



**INTERPIPE**

# Oil and Gas Pipes



# Introduction

## **Welcome to Interpipe's product catalogue for oil and gas pipes.**

Interpipe is a leading producer of steel pipes and one of the fastest growing companies in the steel sector with a wide range of products covering many different sectors. Our seamless and welded steel pipes are in use around the world covering applications in both the production and transportation sectors of the oil and gas industry.

Our integrated business model gives us the opportunity to control the complete manufacturing process from the quality of the steel to end product testing. Our products are certified according to a number of international quality standards – including API, ASTM, GOST, EN, DIN and NFA.

By working in close partnership with our customers we are able to anticipate and respond to their ever changing needs and to develop products that answer those new requirements.

Through our manufacturing network and trading companies all over the world we aim to deliver the best services to our customers in more than 75 countries around the world. In addition to Europe, we now operate an international sales network of offices as diverse as Russia, Kazakhstan, Dubai and the USA.

At Interpipe we believe in long-term partnerships with our customers and we are committed to contribute to their operational success by providing them with quality products and superior customer service.

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# Casing - ISO 11960/API 5CT, 5B

Application: exploration and operation of oil and gas wells

Pipe dimensions and weight								
Labels 1	2	Outside diameter		Wall thickness		Calculated weight of plain-end pipe		Thread type
		inches	mm	inches	mm	lb/ft	kg/m	
4 ½	9.50	4.500	114.30	0.205	5.21	9.41	14.02	P, STC
	10.50			0.224	5.69	10.24	15.24	P, STC, BTC
	11.60			0.250	6.35	11.60	17.26	P, STC, LTC, BTC
	13.50			0.290	7.37	13.50	20.09	P, LTC, BTC
	15.10			0.337	8.56	15.00	22.32	P, LTC, BTC
5	15.00	5.000	127.00	0.296	7.52	14.88	22.16	P, STC, LTC, BTC
	18.00			0.362	9.19	17.95	26.70	P, LTC, BTC
5 ½	17.00	5.500	139.70	0.304	7.72	16.89	25.13	P, STC, LTC, BTC
	20.00			0.361	9.17	19.83	29.52	P, LTC, BTC
	23.00			0.415	10.54	22.56	33.57	P, LTC, BTC
6 ¾	20.00	6.625	168.28	0.288	7.32	19.51	29.06	P, STC, LTC, BTC
	24.00			0.352	8.94	23.60	35.13	P, STC, LTC, BTC
	28.00			0.417	10.59	27.67	41.18	P, LTC, BTC
	32.00			0.475	12.06	31.23	46.46	P, LTC, BTC
7	23.00	7.000	177.80	0.317	8.05	22.65	33.70	P, STC, LTC, BTC
	26.00			0.362	9.19	25.69	38.21	P, STC, LTC, BTC
	29.00			0.408	10.36	28.75	42.78	P, LTC, BTC
	32.00			0.453	11.51	31.70	47.20	P, LTC, BTC
	35.00			0.498	12.65	34.61	51.52	P, LTC, BTC
	38.00			0.540	13.72	37.29	55.52	P, LTC, BTC
7 ¾	24.00	7.625	193.68	0.300	8.33	25.59	38.08	P, STC, LTC, BTC
	26.20			0.328	9.52	29.06	43.24	P, LTC, BTC
	29.70			0.375	10.92	33.07	49.22	P, LTC, BTC
	33.70			0.430	12.70	38.08	56.68	P, LTC, BTC
8 ¾	28.00	8.625	219.08	0.304	7.72	27.40	40.24	P, STC
	32.00			0.325	8.94	31.13	46.33	P, STC, LTC, BTC
	36.00			0.400	10.16	35.17	52.35	P, STC, LTC, BTC
	40.00			0.450	11.43	39.33	58.53	P, LTC, BTC
	44.00			0.500	12.70	43.43	64.64	P, LTC, BTC
	49.00			0.557	14.15	48.04	71.51	P, LTC, BTC
9 ¾	36.00	9.625	244.48	0.352	8.94	34.89	51.93	P, STC, LTC, BTC
	40.00			0.395	10.03	38.97	57.99	P, STC, LTC, BTC
	43.50			0.435	11.05	42.73	63.61	P, LTC, BTC
	47.00			0.472	11.99	46.18	68.75	P, LTC, BTC
	53.50			0.545	13.84	52.90	78.72	P, LTC, BTC

## Pipe dimensions and weight (continued)

Labels 1	2	Outside diameter		Wall thickness		Calculated weight of plain-end pipe		Thread type
		inches	mm	inches	mm	lb/ft	kg/m	
10 ¾	40.50	10.750	273.05	0.350	8.89	38.91	57.91	P, STC, BTC
	45.50			0.400	10.16	44.26	65.87	P, STC, BTC
	51.00			0.450	11.43	49.55	73.75	P, STC, BTC
	55.50			0.495	12.57	54.26	80.75	P, STC, BTC
	60.70			0.545	13.84	59.45	88.47	P, STC, BTC
	65.70			0.595	15.11	64.59	96.12	P, STC, BTC
11 ¾	47.00	11.750	298.45	0.375	9.53	45.60	69.94	P, STC, BTC
	54.00			0.435	11.05	52.62	78.32	P, STC, BTC
	60.00			0.489	12.42	58.87	87.61	P, STC, BTC
	65.00			0.534	13.56	64.03	95.27	P, STC, BTC
13 ¾	48.00	13.375	339.73	0.330	8.38	46.02	68.48	P, STC, BTC
	54.50			0.380	9.65	52.79	78.55	P, STC, BTC
	61.00			0.430	10.92	59.50	88.55	P, STC, BTC
	68.00			0.480	12.19	66.17	98.46	P, STC, BTC
	72.00			0.514	13.06	70.67	105.21	P, STC, BTC

