloy-Steel pipes for High-temperature service
ČSN 42 0251	12021,1, 12022,1	Seamless steel tubes with guaranteed properties at elevated temperatures
DIN 17175	St 35,8, St 45,8 – (only in category I,)	Seamless steel tubes for elevated temperatures" quality grade I
EN 10216-1	P195TR1, P195TR2, P235TR1, P235TR2, P265TR1, P265TR2	Seamless steel tubes for pressure purposes" Part 1: Non-alloy steel tubes with specified room temperature properties
EN 10216-2	P195GH, P235GH, P265GH, 16Mo3, 10CrMo5-5, 10CrMo9-10, 13CrMo4-5, X11CrMo5+NT1, X11CrMo9-1+NT1	Seamless steel tubes for pressure purposes" Part 2: Non-alloy and alloy steel tubes with specified elevated temperature properties
EN 10216-3	P275NL1, P275NL2, P355N, P355NH, P355NL1, P355NL2; P355NL2, P460N, P460NH, P460NL1, P460NL2	Seamless steel tubes for pressure purposes " Part 3 – Alloy and fine grain steel tubes
EN 10216-4	P215NL, P265NL	Seamless steel tubes for pressure purposes " Part 4 – Non-alloy and alloy steel tubes with specified low temperature properties

LENGTHS

Plain-end tubes and pipes are supplied from carbon or micro-alloyed or alloyed steel in the following lengths:

Production length:
in a range of 4,5 – 12,8 m, lengths selected by the producer
by technological possibilities

Set length:
nominal length selected by the customer from the range
of production lengths with a tolerance of ± 500 mm

Exact length:
nominal length selected by the customer following agreement
with the producer.

Max. length of tubes:
< Ø 60.3 mm 9.5 m
≥ Ø 60.3 mm 12.5 m by technological possibility – see tables of sizes

ENDS OF TUBES AND PIPES

The tubes and pipes are standardly supplied with the square cut and de-burred ends. Other types of pipe end finish can be supplied after agreement with the producer (e.g. bevelled ends).

Pipes with WT ≤ 3,18mm are supplied only with square cut ends. Pipes with WT > 3,18mm can be supplied either with perpendicularly cut off ends or with beveled ends at an angle of 30° (-0/+5°) as per API Spec 5L, or ISO 3183, or ASTM A 106, or according to other standards (e.g. ASME B16.25, DIN 2559) with prior agreement.

Outside diameter (mm)		Wall thickness (mm)										
		2,3 1	2,6	2,9	3,2	3,6	4	4,5	5	5,4 2	5,6	6,3
		Weight (kg/m)										
21,3		1,08	1,2	1,32	1,43	1,57	1,71					
22	3,4,5	1,12	1,24	1,37	1,48	1,63	1,78					
25	4,5	1,29	1,44	1,58	1,72	1,9	2,07					
25,4	1,3,4,5,	1,31	1,46	1,61	1,75	1,94	2,11					
26,9		1,4	1,56	1,72	1,87	2,07	2,26	2,49				
30	1,4		1,76	1,91	2,11	2,34	2,56	2,83				
31,8	4		1,87	2,07	2,26	2,5	2,74	3,03	3,31			
33,7			1,99	2,2	2,41	2,67	2,93	3,24	3,54	3,77	3,88	
35	4,5		2,08	2,3	2,51	2,79	3,06	3,38	3,7	3,94	4,06	
38	4		2,27	2,51	2,75	3,05	3,35	3,72	4,07	4,35	4,48	4,93
40	1,3,4,5		2,4	2,65	2,9	3,23	3,55	3,94	4,32	4,61	4,76	5,24
42,4			2,55	2,82	3,09	3,44	3,79	4,21	4,61	4,941	5,09[1]	5,61[1]
44,5	1,4		2,69	2,98	3,26	3,63	4	4,44	4,87	5,221	5,38[1]	5,94[1]
48,3			2,93	3,25	3,56	3,97	4,37	4,86	5,34	5,721	5,91[1]	6,53[1]
51	1,4			3,44	3,77	4,21	4,64	5,16	5,67	6,081	6,28[1]	6,96[1]
54	1,4			3,65	4,01	4,47	4,93	5,49	6,04	6,471	6,68[1]	7,41[1]
57	4			3,87	4,25	4,74	5,23	5,83	6,41	6,871	7,10[1]	7,89[1]
60,3				4,11	4,51	5,03	5,55	6,19	6,82	7,31	7,55	8,39
63,5	1,4			4,33	4,76	5,32	5,87	6,55	7,21	7,74	8	8,89
70	1,4			4,8	5,27	5,9	6,51	7,27	8,01	8,6	8,89	9,9
73	4,5			5,01	5,51	6,16	6,81	7,6	8,38	9	9,31	10,4
76,1				5,24	5,75	6,44	7,11	7,95	8,77	9,42	9,74	10,8
82,5	4,5				6,26	7	7,74	8,66	9,56	10,3	10,6	11,8
88,9					6,76	7,57	8,38	9,37	10,3	11,1	11,5	12,8
101,6						8,7	9,63	10,8	11,9	12,8	13,3	14,8
108	4					9,27	10,3	11,5	12,7	13,7	14,1	15,8
114,3						9,83	10,9	12,2	13,5	14,5	15	16,8
127	4						12,1	13,6	15	16,2	16,8	18,8
133	4						12,7	14,3	15,8	17	17,6	19,7
139,7							13,4	15	16,6	17,9	18,5	20,7
141,3	3,4,5							15,2	16,8	18	18,7	21
152,4	4,5							16,4	18,2	19,6	20,3	22,7
159	4							17,1	19	20,5	21,2	23,7
168,3								18,2	20,1	21,7	22,5	25,2
177,8	5								21,3	23	23,8	26,6
193,7										25,1	26	29,1
219,1												33,1
244,5												37
273												41,41

[1] The tubes can be ordered only by prior agreement,
[2] Wall thickness onlyy acc to EN 10220,
[3] Pipes out of dimensional series of DIN 2448,
[4] Pipes out of dimensional series of EN 10210,
[5] Pipes out of dimensional series of NF A 49 – 112,

2.2 BOILER SEAMLESS PIPES > **DIMENSIONAL RANGE AND WEIGHT ACCORDING TO EN 10220 (ISO 4200)**

Outside diameter (mm)		Wall thickness (mm)										
		7,1	8	8,8	10	11	12,5	14,2	16	17,5	20	22,2 1	25 1
		Weight (kg/m)											
42,4		6,18[1]											
44,5	1,4	6,55[1]											
48,3		7,21[1]											
51	1,4	7,69[1]											
54	1,4	8,21[1]	9,08[1]										
57	4	8,74[1]	9,67[1]	10,46[1]									
60,3		9,32	10,3	11,2	12,46[1]								
63,5	1,4	9,88	11	11,89	13,19[1]								
70	1,4	11	12,2	13,3	14,8[1]								
73	4,5	11,5	12,8	13,95	15,54								
76,1		12,1	13,4	14,6	16,3								
82,5	4,5	13,2	14,7	16	17,9	19,4[1]							
88,9		14,3	16	17,4	19,5	21,1	23,6	26,2[1]					
101,6		16,5	18,5	20,1	22,6	24,6	27,5						
108	4	17,7	19,7	21,5	24,2	26,3	29,4						
114,3		18,8	21	22,9	25,7	28	31,4	35,1	38,8[1]	41,8[1]	46,5[1]		
127	4	21	23,5	25,7	28,9	31,5	35,3	39,5	43,8[1]	47,3[1]	52,8[1]		
133	4	22	24,7	27	30,3	33,1	37,1	41,6	46,2[1]	49,9[1]	55,7[1]		
139,7		23,2	26	28,4	32	34,9	39,2	43,9	48,8[1]	52,7[1]	59,0[1]		
141,3	3,4,5	23,5	26,3	28,8	32,4	35,3	39,7	44,5	49,4[1]	53,4[1]	59,8[1]		
152,4	4,5	25,4	28,5	31,2	35,1	38,4	43,1	48,4	53,8	58,2	65,3	71,3[1]	
159	4	26,6	29,8	32,6	36,7	40,1	45,2	50,7	56,4	61,1	68,6	74,9[1]	82,6[1]
168,3		28,2	31,6	34,6	39	42,7	48	54	60,1	65,1	73,1	80,0[1]	88,4[1]
177,8	5	29,9	33,5	36,7	41,4	45,2	51	57,3	63,8	69,2	77,8	85,2[1]	94,2[1]
193,7		32,7	36,6	40,1	45,3	49,6	55,9	62,9	70,1	76	85,7	93,9[1]	104[1]
219,1		37,1	41,6	45,6	51,6	56,5	63,7	71,8	80,1	87	98,2	1081	120[1]
244,5		41,6	46,7	51,2	57,8	63,3	71,5	80,6	90,2	98	111	122[1]	135[1]
273		46,6	52,3	57,3	64,9	71,1	80,3	90,6	101	110	1251	137[1]	