P - plain end

STC - short, round, threaded and coupled

LTC - long, round, threaded and coupled

BTC - butters threaded and coupled

## Tolerances

Outside diameter permissible deviations:	+1% -0.5%
Wall thickness permissible deviations:	-12.5% Positive deviations are limited by pipe weight
Weight deviation	+6.5%/-3.5%

## Length supplied

Range 1:16-25 feet (4.88-7.62m)

Range 2:25-34 feet (7.62-10.36m)

Range 3:34-41 feet (10.36-12.50m)

## Mechanical properties of steel

Grade	Tensile strength, psi/MPa		Yield strength, psi/MPa	
	not less than		not less than	not more than
J-55	75000 (517)		55000 (379)	80000 (552)
K-55	95000 (655)		55000 (379)	80000 (552)
N-80	100000 (689)		80000 (552)	110000 (758)
L-80	95000 (655)		80000 (552)	95000 (655)
P-110	125000 (862)		110000 (758)	140000 (958)

## Protection

Pipes are supplied:

- black and bare
- external varnished with black or clear lacquer

## Marking

Pipes are supplied with marking according to standard and customer request.

Marking is paint and/or die stencilled on the ends of pipes. The same data as well as additional information per customer's request is indicated on the bundle's tags.

## Delivery

Pipes are supplied in round bundles tied in at least five places with steel strip. Weight of bundle - up to 5000 kg upon request of customer. Each bundle is furnished with three tags.

## Mill test certificate

MTC is issued in accordance with EN 10204

# Casing threaded and coupled - GOST 632-80

Application: exploration and operation of oil and gas wells

Pipe dimensions and weight						
Outside diameter, mm	Wall thickness, mm	Weight per meter, kg	Grades and types of thread			
			triangular thread		ОТТМ	ОТТГ
			short	long		
139.7	7.0	22.9	-	-	Д, К, Е, Л	-
	7.7	25.9				
	9.2	29.5			Д, К, Е, Л	Д, К, Е, Л
	10.5	33.6				
146.1	7.0	24.0	Д, К, Е, Л, М	Д, К, Е, Л, М	Д, К, Е, Л, М	-
	7.7	26.2				
	8.5	28.8				
	9.5	32.0				Д, К, Е, Л, М
	10.7	35.7				
168.3	8.9	35.1	Д, К, Е, Л, М	Д, К, Е, Л, М	Д, К, Е, Л, М	Д, К, Е, Л, М
	10.6	41.2				
	12.1	46.5				
177.8	9.2	38.2	Д, К, Е, Л, М	Д, К, Е, Л, М	Д, К, Е, Л, М	-
	10.4	42.8				
	11.5	47.2				
	12.7	51.5				Д, К, Е, Л, М
	13.7	55.5				
	15.0	60.8				
193.7	9.5	43.3	Д, К, Е, Л, М	Д, К, Е, Л, М	Д, К, Е, Л, М	Д, К, Е, Л, М
	10.9	49.2				
	12.7	56.7				
	15.1	66.5				
219.1	8.9	46.3	Д, К, Е, Л, М	Д, К, Е, Л, М	Д, К, Е, Л, М	Д, К, Е, Л, М
	10.2	52.3				
	11.4	58.5				
	12.7	64.6				
	14.2	71.5				
244.5	8.9	51.9	Д, К, Е, Л, М	Д, К, Е, Л, М	Д, К, Е, Л, М	Д, К, Е, Л, М
	10.0	58.0				
	11.1	63.6				
	12.0	68.7				
	13.8	78.7				
273.1	8.9	57.9	Д, К, Е, Л, М	-	Д, К, Е, Л, М	Д, К, Е, Л, М
	10.2	65.9				
	11.4	73.7				
	12.6	80.8				
	13.8	88.5				

## Pipe dimensions and weight (continued)

Outside diameter, mm	Wall thickness, mm	Weight per meter, kg	Grades and types of thread			
			triangular thread		OTTM	OTTГ
			short	long		
298.5	9.5	67.9	Д, К, Е, Л, М	-	Д, К, Е, Л, М	-
	11.1	78.3				
	12.4	87.6				
	14.8	103.5				
323.9	9.5	73.6	Д, К, Е, Л, М	-	Д, К, Е, Л, М	-
	11.0	84.8				
	12.4	95.2				
	14.0	106.9				
339.7	10.9	88.6	Д, Е, Л, М	-	Д, Е, Л, М	-
	12.2	98.5				
	13.1	105.2				
	14.0	112.2				
	15.4	123.5				

Pipes are produced of accuracy categories A and B.

## Tolerances

Outside diameter permissible deviations category A:	±0.75%
Category B: OD up to 219.1 mm OD above 219.1 mm	±1.0% ±1.25%
Wall thickness permissible deviations	12.5% Positive deviations are limited by pipe weight

## Mechanical properties of steel

Grade	Tensile strength, N/mm <sup>2</sup> (kgf/mm <sup>2</sup> )	Yield strength, N/mm <sup>2</sup> (kgf/mm <sup>2</sup> )		Elongation, %
	not less than	not less than	not more than	not less than
Д (category A)	655 (66.8)	379 (38.7)	552 (56.2)	14.3
Д (category B)	637 (65.0)	373 (38.0)	not limited	16.0
К (category B)	687 (70.0)	490 (50.0)	not limited	12.0
Е	689 (70.3)	552 (56.2)	758 (77.3)	13.0
Л	758 (77.3)	655 (66.8)	862 (87.9)	12.3
М	862 (87.9)	758 (77.3)	965 (98.4)	10.8

### Lengths supplied

- from 9.5 up to 12.2 m.

### Protection

Pipes are supplied:  
- black and bare  
- external varnished with black lacquer

### Marking

Pipes are supplied with marking according to standard and customer request.

### Delivery

Weight of bundle - up to 5000 kg upon request of customer, or lose

# Geological exploration drill pipes - GOST 7909-76

Application: geological exploration drilling

## Pipe dimensions and weight

Outside diameter, mm	Wall thickness, mm	Theoretical weight, kg	
		per meter of plain end pipe	increase of weight due to upsetting
42	5.0	4.56	0.65
50	5.5	6.04	0.96
63.5	6.0	8.51	1.57

Pipes are produced with internally upset ends with right-hand or left-hand thread.