[1] The tubes can be ordered only by prior agreement,
[2] Wall thickness onlyy acc to EN 10220,
[3] Pipes out of dimensional series of DIN 2448,
[4] Pipes out of dimensional series of EN 10210,
[5] Pipes out of dimensional series of NF A 49 – 112,

Specified diameter	Size NPS (ASTM)	Outside diameter		Wall thickness		Weight category	Schedule No, (ASTM)	Weight of pipe with plain ends	
in	-	in	mm	in	mm			lb/ft	kg/m
1,2	1,2	0,84	21,34	0,109	2,77	STD	40	0,85	1,27
				0,147	3,73	XS	80	1,09	1,62
3,4	3,4	1,05	26,67	0,113	2,87	STD	40	1,13	1,69
				0,154	3,91	XS	80	1,48	2,2
1	1	1,315	33,4	0,133	3,38	STD	40	1,68	2,5
				0,179	4,55	XS	80	2,17	3,24
1 1/4	1 1/4	1,66	42,16	0,14	3,56	STD	40	2,27	3,39
				0,191	4,85	XS	80	3	4,47
1 1/2	1 1/2	1,9	48,26	0,145	3,68	STD	40	2,72	4,05
				0,2	5,08	XS	80	3,63	5,41
2 3/8	2	2, 375	60,32	0,125	3,18	...	30	3,01	4,48
				0,141	3,58	...	...	3,37	5,01
				0,154	3,91	STD	40	3,66	5,44
				0,172	4,37	...	...	4,05	6,03
				0,188	4,78	...	...	4,4	6,54
				0,218	5,54	XS	80	5,03	7,48
				0,25	6,35	...	...	5,68	8,45
				0,281	7,14	...	...	6,29	9,36
				0,344	8,74	...	160	7,47	11,11
2 7/8	2 1/2	2,875	73,02	0,125	3,18	...	...	3,67	5,48
				0,141	3,58	...	...	4,12	6,13
				0,156	3,96	...	...	4,53	6,74
				0,172	4,37	...	...	4,97	7,4
				0,188	4,78	...	30	5,4	8,04
				0,203	5,16	STD	40	5,8	8,63
				0,216	5,49	...	...	6,14	9,14
				0,25	6,35	...	...	7,02	10,44
				0,276	7,01	XS	80	7,67	11,41
				0,375	9,53	...	160	10,02	14,92
3 1/2	3	3,5	88,9	0,125	3,18	...	...	4,51	6,72
				0,141	3,58	...	...	5,06	7,53
				0,156	3,96	...	...	5,58	8,3
				0,172	4,37	...	...	6,12	9,11
				0,188	4,78	...	30	6,66	9,92
				0,216	5,49	STD	40	7,58	11,29
				0,25	6,35	...	...	8,69	12,93
				0,281	7,14	...	...	9,67	14,4
				0,3	7,62	XS	80	10,26	15,27
				0,438	11,13	...	160	14,34	21,35
4	3 1/2	4	101,6	0,141	3,58	...	...	5,82	8,65
				0,156	3,96	...	...	6,41	9,54
				0,172	4,37	...	...	7,04	10,48
				0,188	4,78	...	30	7,66	11,41
				0,226	5,74	STD	40	9,12	13,57
				0,25	6,35	...	...	10,02	14,92
				0,281	7,14	...	...	11,17	16,63
				0,318	8,08	XS	80	12,52	18,64
4 1/2	4	4,5	114,3	0,141	3,58	...	...	6,57	9,78
				0,156	3,96	...	...	7,24	10,78
				0,172	4,37	...	...	7,96	11,85
				0,188	4,78	...	30	8,67	12,91
				0,203	5,16	...	...	9,32	13,89
				0,219	5,56	...	...	10,02	14,91
				0,237	6,02	STD	40	10,8	16,08
				0,25	6,35	...	...	11,36	16,91
				0,281	7,14	...	...	12,67	18,87
				0,312	7,92	...	...	13,97	20,78
				0,337	8,56	XS	80	15	22,32
				0,438	11,13	...	120	19,02	28,32
				0,531	13,49	...	160	22,51	33,54

2.3 BOILER SEAMLESS PIPES > **DIMENSIONAL RANGE AND WEIGHT ACCORDING TO ASME B36.10M**

Specified diameter	Size NPS (ASTM)	Outside diameter		Wall thickness		Weight category	Schedule No, (ASTM)	Weight of pipe with plain ends	
in	in	in	mm	in	mm			lb/ft	kg/m
5 9/16	5	5,563	141,3	0,156	3,96	...	...	9,02	13,41
				0,188	4,78	...	...	10,8	16,09
				0,219	5,56	...	...	12,51	18,61
				0,258	6,55	STD	40	14,63	21,77
				0,281	7,14	...	...	15,87	23,62
				0,312	7,92	...	...	17,51	26,05
				0,344	8,74	...	...	19,19	28,57
				0,375	9,53	XS	80	20,8	30,97
				0,5	12,7	...	120	27,06	40,28
6 5/8	6	6,625	168,28	0,188	4,78	...	...	12,94	19,28
				0,203	5,16	...	...	13,94	20,76
				0,219	5,56	...	...	15	22,31
				0,25	6,35	...	...	17,04	25,36
				0,28	7,11	STD	40	18,99	28,26
				0,312	7,92	...	...	21,06	31,33
				0,344	8,74	...	...	23,1	34,39
				0,375	9,53	...	...	25,05	37,31
				0,432	10,97	XS	80	28,6	42,56
				0,5	12,7	...	...	32,74	48,73
				0,562	14,27	...	120	36,43	54,21
				0,625	15,88	...	...	40,09	59,69
				0,719	18,26	...	160	45,39	67,57
8 5/8	8	8,625	219,08	0,25	6,35	...	20	22,38	33,32
				0,277	7,04	...	30	24,72	36,82
				0,312	7,92	...	...	27,73	41,25
				0,322	8,18	STD	40	28,58	42,55
				0,344	8,74	...	...	30,45	45,34
				0,375	9,53	...	...	33,07	49,25
				0,406	10,31	...	60	35,67	53,09
				0,438	11,13	...	...	38,33	57,08
				0,5	12,7	XS	80	43,43	64,64
				0,562	14,27	...	...	48,44	72,08
				0,594	15,09	...	100	51	75,92
				0,625	15,88	...	...	53,45	79,59
				0,719	18,26	...	120	60,77	90,44
10 3/4	10	10,75	273	0,25	6,35	...	20	28,06	41,76
				0,279	7,09	...	...	31,23	46,49
				0,307	7,8	...	30	34,27	51,01
				0,344	8,74	...	...	38,27	56,96
				0,365	9,27	STD	40	40,52	60,29
				0,438	11,13	...	...	48,28	71,88
				0,5	12,7	XS	60	54,79	81,53
				0,562	14,27	...	...	61,21	91,05
				0,594	15,09	...	80	64,49	95,98
				0,625	15,88	...	...	67,65	100,69
				0,719	18,26	...	100	77,1	114,71

WT (mm)	2,3	2,6	2,9	3,2	3,6	4	4,5	5	5,6	6,3	7,1
OD (mm)		(2,65)	(2,77-2,87)	(3,18 - 3,38)	(3,56 - 3,73)	(3,91 - 4,24)	(4,37 - 4,55)	(4,78 - 5,16)	(5,21 - 5,74)	(6,02 - 6,55)	(6,88-7,14)
21,3	A	AN	AN	AN	AN	AN					
25	A	AN	AN	AN	AN	AN					
26,9	A	AN	AN	AN	AN	AN	AN				
31,8		AN	AN	AN	AN	AN	AN	AN			
33,7		AN	AN	AN	AN	AN	AN	AN	AN		
35		AN	AN	AN	AN	AN	AN	AN	AN		
38		AN	AN	AN	AN	AN	AN	AN	AN	AN	
42,4		AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
44,5		AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
48,3		AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
51			AN	AN	AN	AN	AN	AN	AN	AN	AN
54			AN	AN	AN	AN	AN	AN	AN	AN	AN
57			AN	AN	AN	AN	AN	AN	AN	AN	AN
60,3			AN	AN	ANJ	ANJ	ANZJU	ANZJU	ANZJU	ANZJU	ANZJU
63,5			AN	AN	ANJ	ANJ	ANZJU	ANZJU	ANZJU	ANZJU	ANZJU
70			AN	AN	ANJ	ANJ	ANZJU	ANZJU	ANZJU	ANZJU	ANZJU
73			AN	AN	ANJ	ANJ	ANZJU	ANZJU	ANZJU	ANZJU	ANZJU
76,1			AN	AN	ANJ	ANJ	ANZJU	ANZJU	ANZJU	ANZJU	ANZJU
82,5				AN	ANJ	ANJ	ANZJU	ANZJU	ANZJU	ANZJU	ANZJU
88,9				AN	ANJ	ANZJU	ANZJU	ANZJU	ANZJU	ANZJUTQ	ANZJUTQ
101,6					ANJ	ANZJU	ANZJU	ANZJU	ANZJU	ANZJUTQ	ANZJUTQ
108					ANJ	ANZJU	ANZJU	ANZJU	ANZJU	ANZJUTQ	ANZJUTQ
114,3					ANJ	ANZJU	ANZJU	ANZJU	ANZJU	ANZJUTQ	ANZJUTQ
127						ANZJU	ANZJU	ANZJU	ANZJU	ANZJUTQ	ANZJUTQ
133						ANZJU	ANZJU	ANZJU	ANZJU	ANZJUTQ	ANZJUTQ
139,7						ANZJU	ANZJU	ANZJU	ANZJU	ANZJUTQ	ANZJUTQ
152,4							ANZJU	ANZJU	ANZJU	ANZJUTQ	ANZJUTQ
159							ANZJU	ANZJU	ANZJU	ANZJUTQ	ANZJUTQ
168,3							ANZJU	ANZJU	ANZJU	ANZJUTQ	ANZJUTQ
177,8								ANZJU	ANZJU	ANZJUTQ	ANZJUTQ
193,7									ANZJU	ANZJUTQ	ANZJUTQ
219,1										ANZJUTQ	ANZJUTQ
244,5										ANZJUTQ	ANZJUTQ
273										ANZJUT	ANZJUT