## Tolerances

Outside diameter, mm	Outside diameter permissible deviation, mm	Wall thickness, mm	Wall thickness permissible deviation, mm
42	±0.45	5.0	+ 0.6 - 0.5
50	±0.45	5.5	+ 0.66 - 0.55
63.5	±0.65	6.0	+ 0.72 - 0.6

Length supplied

- OD 42 and 50 mm - 3.0 or 4.5 meters
- OD 63.5 m - 3.0; 4.5; 6.0 meters

## Mechanical properties of steel

Grade	Tensile strength, N/mm <sup>2</sup> (kgf/mm <sup>2</sup> ), not less than	Yield limit, N/mm <sup>2</sup> (kgf/mm <sup>2</sup> ), not less than	Elongation, %, not less than
K	686 (70)	490 (50)	12

# Nipple joint drill pipes - GOST 8467-83

Application: drilling expendable wells for mineral deposits

## Pipe dimensions and weight

Outside diameter, mm	Wall thickness, mm	Weight per meter, kg
42	4.5	4.16
54	4.5	5.49
68	4.5	7.05

Pipes are produced with right-hand or left-hand thread.

## Tolerances

Outside diameter, mm	Outside diameter permissible deviation, mm	Wall thickness, mm	Wall thickness permissible deviation, mm
42	±0.20	4.5	+0.75
54	±0.25		
68	±0.30		

Lengths supplied

- multiple 1.5 m:
- OD 42 mm - 3.0; 4.5 meters
- OD 54 and 68 mm - 3.0; 4.5; 6.0 meters

## Mechanical properties of steel

Grade	Tensile strength, N/mm <sup>2</sup> (kgf/mm <sup>2</sup> ), not less than	Yield strength, N/mm <sup>2</sup> (kgf/mm <sup>2</sup> ), not less than	Elongation, %, not less than
K	687 (70)	490 (50)	12
E	735 (75)	539 (55)	12

Protection

- black and bare
- external varnished with black lacquer

Marking

Pipes are supplied with marking according to standard and customer request.

Delivery

Weight of bundle - up to 5000 kg upon request of customer



# Tubing - ISO 11960/API 5CT, 5B

Application: exploitation and operation of oil and gas wells

## Pipe dimensions and weight

Label 1	Label 2 *	Outside diameter		Wall thickness		Calculated pipe weight		Steel grade	Ends type
		inch	mm	inch	mm	lb/ft	kg/m		
1.900	2.40	1.900	48.26	0.145	3.68	2.72	4.05	H-40, J-55, N-80	P, NUE
2 3/8	4.00	2.375	60.32	0.167	4.24	3.94	5.84	H-40, J-55, N-80, L-80	P, NUE, EUE
	4.60			0.190	4.83	4.44	6.61	H-40, J-55, N-80, L-80, P-110	P, NUE, EUE
2 7/8	6.40	2.875	73.02	0.217	5.51	6.17	9.17	H-40, J-55, N-80, L-80, P-110	P, NUE, EUE
	7.80			0.276	7.01	7.67	11.41	N-80, L-80, P-110	P, NUE, EUE
	8.60			0.308	7.82	8.45	12.58	N-80, L-80, P-110	P, NUE, EUE
	7.70			0.216	5.49	7.58	11.29	H-40, J-55, N-80, L-80	P, NUE
	9.20			0.254	6.45	8.81	13.12	H-40, J-55, N-80, L-80, P-110	P, NUE, EUE
3 1/2	10.20	3.500	88.90	0.289	7.34	9.92	14.76	H-40, J-55, N-80, L-80	P, NUE
	12.70			0.375	9.52	12.70	18.90	N-80, L-80, P-110	P, NUE, EUE
	14.30			0.430	10.92	14.30	21.28	L-80	P, NUE
	15.50			0.476	12.09	15.50	23.07	L-80	P, NUE
	17.00			0.530	13.46	17.00	25.30	L-80	P, NUE
4	9.50	4.000	101.60	0.226	5.74	9.12	13.57	H-40, J-55, N-80, L-80	P, NUE
	10.70			0.262	6.65	10.47	15.57	H-40, J-55, N-80, L-80	P, NUE
	13.20			0.330	8.38	13.20	19.64	L-80	P, NUE
	16.10			0.412	10.54	16.10	23.96	L-80	P, NUE
	18.90			0.500	12.70	18.90	28.13	L-80	P, NUE
4 1/2	12.60	4.500	114.30	0.271	6.88	12.60	18.75	H-40, J-55, N-80, L-80	P, NUE
	15.20			0.337	8.56	15.20	22.62	L-80	P, NUE
	18.90			0.430	10.92	18.90	28.30	L-80	P, NUE
	21.50			0.500	12.70	21.50	32.00	L-80	P, NUE

\* Table 2 is for pipes with non upset ends

P - plain ends (upset and non-upset)

NUE - non-upset threaded ends

EUE - upset threaded ends

## Tolerances

Outside diameter permissible deviations	± 0.031 inch (± 0.79 mm)
Wall thickness permissible deviations	- 12.5%. Positive deviations are limited by pipe weight
Weight deviation	+6.5% / -3.5%

## Lengths supplied

Range 1: 20.0 - 24.0 feet (6.10 - 7.32m), upon agreement 20.0-28.0 feet (6.10-8.53 m).

Range 2: 28.0 - 32.0 feet (8.53 - 9.75 m)

## Mechanical properties of steel

Grade	Tensile strength, psi/MPa	Yield strength, psi/MPa	
	not less than	not less than	not more than
H-40	60000 (414)	40000 (276)	80000 (552)
J-55	75000 (517)	55000 (379)	80000 (552)
N-80	100000 (689)	80000 (552)	110000 (758)
P-110	125000 (862)	110000 (758)	140000 (965)

## Protection

Pipes are supplied:

- black and bare

- external varnished with black or clear lacquer

## Marking

Pipes are supplied with marking according to standard and customer request.

Marking is paint and/or die stencilled on the ends of pipes. The same data, as well as additional information per customer's request, is indicated on the bundle's tags.

## Delivery

Pipes are supplied in hexahedral bundles tied in at least five places with steel strip.

Weight of bundle - up to 5000 kg upon request of customer.

Each bundle is furnished with three tags.

## Mill test certificate

MTC is issued in accordance with EN 10204

# Tubing, threaded and coupled - GOST 633-80

Application: drilling expendable wells for mineral deposits

## Pipe dimensions and weight

NPS	Outside diameter, mm	Wall thickness, mm	Weight per meter, kg	Pipe type
60	60.3	5.0	6.8	Plain end, Б, HKM
73	73.0	5.5	9.2	Plain end, Б, HKM
		7.0	11.4	Plain end, Б, HKM
89	88.9	6.5	13.2	Plain end, HKM
114	114.3	7.0	18.5	Plain end

Б - externally upset pipes ends

HKM - gas tight connection

In precision and quality, pipes are produced of accuracy categories A and Б.

## Tolerances

Parameters	Permissible deviations	
	category A	category Б
Outside diameter from 60 up to 89	± 0.8 mm	+1.0 mm - 0.5 mm
above 89	± 0.9 mm	+1.2 mm - 0.5 mm
Wall thickness	-12.5% Positive deviations are limited by pipe weight	- 12.5% Positive deviations are limited by pipe weight

## Mechanical properties of steel

Parameter	Mechanical properties for grades			
	Д		K	E
	category A	category Б		
Tensile strength, N/mm <sup>2</sup> (kgf/mm <sup>2</sup> ), not less than	655 (66.8)	638 (65.0)	687 (70.0)	689 (70.3)
Yield limit, N/mm <sup>2</sup> (kgf/mm <sup>2</sup> ), not less than	379 (38.7)	373 (38.0)	491 (50.0)	552 (56.2)
not more than	552 (56.2)	-	-	758 (77.3)
Elongation %, not less than	14.3	16.0	12.0	13.0

## Lengths supplied

- from 9.5 up to 13.0 m.

## Protection

Pipes are supplied:

- black and bare
- external varnished with black lacquer

## Marking

Pipes are supplied with marking according to standard and customer request.

## Delivery

Weight of bundle - up to 5000 kg upon request of customer, or lose

# Coupling stock - ISO 11960/API 5CT

Application: oil and natural gas exploitation  
Coupling stock for tubing

## Pipe dimensions and weight

Label 1	Label 2	Outside diameter		Wall thickness, min	
		inches	mm	inches	mm
Externaly upset tubing					
2 ¾	11.97	3.063	77.80	0.425	10.80
2 ⅞	16.63	3.668	93.17	0.490	12.45
3 ½	24.99	4.500	114.30	0.600	15.24
Non upset tubing					
2 ¾	10.82	2.875	73.02	0.411	10.44
2 ⅞	15.97	3.500	88.90	0.498	12.65
3 ½	22.10	4.250	107.95	0.561	14.25

Coupling stock for casing

## Pipe dimensions and weight

Label 1	Label 2	Outside diameter		Wall thickness, min	
		inches	mm	inches	mm
	Casing short round thread				
4 ½	22.57	5.000	127.00	0.466	11.84
5	27.38	5.563	141.30	0.507	12.88
5 ½	29.64	6.050	153.67	0.500	12.70
6 ⅝	45.81	7.390	187.71	0.635	16.13
7	43.35	7.656	194.46	0.573	14.55
7 ⅝	58.77	8.500	215.90	0.706	17.93
8 ⅝	73.77	9.625	244.48	0.706	17.93
9 ⅝	82.11	10.625	269.88	0.781	19.84
10 ¾	92.04	11.750	298.45	0.786	19.96
11 ¾	100.43	12.750	323.85	0.786	19.96
13 ⅜	114.07	14.375	365.12	0.786	19.96
	Casing long round thread				
4 ½	23.13	5.000	127.00	0.479	12.17
5	28.44	5.563	141.30	0.529	13.44
5 ½	31.03	6.050	153.67	0.526	13.44
6 ⅝	47.57	7.390	187.71	0.662	16.81
7	45.42	7.656	194.46	0.603	15.32
7 ⅝	60.95	8.500	215.90	0.735	18.67
8 ⅝	77.62	9.625	244.48	0.826	20.98
9 ⅝	86.73	10.625	269.88	0.820	20.83
	Casing buttress thread				
4 ½	21.56	5.000	127.00	0.443	11.25
5	26.20	5.563	141.30	0.483	12.27
5 ½	28.39	6.050	153.67	0.477	12.12
6 ⅝	43.97	7.390	187.71	0.607	15.42
7	41.88	7.656	194.46	0.552	14.02
7 ⅝	57.02	8.500	215.90	0.683	17.35
8 ⅝	71.96	9.625	244.48	0.760	19.30
9 ⅝	80.07	10.625	269.88	0.760	19.30
10 ¾	89.09	11.750	298.45	0.759	19.28
11¾	97.68	12.750	323.85	0.763	19.38
13 ⅜	110.51	14.375	365.12	0.760	19.30

## Tolerances

Outside diameter  $\pm 1\%$  (not more than  $\pm 3,18$  mm)  
Wall thickness  $+20/-0\%$  (not more than  $\pm 3,18$  mm)

## Mechanical properties of steel

Grade	Tensile strength, psi/MPa	Yield limit, psi/MPa	
	not less than	not less than	not more than
J-55	75000 (517)	55000 (379)	80000 (552)
K-55	95000 (655)	55000 (379)	80000 (552)
N-80	100000 (689)	80000 (552)	110000 (758)
L-80	95000 (655)	80000 (552)	95000 (655)
C-95	105000 (724)	95000 (655)	100000 (758)
P-110	125000 (862)	110000 (758)	140000 (958)

### Length supplied:

- random length 4.5 - 12.5 meters
- fixed length within the random length range

### Protection

Pipes are supplied:

- black and bare
- external varnished with black or clear lacquer

Upon request, pipes ends are supplied with plastic caps

### Marking

Pipes are supplied with marking according to standard and customer request.