2.4 BOILER SEAMLESS PIPES > **PRODUCTION POSSIBILITIES - SIZES OFFERED FOR PRODUCT GROUP**

8	8,8	10	11	12,5	14,2	16	17,5	20	22,2	25
(7,62 - 8,18)	(8,56 - 9,27)	(9,52 - 10,54)	(11,13)	(12,7)	(13,49 - 14,27)	(15,88)	(18,0 - 18,26)			
			Ar / N / Q+T (NDT 12,5%, 10% or 5%)							
			Ar / N / N+T (NDT 12,5%, 10% or 5%)							
			Ar / N (NDT 12,5%, 10% or 5%)							
			Ar / N (NDT 12,5% or 10%)							
			PSL2 - Ar/N (NDT 12,5%)							
			Structural - Ar/N (NDT 12,5%, 10% or 5%)							
			Structural - Ar/N (NDT 12,5%)							
			PSL1 (NDT 12,5%)							
			YS = max 320MPa (NDT 12,5%)							
AN										
AN	AN									
ANZJU	ANZ	A								
ANZJU	ANZ	A								
ANZJU	ANZJU	A								
ANZJU	ANZJU	ANZ								
ANZJU	ANZJU	ANZJU								
ANZJU	ANZJU	ANZJU	ANZJU							
ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZ	ANZ					
ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ						
ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ						
ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZQ	ANZ	ANZ		
ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZ	ANZ		
ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUT	ANZ		
ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUT	ANZ		
ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUT	ANZU	A	
ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUT	ANZJUT	ANZ	ANZ
ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUT	ANZJUT	ANZJUT	ANZ
ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUT	ANZJUT	ANZJUT	ANZ
ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUT	ANZJUT	ANZJUT	ANZU
ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUT	ANZJUT	ANZJUT	A
ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUTQ	ANZJUT	ANZJUT	A	A
ANZJUT	ANZJUT	ANZJUT	ANZJUT	ANZJUT	ANZJUT	ANZJUT	ANZJUT	A	A	

			OD≥ 60,3 and WT≥ 4,0
Size-grade group	A	N	Z
Norm	Re<320MPa (NDT 12,5%)	+NR / +N (KCV NDT 12,5%)	+N (add, +N + NDT 12,5%)
ČSN 412021	12021,1		
ČSN 412022	12022,1		
DIN 17175	St 35,8, St 45,8		
EN 10216-2	P195GH, P235GH, P265GH		
EN 10216-3		P355N, P355NH	P275NL1, P275NL2, P355NL1, P355NL2, P460N, P460NH, P460NL1, P460NL2
EN 10216-4			P215NL, P265NL
ASTM A106/ ASME SA106	A, B	C	
ASTM A333/ ASME SA333		Gr,1, Gr,6	
ASTM A335/ ASME SA335			
ASTM A 192/(ASME SA192	A 192	C	
ASTM A 210/ ASME SA210	A-1	C	

OD≥ 60,3; WT≥3,6	OD=≥ 60,3 and WT≥4,0	OD≥ 88,9; WT≥6,3	OD= 88,9 - 245 and WT≥ 6,3
J	U	T	Q
TC2 +Nr (NDT 5%)	TC2 + add +N (NDT 5%)	+NT (TC2)	+QT / spec +NT (TC2)
P195GH, P235GH, P265GH, 16Mo3		10CrMo5-5, 10CrMo9-10, 13CrMo4-5	X11CrMo5+NT1 (NT2), X11CrMo9-1+NT only WT=min,8,0mm
	P275NL1 /NL2, P355N/NH, P355NL1 /NL2, P460N/NH, P460NL1 /2		
	P215NL, P265NL		
		P1, P11, P12, P22	P5, P9 (= +NT) only WT=min,8,0mm

2.5 BOILER SEAMLESS ALLOYED PIPES

OD	WT (mm)										
(mm)	2,3	2,6 -2,65	2,9 (2,77-2,87)	3,2 (3,18 - 3,38)	3,6 (3,56 - 3,73)	4 (3,91 - 4,24)	4,5 (4,37 - 4,55)	5 (4,78 - 5,16)	5,6 (5,21 - 5,74)	6,3 (6,02 - 6,55)	7,1 (6,88-7,14)
60,3						A	A	A	A	A,B	A,B
63,5						A	A	A	A	A,B	A,B
70						A	A	A	A	A,B	A,B
73						A	A	A	A	A,B	A,B
76,1						A	A	A	A	A,B	A,B
82,5						A	A	A	A	A,B	A,B
88,9						A	A	A	A	A,B	A,B
101,6						A	A	A	A	A,B	A,B
108						A	A	A	A	A,B	A,B
114,3						A	A	A	A	A,B	A,B
127						A	A	A	A	A,B	A,B
133						A	A	A	A	A,B	A,B
139,7						A	A	A	A	A,B	A,B
152,4							A	A	A	A,B	A,B
159							A	A	A	A,B	A,B
168,3							A	A	A	A,B	A,B
177,8								A	A	A,B	A,B
193,7									A	A,B	A,B
219,1										A,B	A,B
244,5										A,B	A,B
273										A,B	A,B

OD	WT (mm)										
(mm)	8 (7,62 - 8,18)	8,8 (8,56 - 9,27)	10 (9,52 - 10,54)	11 -11,13	12,5 -12,7	14,2 (13,49 - 14,27)	16 -15,88	17,5 (18,0 - 18,26)	20	22,2	25
60,3	A,B										
63,5	A,B	A,B									
70	A,B	A,B									
73	A,B	A,B									
76,1	A,B	A,B	A,B								
82,5	A,B	A,B	A,B	A,B							
88,9	A,B	A,B,C	A,B,C	A,B,C							
101,6	A,B	A,B,C	A,B,C	A,B,C	A,B,C						
108	A,B	A,B,C	A,B,C	A,B,C	A,B,C						
114,3	A,B	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C					
127	A,B	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C				
133	A,B	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C			
139,7	A,B	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C			
152,4	A,B	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C		
159	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C		
168,3	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C		
177,8	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C		
193,7	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C		
219,1	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C		
244,5	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C		
273	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C	A,B,C			

Legend:			Billet size for relevant grade:		
EN 10216-2	ASTM/ASME 335	in table	OD 130	OD 160	OD 200
16Mo3	-	= A			
10CrMo5-5	P11	= B			
10CrMo9-10	P22	= B			
13CrMo4-5	P12	= B			
-	P1	= B			
X11CrMo5+NT1	P5	= C			
X11CrMo5+NT2	P5	= C			
X11CrMo9-1+NT	P9	= C			

Possible production of grades TC2 in range marked „A“:

EN 10216-2 P195GH, P235GH, P265GH, 16Mo3
EN 10216-3 P275NL1, P275NL2, P355N, P355NH, P355NL1, P355NL2, P460N, P460NH, P460NL1, P460NL2
EN 10216-4 P215NL, P265NL

3.0
Line Pipes

3.1 LINE PIPES > **PRODUCTION POSSIBILITIES - PRODUCT GROUP**

STANDARD	GRADES	APPLICATION
API Spec 5L (ISO 3183)	PSL 1: A, B, X42, X46, X52, X56, X60, X65, X70	Line pipe
	PSL 2 (+R) : BR, X42R,	
	PSL 2 (+N) : BN, X42N, X46N, X52N, X56N, X60N,	
	PSL 2 (+Q) : BQ, X42Q, X46Q, X52Q, X56Q, X60Q, X65Q, X70Q	
	PSL 2 (+N) : BNS, X42NS, X46NS, X52NS,	
	PSL 2 (+Q) : BQS, X42QS, X46QS, X52QS, X56QS, X60QS, X65QS, X70QS	
	PSL 2 (+N) : BNO, X42NO, X46NO, X52NO,	
	PSL 2 (+Q) : BQO, X42QO, X46QO, X52QO, X56QO, X60QO, X65QO, X70QO	
ISO 3183 Annex A:	PSL 2 (+N) : BNE, X42NE, X52NE, X60NE	PSL 2 pipe ordered for European onshore natural gas transmission pipelines
	PSL 2 (+Q) : X52QE, X60QE, X65QE, X70QE	