Marking is paint and/or die stencilled on the ends of pipes. The same data as well as additional information per customer's request is indicated on the bundle's tags.

### Delivery

Pipes are supplied in hexahedral (up to OD 114 mm) or round (above 121 mm) bundles tied in at least five places with steel strip.

Weight of bundle - up to 5000 kg upon request of customer.

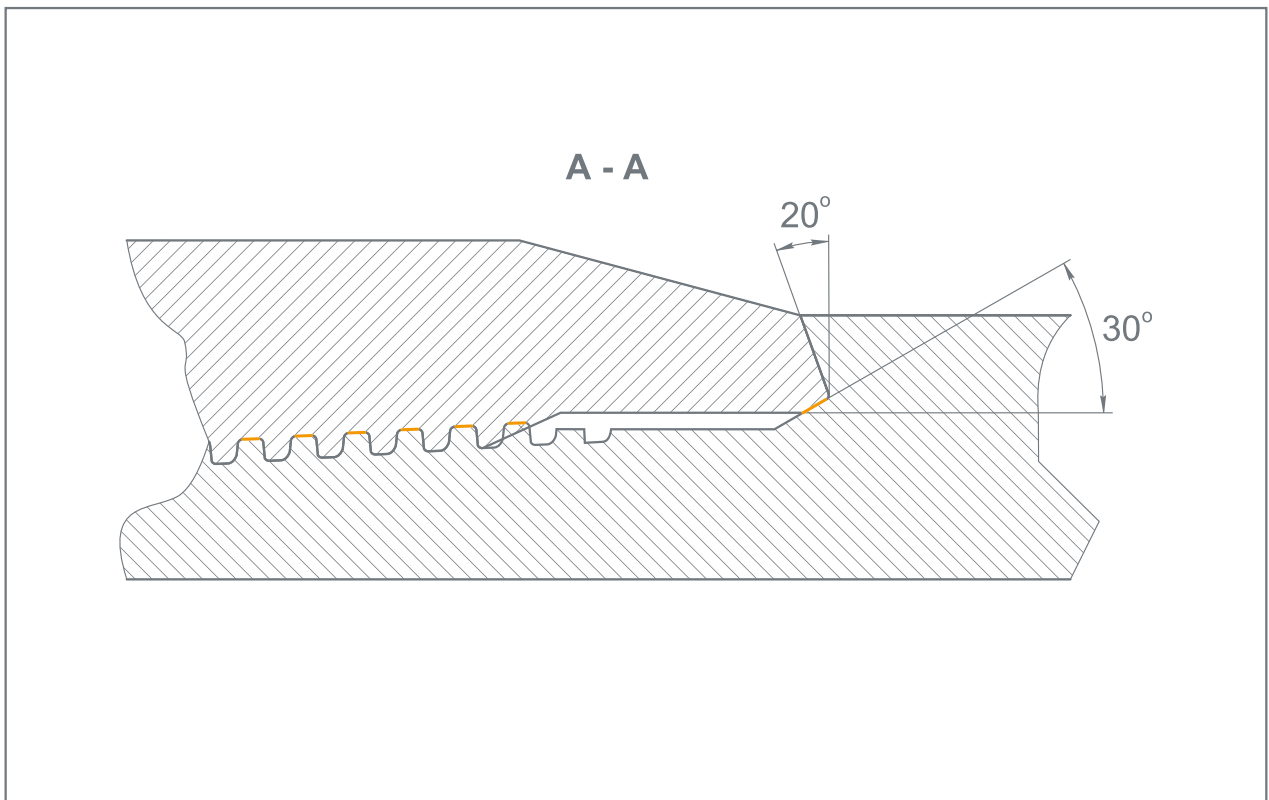
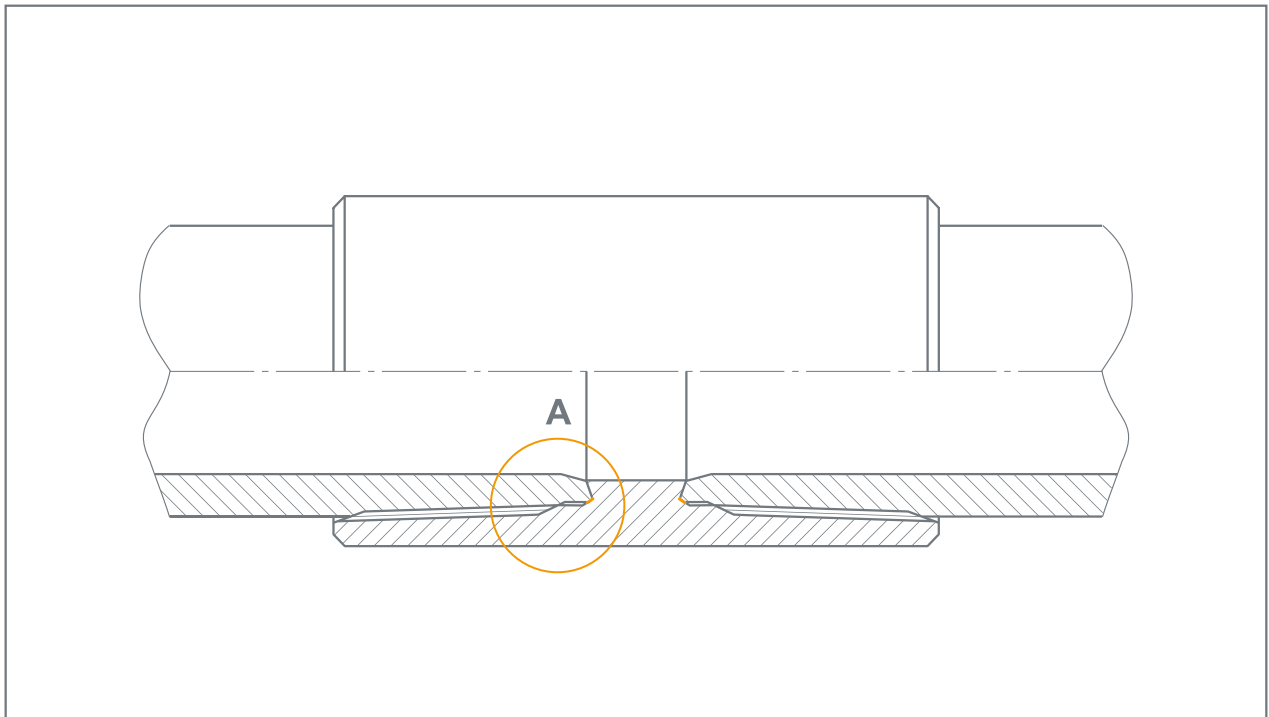
Each bundle is furnished with three tags.