Standard		grade	Size-grade group		Ar / N / Q+T (NDT 10% or 5%)
API 5L + ISO 3183	PSL1	A to X65 (+Ar) L210 to L450 (+Ar)	P	LP-PSL1	
		X65, X70 L450, L485	Q	+QT	
	PSL2	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	L	LP - PSL2	
		BQ to X70Q L245Q to L485Q	Q	+QT	
	PSL2 +Annex H	BNS to X52NS L245NS to L360NS	S	LP-Spec (NDT 5% NWT)	
		BQS to X70QS L245QS to L485QS	Q	+QT	
	PSL2 +Annex J	BNO to X52NO L245NO to L360NO	S	LP-Spec (NDT 5% NWT)	
		BQO to X70QO L245QO to L485QO	Q	+QT	
ISO 3183	PSL2 +Annex A	L245NE to L415NE	E	NDT10% WT	
		L360QE to 485QE	Q	+QT	

Ar / N / Q+T (NDT 12,5% or 10%)	Ar / N (NDT 10% or 5%)	Ar / N (NDT 12,5% or 10%)	PSL2 - Ar/N (NDT 12,5%)	PSL1 (NDT 12,5%)	A, B - PSL1 (NDT 12,5%)
					A, B - PSL1
	-	-	-	-	-
				-	-
	-	-	-	-	-
-		-	-	-	-
-	-	-	-	-	-
-		-	-	-	-
-	-	-	-	-	-
			-	-	-
	-	-	-	-	-

3.2 LINE PIPES > **PRODUCTION POSSIBILITIES - SIZES OFFERED FOR PRODUCT GROUP**

WT (mm)	2,3	2,6 -2,65	2,9 (2,77-2,87)	3,2 (3,18 - 3,38)	3,6 (3,56 - 3,73)	4 (3,91 - 4,24)	4,5 (4,37 - 4,55)	5 (4,78 - 5,16)	5,6 (5,21 - 5,74)	6,3 (6,02 - 6,55)	7,1 (6,88-7,14)
21,3	P	P	P	P	P	P					
25	P	P	P	P	P	P					
26,9	P	P	P	P	P	P	P				
31,8		P	P	P	P	P	P	P			
33,7		P	P	P	P	P	P	P	P		
35		P	P	P	P	P	P	P	P		
38		P	P	P	P	P	P	P	P	P	
42,4		P	P	P	P	P	P	P	P	P	P
44,5		P	P	P	P	P	P	P	P	P	P
48,3		P	P	P	P	P	P	P	P	P	P
51			P	P	P	P	P	P	P	P	P
54			P	P	P	P	P	P	P	P	P
57			P	P	P	P	P	P	P	P	P
60,3			PL	PL	PLE	PLE	PLE	PLE	PLE	PLE	PLE
63,5			PL	PL	PLE	PLE	PLE	PLE	PLE	PLE	PLE
70			PL	PL	PLE	PLE	PLE	PLE	PLE	PLE	PLE
73			PL	PL	PLE	PLE	PLE	PLE	PLE	PLE	PLE
76,1			PL	PL	PLE	PLE	PLE	PLE	PLE	PLE	PLE
82,5				PL	PLE	PLE	PLE	PLE	PLE	PLE	PLE
88,9				PL	PLE	PLE	PLES	PLES	PLES	PLESQ	PLESQ
101,6					PLE	PLE	PLES	PLES	PLES	PLESQ	PLESQ
108					PLE	PLE	PLES	PLES	PLES	PLESQ	PLESQ
114,3					PLE	PLE	PLES	PLES	PLES	PLESQ	PLESQ
127						PLE	PLES	PLES	PLES	PLESQ	PLESQ
133						PLE	PLES	PLES	PLES	PLESQ	PLESQ
139,7						PLE	PLES	PLES	PLES	PLESQ	PLESQ
152,4							PLES	PLES	PLES	PLESQ	PLESQ
159							PLES	PLES	PLES	PLESQ	PLESQ
168,3							PLES	PLES	PLES	PLESQ	PLESQ
177,8								PLES	PLES	PLESQ	PLESQ
193,7									PLES	PLESQ	PLESQ
219,1										PLESQ	PLESQ
244,5										PLESQ	PLESQ
273										PLES	PLES

WT (mm)	8 (7,62 - 8,18)	8,8 (8,56 - 9,27)	10 (9,52 - 10,54)	11 -11,13	12,5 -12,7	14,2 (13,49 - 14,27)	16 -15,88	17,5 (18,0 - 18,26)	20	22,2	25
21,3											
25											
26,9											
31,8											
33,7											
35											
38											
42,4											
44,5											
48,3											
51											
54	P										
57	P	P									
60,3	PLE	PLE									
63,5	PLE	PLE									
70	PLE	PLE									
73	PLE	PLE	PLE								
76,1	PLE	PLE	PLE								
82,5	PLE	PLE	PLE	PLE							
88,9	PLESQ	PLESQ	PLESQ	PLESQ	PLE						
101,6	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ						
108	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ						
114,3	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLEQ	P			
127	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLE			
133	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLES			
139,7	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLES			
152,4	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLES			
159	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLES	PLES		
168,3	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLES	PLES		
177,8	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLES	PLES		
193,7	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLES	PLES		
219,1	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLES	PLES		
244,5	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLESQ	PLES	PLES		
273	PLES	PLES	PLES	PLES	PLES	PLES	PLES	PLES			

Maximum available condition:

- Ar / N / Q+T (NDT 12,5%, 10% or 5%)
- Ar / N / Q+T (NDT 12,5% or 10%)
- Ar / N (NDT 12,5%, 10% or 5%)
- Ar / N (NDT 12,5% or 10%)
- PSL2 - Ar/N (NDT 12,5%)
- PSL1 (NDT 12,5%)
- A, B - PSL1 (NDT 12,5%)
- out of LP production range

Specified diameter	Size NPS (ASTM)	Outside diameter		Wall thickness		Weight category	Schedule No. (equivalent ASTM)	Weight of pipe with plain ends	
in	-	in	mm	in	mm			lb/ft	kg/m
1,2	1,2	0,84	21,34	0,109	2,77	STD	40	0,85	1,27
				0,147	3,73	XS	80	1,09	1,62
3,4	3,4	1,05	26,67	0,113	2,87	STD	40	1,13	1,69
				0,154	3,91	XS	80	1,48	2,2
1	1	1,315	33,4	0,133	3,38	STD	40	1,68	2,5
				0,179	4,55	XS	80	2,17	3,24
1 1/4	1 1/4	1,66	42,16	0,14	3,56	STD	40	2,27	3,39
				0,191	4,85	XS	80	3	4,47
1 1/2	1 1/2	1,9	48,26	0,145	3,68	STD	40	2,72	4,05
				0,2	5,08	XS	80	3,63	5,41
2 3/8	2	2, 375	60,32	0,125	3,18	...	30	3,01	4,48
				0,141	3,58	...	...	3,37	5,01
				0,154	3,91	STD	40	3,66	5,44
				0,172	4,37	...	...	4,05	6,03
				0,188	4,78	...	...	4,4	6,54
				0,218	5,54	XS	80	5,03	7,48
				0,25	6,35	...	...	5,68	8,45
				0,281	7,14	...	...	6,29	9,36
				0,344	8,74	...	160	7,47	11,11

3.3 LINE PIPES > DIMENSIONAL RANGE AND WEIGHT ACCORDING TO ASME B36.10M

API 5L + ISO 3183							ISO 3183	
PSL1	PSL2	PSL2	PSL2 +Annex H	PSL2 +Annex J			PSL2 +Annex A	
+Ar	+Ar / +N	+QT	+N	+QT	+N	+QT	+N	+QT
A to B (+Ar) L210 to L290 (+Ar)								
A to X52 (+Ar) L210 to L360 (+Ar)								
A to X52 (+Ar) L210 to L360 (+Ar)								
A to X52 (+Ar) L210 to L360 (+Ar)								
A to X52 (+Ar) L210 to L360 (+Ar)								
A to X52 (+Ar) L210 to L360 (+Ar)								
A to X52 (+Ar) L210 to L360 (+Ar)								
A to X52 (+Ar) L210 to L360 (+Ar)								
A to X52 (+Ar) L210 to L360 (+Ar)								
A to X52 (+Ar) L210 to L360 (+Ar)								
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N							
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N						L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N						L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N						L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	