### Mill test certificate

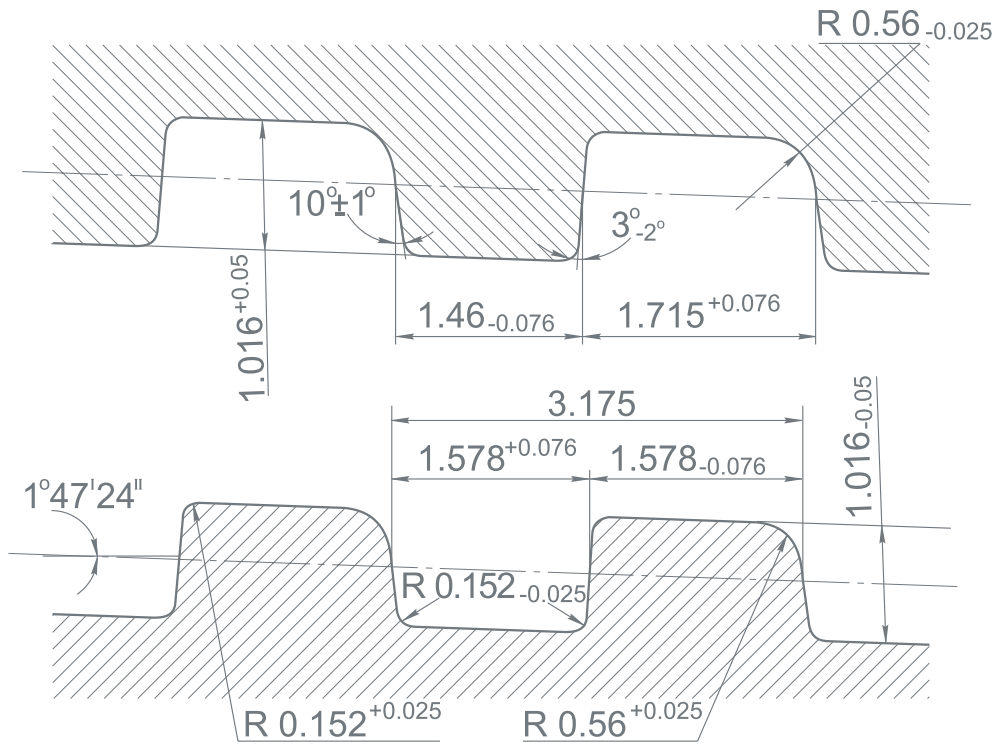
MTC is issued in accordance with EN 10204