Specified diameter	Size NPS (ASTM)	Outside diameter		Wall thickness		Weight category	Schedule No. (equivalent ASTM)	Weight of pipe with plain ends	
in	-	in	mm	in	mm			lb/ft	kg/m
2 7/8	2 1/2	2,875	73,02	0,125	3,18	...	...	3,67	5,48
				0,141	3,58	...	...	4,12	6,13
				0,156	3,96	...	...	4,53	6,74
				0,172	4,37	...	...	4,97	7,4
				0,188	4,78	...	30	5,4	8,04
				0,203	5,16	STD	40	5,8	8,63
				0,216	5,49	...	...	6,14	9,14
				0,25	6,35	...	...	7,02	10,44
				0,276	7,01	XS	80	7,67	11,41
				0,375	9,53	...	160	10,02	14,92
3 1/2	3	3,5	88,9	0,125	3,18	...	...	4,51	6,72
				0,141	3,58	...	...	5,06	7,53
				0,156	3,96	...	...	5,58	8,3
				0,172	4,37	...	...	6,12	9,11
				0,188	4,78	...	30	6,66	9,92
				0,216	5,49	STD	40	7,58	11,29
				0,25	6,35	...	...	8,69	12,93
				0,281	7,14	...	...	9,67	14,4
				0,3	7,62	XS	80	10,26	15,27
				0,438	11,13	...	160	14,34	21,35

API 5L + ISO 3183							ISO 3183	
PSL1	PSL2	PSL2	PSL2 +Annex H	PSL2 +Annex J			PSL2 +Annex A	
+Ar	+Ar / +N	+QT	+N	+QT	+N	+QT	+N	+QT
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N							
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N						L245NE to L360NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N						L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N						L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N							
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N						L245NE to L360NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N						L245NE to L360NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N						L245NE to L360NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L360NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	

Specified diameter	Size NPS (ASTM)	Outside diameter		Wall thickness		Weight category	Schedule No. (equivalent ASTM)	Weight of pipe with plain ends	
in	-	in	mm	in	mm			lb/ft	kg/m
4	3 1/2	4	101,6	0,141	3,58	...	...	5,82	8,65
				0,156	3,96	...	...	6,41	9,54
				0,172	4,37	...	...	7,04	10,48
				0,188	4,78	...	30	7,66	11,41
				0,226	5,74	STD	40	9,12	13,57
				0,25	6,35	...	...	10,02	14,92
				0,281	7,14	...	...	11,17	16,63
				0,318	8,08	XS	80	12,52	18,64
4 1/2	4	4,5	114,3	0,141	3,58	...	...	6,57	9,78
				0,156	3,96	...	...	7,24	10,78
				0,172	4,37	...	...	7,96	11,85
				0,188	4,78	...	30	8,67	12,91
				0,203	5,16	...	...	9,32	13,89
				0,219	5,56	...	...	10,02	14,91
				0,237	6,02	STD	40	10,8	16,08
				0,25	6,35	...	...	11,36	16,91
				0,281	7,14	...	...	12,67	18,87

API 5L + ISO 3183							ISO 3183	
PSL1	PSL2	PSL2	PSL2 +Annex H	PSL2 +Annex J			PSL2 +Annex A	
+Ar	+Ar / +N	+QT	+N	+QT	+N	+QT	+N	+QT
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N						L245NE to L360NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N						L245NE to L360NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N						L245NE to L360NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N						L245NE to L360NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N						L245NE to L360NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N						L245NE to L360NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L360NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L360NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE

Specified diameter	Size NPS (ASTM)	Outside diameter		Wall thickness		Weight category	Schedule No. (equivalent ASTM)	Weight of pipe with plain ends	
in	-	in	mm	in	mm			lb/ft	kg/m
4 1/2				0,312	7,92	...	...	13,97	20,78
				0,337	8,56	XS	80	15	22,32
				0,438	11,13	...	120	19,02	28,32
				0,531	13,49	...	160	22,51	33,54
5 9/16	5	5,563	141,3	0,156	3,96	...	...	9,02	13,41
				0,188	4,78	...	...	10,8	16,09
				0,219	5,56	...	...	12,51	18,61
				0,258	6,55	STD	40	14,63	21,77
				0,281	7,14	...	...	15,87	23,62
				0,312	7,92	...	...	17,51	26,05
				0,344	8,74	...	...	19,19	28,57
				0,375	9,53	XS	80	20,8	30,97
				0,5	12,7	...	120	27,06	40,28
6 5/8	6	6,625	168,28	0,188	4,78	...	...	12,94	19,28
				0,203	5,16	...	...	13,94	20,76
				0,219	5,56	...	...	15	22,31
				0,25	6,35	...	...	17,04	25,36

3.3 LINE PIPES > DIMENSIONAL RANGE AND WEIGHT ACCORDING TO ASME B36.10M

API 5L + ISO 3183							ISO 3183	
PSL1	PSL2	PSL2	PSL2 +Annex H	PSL2 +Annex J			PSL2 +Annex A	
+Ar	+Ar / +N	+QT	+N	+QT	+N	+QT	+N	+QT
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N						L245NE to L360NE	
A to X52 (+Ar) L210 to L360 (+Ar)	BR, X42R and BN to X52N L245R, L290R and L245N to L360N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L360NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE

Specified diameter	Size NPS (ASTM)	Outside diameter		Wall thickness		Weight category	Schedule No. (equivalent ASTM)	Weight of pipe with plain ends	
in	-	in	mm	in	mm			lb/ft	kg/m
6 5/8				0,28	7,11	STD	40	18,99	28,26
				0,312	7,92	...	...	21,06	31,33
				0,344	8,74	...	...	23,1	34,39
				0,375	9,53	...	...	25,05	37,31
				0,432	10,97	XS	80	28,6	42,56
				0,5	12,7	...	...	32,74	48,73
				0,562	14,27	...	120	36,43	54,21
				0,625	15,88	...	...	40,09	59,69
				0,719	18,26	...	160	45,39	67,57
8 5/8	8	8,625	219,08	0,25	6,35	...	20	22,38	33,32
				0,277	7,04	...	30	24,72	36,82
				0,312	7,92	...	...	27,73	41,25
				0,322	8,18	STD	40	28,58	42,55
				0,344	8,74	...	...	30,45	45,34
				0,375	9,53	...	...	33,07	49,25
				0,406	10,31	...	60	35,67	53,09
				0,438	11,13	...	...	38,33	57,08

3.3 LINE PIPES > **DIMENSIONAL RANGE AND WEIGHT ACCORDING TO ASME B36.10M**

API 5L + ISO 3183							ISO 3183	
PSL1	PSL2	PSL2	PSL2 +Annex H	PSL2 +Annex J			PSL2 +Annex A	
+Ar	+Ar / +N	+QT	+N	+QT	+N	+QT	+N	+QT
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE

Specified diameter	Size NPS (ASTM)	Outside diameter		Wall thickness		Weight category	Schedule No. (equivalent ASTM)	Weight of pipe with plain ends	
in	-	in	mm	in	mm			lb/ft	kg/m
8 5/8				0,5	12,7	XS	80	43,43	64,64
				0,562	14,27	...	...	48,44	72,08
				0,594	15,09	...	100	51	75,92
				0,625	15,88	...	...	53,45	79,59
				0,719	18,26	...	120	60,77	90,44
10 3/4	10	10,75	273	0,25	6,35	...	20	28,06	41,76
				0,279	7,09	...	...	31,23	46,49
				0,307	7,8	...	30	34,27	51,01
				0,344	8,74	...	...	38,27	56,96
				0,365	9,27	STD	40	40,52	60,29
				0,438	11,13	...	...	48,28	71,88
				0,5	12,7	XS	60	54,79	81,53
				0,562	14,27	...	...	61,21	91,05
				0,594	15,09	...	80	64,49	95,98
				0,625	15,88	...	...	67,65	100,69
				0,719	18,26	...	100	77,1	114,71

API 5L + ISO 3183							ISO 3183	
PSL1	PSL2	PSL2	PSL2 +Annex H	PSL2 +Annex J			PSL2 +Annex A	
+Ar	+Ar / +N	+QT	+N	+QT	+N	+QT	+N	+QT
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N	BQ to X70Q L245Q to L485Q	BNS to X52NS L245NS to L360NS	BQS to X70QS L245QS to L485QS	BNO to X52NO L245NO to L360NO	BQO to X70QO L245QO to L485QO	L245NE to L415NE	L360QE to 485QE
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	
A to X65 (+Ar) L210 to L450 (+Ar)	BR, X42R and BN to X60N L245R, L290R and L245N to L415N		BNS to X52NS L245NS to L360NS		BNO to X52NO L245NO to L360NO		L245NE to L415NE	

4.0
Oil Country Tubular Goods (OCTG)

4.1 OCTG > GRADE RANGE

Casing and Tubing are supplied according to API Spec 5CT and Line Pipe according to API Spec 5L or ISO 3183.

Type of pipe	API Specification	Application	Grade
Casing	API Spec 5CT		H40, J55, K55, N80-1[1,2], N80-Q[2], R95, L80-1, T95[1], P110[5], Q125[1] High Collapse[4] K55 HC, L80 HC, N80-Q HC, R95 HC, P110 HC, Q125 HC N80 HC, P110 HC, Q125 HC N80 HP, P110 HP, Q125 HP
Tubing[3]	API Spec 5CT		PSL 1: H40, J55, N80-1[2], N80-Q[2], R95[1], L80-1, P110[1, 5]
Line Pipe (seamless)[6]	API Spec 5L and/or ISO 3183	std	PSL 1: A, B, X42, X46, X52, X56, X60, X65, X70 PSL 2 (+R) : BR, X42R, PSL 2 (+N) : BN, X42N, X46N, X52N, X56N, X60N, PSL 2 (+Q) : BQ, X42Q, X46Q, X52Q, X56Q, X60Q, X65Q, X70Q
		Sour service (Annex H)	PSL 2 (+N) : BNS, X42NS, X46NS, X52NS, PSL 2 (+Q) : BQS, X42QS, X46QS, X52QS, X56QS, X60QS, X65QS, X70QS
		Offshore service (Annex J)	PSL 2 (+N) : BNO, X42NO, X46NO, X52NO, PSL 2 (+Q) : BQO, X42QO, X46QO, X52QO, X56QO, X60QO, X65QO, X70QO
Line Pipe (seamless)[6]	ISO 3183	Onshore service (Annex A)	PSL 2 (+N) : BNE, X42NE, X52NE, L415NE PSL 2 (+Q) : X52QE, X60QE, X65QE, X70QE

[1] Supply in these grades shall be pre-negotiated
[2] Supplied by producer option or by agreement with customer
[3] Only plain ends and non uppset
[4] By agreement it is possible to guarantee stability against outside press collapsing incl, making of relevant test for High Collapse, refer corresponding schedule
[5] Casing and Tubing pipes in grade P110 with WT < 8,8 mm only with SR16 and by agreement with customers,
[6] Line pipe are standardly supplied in sizes acc to ASME B36,10M or EN 10220
Line Pipe with spiral weld – see next chapter “Spiral-weld pipes”

Note: Line pipe acc to API 5L and ISO 3183 are supllied in sizes acc to ASME B36,10M, or EN 10220

Product	Minimum yield strength	Maximum yield strength	Minimum tensile strength	Maximum hardness
N80 HC	80,000 psi	110,000 psi	100,000 psi	None
N80 HP	95,000 psi	110,000 psi	100,000 psi	None
P110 HC	110,000 psi	125,000 psi	125,000 psi	None
P110 HP	125,000 psi	140,000 psi	130,000 psi	None
Q125 HC	125,000 psi	150,000 psi	135,000 psi	Hardness variation requirement
Q125 HP	135,000 psi	150,000 psi	140,000 psi	Hardness variation requirement

4.2 OCTG > CASING PIPE ACC. TO API 5CT - DIMENSIONAL RANGE, WEIGHT, GRADE

Nominal outside diameter		Nominal wall thickness		Labels	Weight with thread and coupling		Length	Type of thread / Supplied with pipe end P = plain end; S = SC; L = LC; B = BC (Buttress)[3] ; G = gass tightness[1]						
inch	mm	inch	mm		lb/ft	kg/m	Range	H40	J55 K55	L80	R95	N80	P110[2]	Q125
4 1/2	114,3	0,205	5,21	9,5	9,7	14,38	R2, R3	PS	PS					
		0,224	5,69	10,5	10,6	15,73	R2, R3		PSB					
		0,25	6,35	11,6	11,7	17,38	R2, R3		PSLBG	PLBG	PLB	PLBG	PLBG	
		0,29	7,37	13,5	13,3	19,87	R2, R3			PLBG	PLB	PLBG	PLBG	
		0,337	8,56	15,1	15,3	22,69	R2, R3						PLBG	
5	127	0,22	5,59	11,5	11,3	17,19	R2, R3		PS					
		0,253	6,43	13	13,2	19,69	R2, R3		PSLBG					
		0,296	7,52	15	15,3	22,69	R2, R3		PSLBG	PLBG	PLB	PLBG	PLBG	
		0,362	9,19	18	18,3	27,19	R2, R3			PLBG	PLB	PLBG	PLBG	
5 1/2	139,7	0,244	6,2	14	14	20,91	R2, R3	PS	PS					
		0,275	6,98	15,5	15,8	23,48	R2, R3		PSLBG					
		0,304	7,72	17	17,3	25,72	R2, R3		PSLBG	PLBG	PLB	PLBG	PLBG	
		0,361	9,17	20	20,2	30,05	R2, R3			PLBG	PLB	PLBG	PLBG	
		0,415	10,54	23	22,9	34,05	R2, R3			PLBG	PLB	PLBG	PLBG	
6 5/8	168,28	0,288	7,32	20	20	29,76	R2, R3	PS	PSLBG					
		0,352	8,94	24	24	35,72	R2, R3		PSLBG	PLBG	PLB	PLBG	PLBG	
		0,417	10,59	28	28	41,67	R2, R3			PLBG	PLB	PLBG	PLBG	
		0,475	12,06	32	32	47,62	R2, R3			PLBG	PLB	PLBG	PLBG	PLBG
7	177,8	0,272	6,91	20	20,1	29,91	R2, R3	PS	PS					
		0,317	8,05	23	23,3	34,67	R2, R3		PSLBG	PLBG	PLB	PLBG		
		0,362	9,19	26	26,3	39,14	R2, R3		PSLBG	PLBG	PLB	PLBG	PLBG	
		0,408	10,36	29	29,3	43,6	R2, R3			PLBG	PLB	PLBG	PLBG	
		0,453	11,51	32	32,2	47,92	R2, R3			PLBG	PLB	PLBG	PLBG	
		0,498	12,65	35	35	52,09	R2, R3			PLBG	PLB	PLBG	PLBG	PLBG
7 5/8	193,68	0,3	7,62	24	24	35,72	R2, R3	PS						
		0,328	8,33	26,4	26,4	39,29	R2, R3		PSLBG	PLBG	PLB	PLBG		
		0,375	9,52	29,7	29,7	44,2	R2, R3			PLBG	PLB	PLBG	PLBG	
		0,43	10,92	33,7	33,7	50,15	R2, R3			PLBG	PLB	PLBG	PLBG	
		0,5	12,7	39	39	58,04	R2, R3			PLBG	PLB	PLBG	PLBG	PLBG
8 5/8	219,08	0,264	6,71	24	24	35,72	R2, R3		PS					
		0,304	7,72	28	28	41,67	R2, R3	PS						
		0,352	8,94	32	32	47,62	R2, R3	PS	PSLBG					
		0,4	10,16	36	36	53,57	R2, R3		PSLBG	PLBG	PLB	PLBG		
		0,45	11,43	40	40	59,53	R2, R3			PLBG	PLB	PLBG	PLBG	
		0,5	12,7	44	44	65,48	R2, R3			PLBG	PLB	PLBG	PLBG	
9 5/8	244,48	0,312	7,92	32,3	32,3	48,07	R2, R3	PS						
		0,352	8,94	36	36	53,57	R2, R3	PS	PSLBG					
		0,395	10,03	40	40	59,53	R2, R3		PSLBG	PLBG	PLB	PLBG		
		0,435	11,05	43,5	43,5	64,74	R2, R3			PLBG	PLB	PLBG	PLBG	
		0,472	11,99	47	47	69,94	R2, R3			PLBG	PLB	PLBG	PLBG	PLBG
		0,545	13,84	53,5	53,5	79,62	R2, R3			PLBG	PLB	PLBG	PLBG	PLBG
10 3/4	273,05	0,35	8,89	40,5	40,5	60,27	R2, R3	P	P					
		0,4	10,16	45,5	45,5	67,71	R2, R3		P[1]					
		0,45	11,43	51	51	75,9	R2, R3		P[1]					

[1] Supply in these grades shall be pre-negotiated
[2] Casing in grade P110 with WT < 8,8 mm only with SR16 and by agreement with customers
[3] After agreement can be supplied „Special Clearance“

Nominal outside diameter		Nominal wall thickness		Labels	Calculated mass		Length	Supplied with pipe end P = plain end			
				Non Upset T&C	plain end			J55	L80-1	N80	P110 + SR16
inch	mm	inch	mm	lb/ft	lb/ft	kg/m	Range				
1,9	48,26		3,68	2,75	2,72	4,05	R2	P[1]			
2 3/8	60,32	0,167	4,24	4	3,94	5,86	R2, R3	P			
		0,19	4,83	4,6	4,44	6,61	R2, R3	P			
2 7/8	73,02	0,217	5,51	6,4	6,17	9,17	R2, R3	P			
3 1/2	88,9	0,216	5,49	7,7	7,58	11,29	R2, R3	P	P	P[2]	
		0,254	6,45	9,2	8,81	13,12	R2, R3	P	P	P[2]	P
		0,289	7,34	10,2	9,92	14,76	R2, R3	P	P	P[2]	
		0,375	9,52	12,7	12,53	18,64	R2		P	P[2]	P
4	101,6	0,226	5,74	9,5	9,12	13,57	R2, R3		P[1]		
		0,33	8,38	13,2	12,95	19,27	R2, R3		P[1]		
		0,415	10,54	16,1	15,9	23,67	R2, R3		P[1]		
4 1/2	114,3	0,271	6,88	12,6	12,25	18,23	R2, R3	P	P	P[2]	
		0,337	8,56	15,2	15	22,32	R2, R3		P		

[1] Supplied only after agreement
[2] N80-Type 1 or N80-Q Supplied by producer option or by agreement with customer

FINISHING OF ENDS, THREADS, COUPLINGS

Casings are supplied with threaded ends and galvanized.
The threads are: short round, long round, buttress, gastight connection see relevant schedule for Casing, column “Type of thread”. H grade pipes supplied only with short round thread. Tubes according to API Spec 5CT, the last release are supplied with long round or buttress thread. The supply of casing with gastight connection shall be negotiated beforehand.