# Gas-tight premium connection UPJ

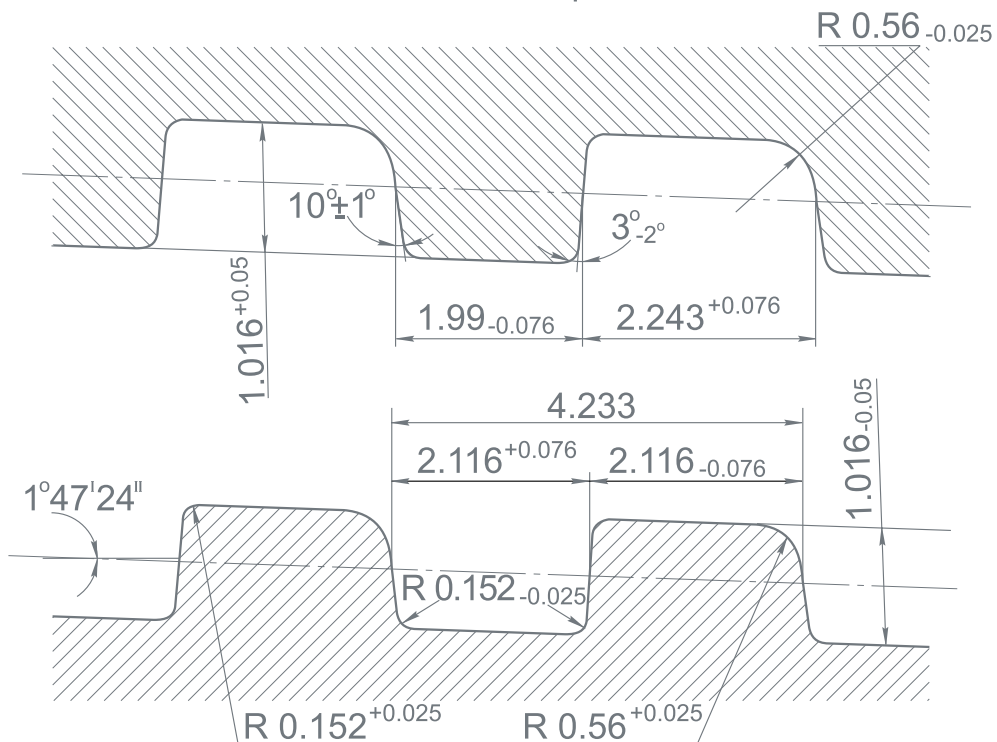
Tubing - ISO 11960/API 5CT



**2 3/8" - 2 7/8" 8 threads per inch**



**3 1/2" 6 threads per inch**



## Pipe dimensions and weight

Label 1	Label 2	Outside diameter		Wall thickness		Calculated pipe weight		Steel grade
		inch	mm	inch	mm	lb/ft	kg/m	
2 3/8	4.60	2.375	60.32	0.190	4.83	4.44	6.61	H-40, J-55, N-80, L-80, P-110
2 7/8	6.40	2.875	73.02	0.217	5.51	6.17	9.17	H-40, J-55, N-80, L-80, P-110
	7.80			0.276	7.01	7.67	11.41	N-80, L-80, P-110
3 1/2	7.70	3.500	88.90	0.216	5.49	7.58	11.29	H-40, J-55, N-80, L-80
	9.20			0.254	6.45	8.81	13.12	H-40, J-55, N-80, L-80, P-110
	10.20			0.289	7.34	9.92	14.76	H-40, J-55, N-80, L-80

## Tolerances

Outside diameter permissible deviations:	±0.031 inch (±0.79 mm)
Wall thickness permissible deviations:	-12.5% Positive deviations are limited by pipe weight
Weight deviation	+6.5%/-3.5%

## Lengths supplied

Range 1: 20.0 - 24.0 feet (6.10 - 7.32 m), upon agreement 20.0-28.0 feet (6.10-8.53 m);  
Range 2: 28.0 - 32.0 feet (8.53 - 9.75 m).

## Mechanical properties of steel

Grade	Tensile strength, psi/MPa	Yield strength, psi/MPa	
	not less than	not less than	not more than
H-40	60000 (414)	40000 (276)	80000 (552)
J-55	75000 (517)	55000 (379)	80000 (552)
N-80	100000 (689)	80000 (552)	110000 (758)
L-80	95000 (655)	80000 (552)	95000 (655)
P-110	125000 (862)	110000 (758)	140000 (965)

## Protection

Pipes are supplied:  
- black and bare  
- external varnished with black or clear lacquer  
- threaded ends of pipes and couplings are phosphatized

## Marking

Pipes are supplied with marking according to standard and customer request.  
Marking is paint and/or die stencilled on the ends of pipes. The same data, as well as additional information per customer's request, is indicated on the bundle's tags.

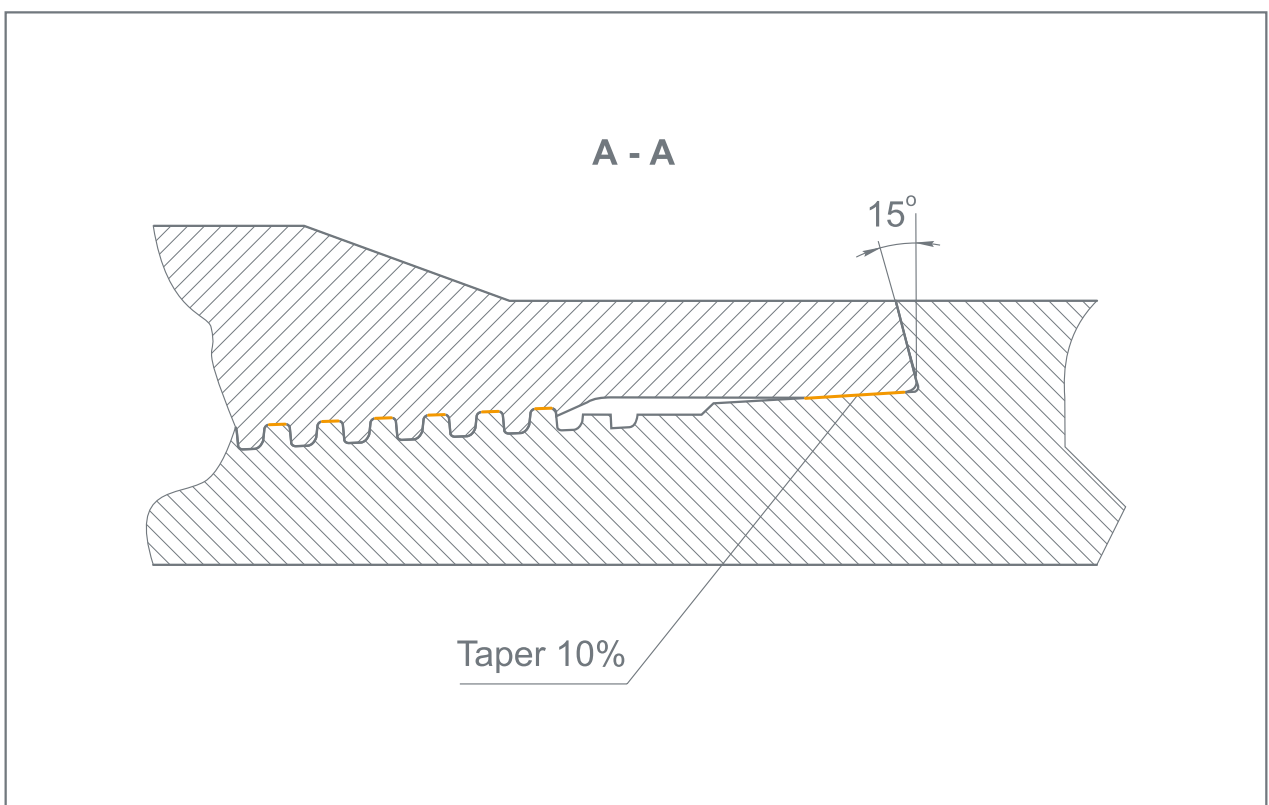
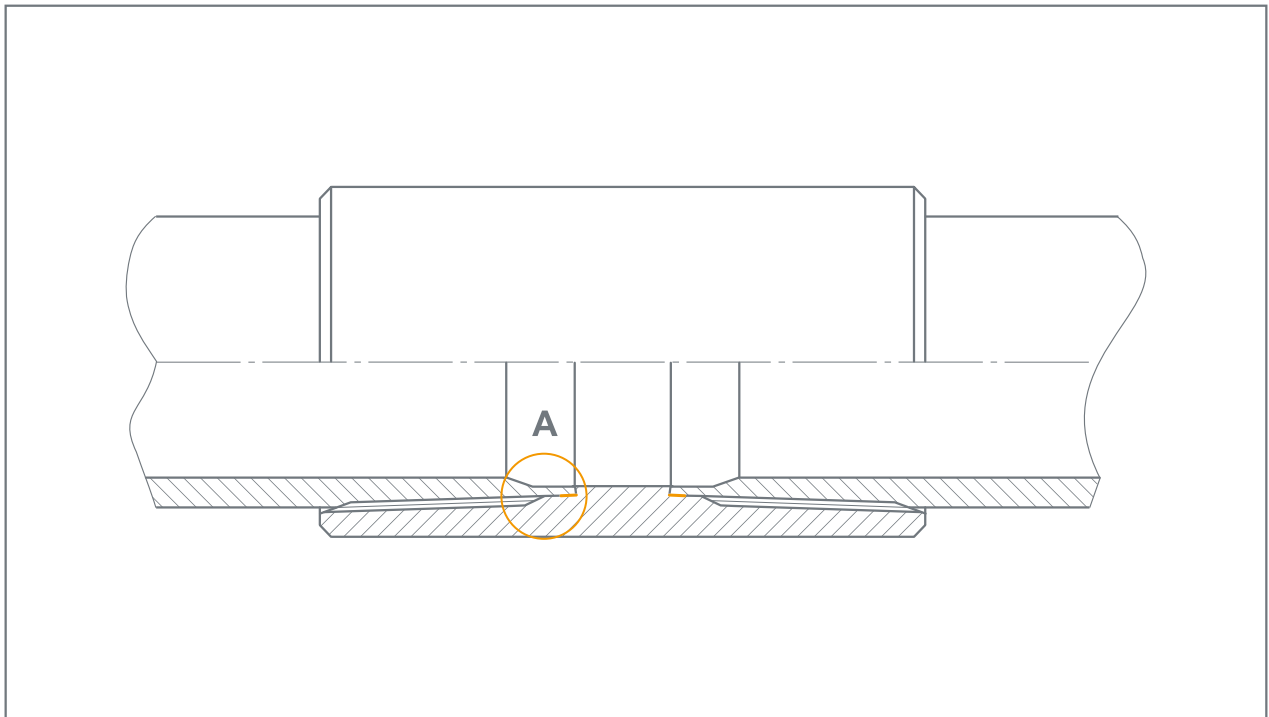
## Delivery