Tubings are supplied with round threads and galvanized or phosphated couplings.
Threads on pipes and couplings are protected against damage during transport or manipulation.

Pup Joints are supplied according to API Spec 5CT, latest release. Reducing pieces with different diameters 1.9“ ÷ 10 3/4“ and type of thread is necessary discuss before. Tube end finishing (machining operation) outside & inside according to customer documentation – up to O.D. 5 1/2“ and up to 250 mm from end of tube; for tubes over 5 1/2 to O.D. 10 3/4“ up to 400 mm from end of tube.

Line Pipes are supplied with plain-ends and de-burred edges.
Pipes with WT ≤ 3,18mm are supplied only with square cut ends. Pipes with WT > 3,18mm can be supplied either with perpendicularly cut off ends or with beveled ends at an angle of 30° (-0/+5°) as per API Spec 5L, or ISO 3183, or ASTM A 106, or according to other standards (e.g. ASME B16.25) with prior agreement.

5.0
Seamless tubes suitable for screwing

5.0 SEAMLESS TUBES SUITABLE FOR SCREWING

STANDARD	GRADES	APPLICATION
ČSN 42 5710	11 353,0, 11 353,1	“Steel tubes suitable for screwing – medium series”
ČSN 42 5711	11 353,0, 11 353,1	“Steel tubes suitable for screwing – heavy series”
DIN 2440	St 33	“Steel tubes, medium weight suitable for screwing”
DIN 2441	St 33	“Steel tubes, heavy weight suitable for screwing”
NF A 49–115	TU 34-1	“Hot-rolled seamless steel tubes suitable for threading”
EN 10255	S195T	“Non-alloyed steel tubes suitable for screwing”

5.1 > DIMENSIONAL RANGE ACCORDING TO ČSN 42 5710, DIN 2440, ČSN 42 5711, DIN 2441

Size		Outside diameter	Wall thickness / weight			
			ČSN 42 5710, DIN 2440		ČSN 42 5711, DIN 2441	
DN	NPS	mm	mm	Kg/m	mm	Kg/m
15	1/2	21,3	2,65	1,22	3,25	1,45
20	3/4	26,9	2,65	1,58	3,25	1,9
25	1	33,7	3,25	2,44	4,05	2,96
32	1 1/4	42,4	3,25	3,14	4,05	3,83
40	1 1/2	48,3	3,25	3,61	4,05	4,42
50	2	60,3	3,65	5,1	4,5	6,19
65	2 1/2	76,1	3,65	6,51	4,5	7,95
80	3	88,9	4,05	8,47	4,85	10,05
90	3 1/2	101,6	4,05	9,72	4,85	11,57
100	4	114,3	4,5	12,19	5,4	14,5
125	5	139,7	4,85	16,13	5,4	17,89

5.2 > DIMENSIONAL RANGE ACCORDING TO NF A 49–115, EN 10255

Size		Outside diameter	Wall thickness / weight			
			Middle series		Heavy series	
DN	NPS	mm	mm	Kg/m	mm	Kg/m
15	1/2	21,3	2,6	1,21	3,2	1,43
20	3/4	26,9	2,6	1,56	3,2	1,87
25	1	33,7	3,2	2,41	4	2,93
32	1 1/4	42,4	3,2	3,09	4	3,79
40	1 1/2	48,3	3,2	3,56	4	4,37
50	2	60,3	3,6	5,03	4,5	6,19
65	2 1/2	76,1	3,6	6,44	4,5	7,95
80	3	88,9	4	8,38	4,9 (5,0)	10,15 (10,35)
90	3 1/2	101,6	4	9,63	4,9	11,69
100	4	114,3	4,5	12,19	5,4	14,5
125	5	139,7	4,5 (5,0)	15 (16,61)	5,4	17,89

The data in brackets are sizes according to EN 10255

5.3 > DIMENSIONAL RANGE ACCORDING TO EN 10255 – NONSTANDARD SERIES L A L1

Series L	Series L1	Size		Wall thickness (mm)	weight
DN	DN	(")	Outside diameter ‘(mm)		Kg/m
15	15	1-Feb	21,3	2,3	1,08
20	20	3-Apr	26,9	2,3	1,4
25	25	1	33,7	2,9	2,2
32	32	1 1/4	42,4	2,9	2,82
40	40	1 1/2	48,3	2,9	3,25
50	50	2	60,3	3,2	4,51
-	65	2 1/2	76,1	3,2	5,75
-	80	3	88,9	3,6	7,57
-	100	4	114,3	4	10,88
125	-	5	139,7	4,5	15

Note: Size marked „-“ is not produced or there is not defined size in mentioned series

6.0
Spiral Welded Pipes

6.1 SPIRAL WELDED PIPES

LENGTHS
Tubes are supplied in lengths from 8m to 18m for rail or truck transport

Linepipe length	Length 12 m acc. to the table 12 of standard API Spec 5L (Minimum length 6,71 m, Maximum length 13,72 m, Minimum Average Length for each Order Item 10,67 m)
Set length	Nominal length selected by the customer from the range of production lengths with a tolerance of ± 500 mm
Exact length	Nominal length selected by the customer following agreement with the producer with a tolerance of +50/-0 mm. More strict tolerances only after agreement.

ENDS OF TUBES

A) The tubes are supplied with the ends cut off by flame perpendicular to the tube and pipe axis with a tolerance of +50/-0 mm. More strict tolerances only after agreement.

B) The tubes are supplied with the ends cut off perpendicular to the tube and pipe axis.

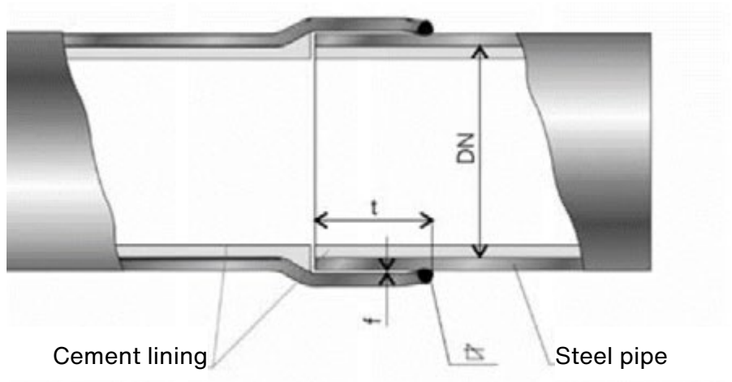
C) Pipes are supplied with beveled ends at an parameters according to relevant standard.

SOCKET PIPES

The tubes are delivered according to DIN 2460 or EN 10224 with outside polyethylene coating according to DIN 30 670 and internal protection (cement mortar lining) according to EN 10298. At the point of connection it is possible to carry out surface coating for pipe ends finishing – for example by thermally shrinking collar on the outside surface, the connection does not require additional tube internal surface treatment.

Steel Grade

Outside diameter [mm]	Max. wall thickness [mm]		
	Grade L235	Grade L275	Grade L355
323,9	6,3	6,3	5,6
355,6	8,0	8,0	5,6
406,4	8,0	8,0	7,1
508	6,3	6,3	5,6
610	8,0	8,0	7,1
711	8,0	8,0	7,1
813	8,0	8,0	7,1



6.1.1 SPIRAL WELDED PIPES > DIMENSIONAL STANDARDS

ASME B36.10M	“Welded and hot-rolled seamless
ČSN 42 5738	“Spiral weld steel pipes”
DIN 2458	“Welded steel tubes”
EN 10220	“Seamless and welded steel tubes - General tables of dimensions and masses per unit length”
ISO 4200	“Plain-end steel tubes, welded and seamless”

6.1.2 SPIRAL WELDED PIPES > TECHNICAL SUPPLY REGULATIONS

ČSN 42 0144	“Spiral welded steel”
DIN 1615	“Welded circular tubes of non-alloy steels without special quality requirements”
EN 10217-1	“Welded steel pipes for pressure purposes”
EN 10217-3	“Welded steel pipes for pressure vessel”
EN 10217-5	“Welded steel tubes for pressure purposes. Submerged arc welded non-alloy and alloy steel tubes with specified elevated temperature properties”
EN 10219-1	“Cold formed welded structural hollow sections of non-alloy and fine grain steels”
EN 10224	“Non-alloy steel tubes and fittings for the conveyance of water and other aqueous liquids”
API Spec 5L	“Specification for Line Pipe”
ISO 3183	“Steel pipe for pipeline transportation systems”

6.1.3 SPIRAL WELDED PIPES > STEEL GRADES

ČSN 42 5738	11 375, 11 378, 11 425, 11 523
DIN 1615	St 33 (St 37.0, St 44.0, St 52.0)
EN 10217-1	P195TR1, P235TR1, P265TR1, P195TR2, P235TR2, P265TR2
EN 10217-3	P355NH TC1/TC2, P355N TC1/TC2
EN 10217-5	P235GH TC1/TC2, P265GH TC1/TC2
EN 10219-1	S235JRH, S275JOH, S275J2H, S355JOH, S355J2H
EN 10224	L235, L275, L355
API Spec 5L	**PSL1:** L210/A, L245/B, L290/X42, L320/X46, L360/X52, L390/X56, L415/X60, L450/X65, L485/X70, **PSL2:** L245N/BN, L290N/X42N, L320N/X46N, L360N/X52N, L360M/X52M, L390M/X56M, L415M/X60M, L450M/X65M, L485M/X70M
ISO 3183	**PSL1:** L210/A, L245/B, L290/X42, L320/X46, L360/X52, L390/X56, L415/X60, L450/X65, L485/X70, **PSL2:** L245N/BN, L290N/X42N, L320N/X46N, L360N/X52N, L360M/X52M, L390M/X56M, L415M/X60M, L450M/X65M, L485M/X70M
ISO 3183 Annex A	**PSL2:** L245NE/BNE, L290NE/X42NE, L360NE/X52NE, L360ME/X52ME, L415ME/X60ME, L450ME/X65ME, L485ME/X70ME

6.1.4 SPIRAL WELDED PIPES > DIMENSIONAL RANGE, WEIGHT

Outside diameter [mm]	Wall thickness (mm)								
	5	5.6	6.3	7.1	8	8.8	10	11	12.5 [2]
	Weight (kg/m)								
323.9	39.3 [1]	44.0 [1]	49.3 [1]	55.5 [1]	62.3 [1]				
355.6	43.2 [1]	48.3 [1]	54.3 [1]	61.0 [1]	68.6 [1]				
406.4	49.5 [1]	55.4	62.2	69.9	78.6	86.3 [1]	97.8 [1]	107 [1]	121 [1]
457	55.7 [1]	62.3	70.0	78.8	88.6	97.3 [1]	110 [1]	121 [1]	137 [1]
508	62.0 [1]	69.4	77.9	87.7	98.6	108	123	135	153
(559)	68.3 [1]	76.4	85.9	94.6	109	119	135	149	169
610	74,6 [1]	83.5 [1]	93.8	106	119	130	148	162	184
(660)		90.4 [1]	102 [1]	114	129	141	160	176	200
711		97,4 [1]	109 [1]	123	139	152	173	190	215
762			117 [1]	132 [1]	149	163	185	204	231
813			125 [1]	141 [1]	159 [1]	175	198	218	247
(864)				150 [1]	169 [1]	186	211	231	262
914					179 [1]	196 [1]	223	245	278
1016					199 [1]	219 [1]	248	273	309

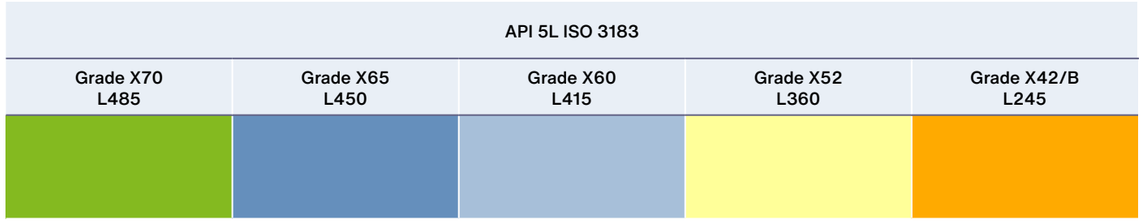
[1] Supplied by prior agreement.
[2] Thicker WT than 12,5 mm supplied by prior agreement

6.1.5 SPIRAL WELDED PIPES > DIMENSIONAL RANGE, WEIGHT ACCORDING TO ASME B36.10M

Outside diameter		Wall thickness (in / mm)									
		0.219/5.56	0.250/6.35	0.281/7.14	0.312/7.92	0.344/8.74	0.375/9.52	0.406/10.31	0.438/11.13	0.469/11.91	0.469/12.7 [2]
in	mm	Weight ($lb.ft^{-1}$ / $kg.m^{-1}$)									
12 ¾	323.8	29.34/43.64 [1]	33.41/49.71 [1]	37.46/55.76 [1]	41.48/61.70 [1]						
14	355.6	32.26/48.00 [1]	36.75/54.69 [1]	41.21/61.36 [1]	45.65/67.91 [1]						
16	406.4	36.95/54.96	42.09/62.65	47.22/70.30	52.32/77.83	57.57/85.71 [1]	62.64/93.18 [1]	67.68/100.71 [1]	72.86/108.49 [1]		
18	457,2	41.63/61.93	47.44/70.60	53.23/79.25	58.99/87.75	64.93/96.66 [1]	70.65/105.11 [1]	76.36/113.63 [1]	82.23/122.44 [1]	87.89/130.79 [1]	93.54/139.22 [1]
20	508,0	46.31/68.89	52.78/78.56	59.23/88.19	65.66/97.68	72.28/107.61	78.67/117.03	85.04/126.54	91.59/136.38	97.92/145.71	104.23/155.13
22	558,8	50.99/75.86	58.13/86.51	65.24/97.14	72.34/107.60	79.64/118.56	86.69/128.96	93.72/139.46	100.96/150.33	107.95/160.63	114.92/171.04
24	609,6	55.42/82.58 [1]	63.47/94.47	71.25/106.08	79.01/117.52	86.99/129.51	94.71/140.89	102.40/152.38	110.32/164.27	117.98/175.55	125.61/186.95
26	660,4		68.82/102.42 [1]	77.26/115.03	85.68/127.44	94.35/140.46	102.72/152.81	111.08/165.29	119.69/178.21	128.00/190.47	136.30/202.86
28	711,2		74.16/110.38 [1]	83.26/123.97	92.35/137.36	101.70/151.41	110.74/164.74	119.76/178.21	129.05/192.16	138.03/205.39	146.99/218.77
30	762,0		79.51/118.34 [1]	89.27/132.92 [1]	99.02/147.29	109.06/162.36	118.76/176.67	128.44/191.12	138.42/206.10	148.06/220.32	157.68/234.68
32	813,0		84.85/126.32 [1]	95.28/141.90 [1]	105.69/157.25 [1]	116.41/173.35	126.78/188.64	137.12/204.09	147.78/220.10	158.08/235.29	168.37/250.65
34	864,0			101.29/150.88 [1]	112.36/167.21 [1]	123.77/184.34	134.79/200.61	145.80/217.06	157.14/234.10	168.11/250.27	179.06/266.63
36	914,0				119.03/176.97 [1]	131.12/195.12 [1]	142.81/212.35	154.48/229.77	166.51/247.82	178.14/264.96	189.75/282.29
38	965,0				125.7/186.94 [1]	138.47/206.11 [1]	150.83/224.33	163.16/242.74	175.87/261.82	188.17/279.94	200.44/298.26
40	1016,0				132.37/196.90 [1]	145.83/217.11 [1]	158.85/236.30 [1]	171.84/255.71	185.24/275.82	198.19/294.92	211.13/314.23

[1] Supplied by prior agreement.
[2] Thicker WT than 12,7mm supplied by prior agreement

6.1.6 SPIRAL WELDED PIPES > WALL THICKNESS LIMITATION DEPENDING ON TUBE OUTSIDE DIAMETER AND GRADE



Diamater		Wall thickness								
mm	inch	5	5,6	6,3	7,1	8	8,8	10	11	12,5
323,9	12									
355,6	14									
377	-									
406,4	16									
426	-									
457	18									
508	20									
530	-									
559	22									
610	24									
630	-									
660	26									
711	28									
720	-									
762	30									
813	32									
820	-									
864	34									
914	36									
920	-									
965	38									
1016	40									
1020	-									

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