Pipes are supplied in round bundles tied in at least five places with steel strip Weight of bundle - up to 5000 kg upon request of customer. Each bundle is furnished with three tags.

## Mill test certificate

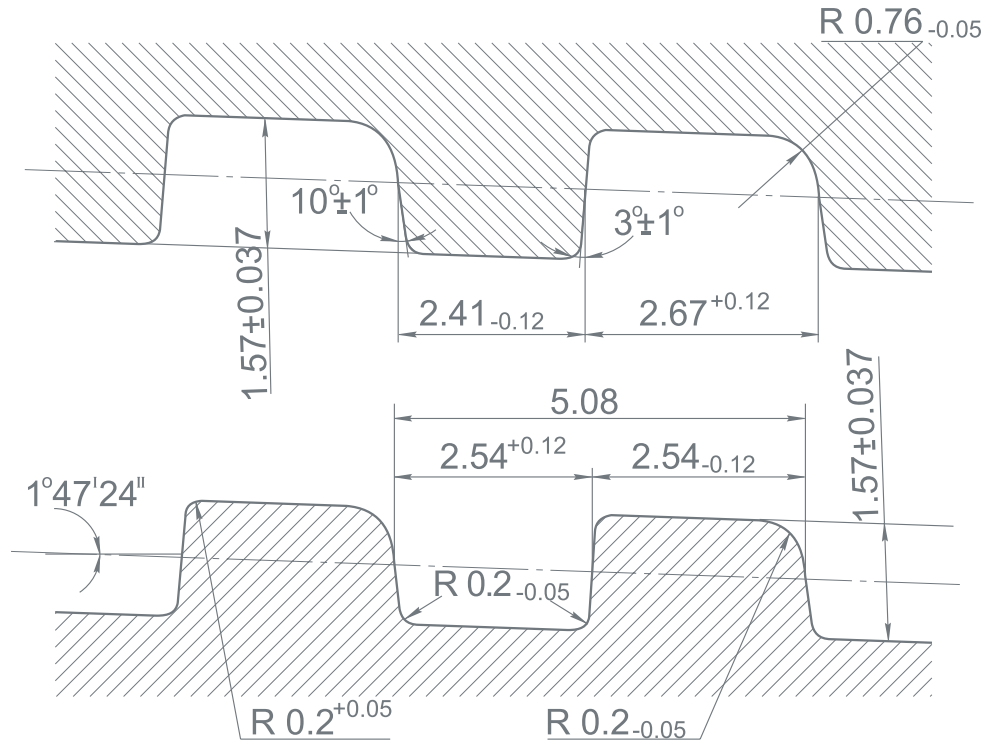
MTC is issued in accordance with EN 10204

## Casing - ISO 11960/API 5CT





5" - 9 5/8" 5 threads per inch



## Pipe dimensions and weight

Label 1	Label 2	Outside diameter		Wall thickness		Calculated weight of plain-end pipe	
		inches	mm	inches	mm	lb/ft	kg/m
5 ½	17.00	5.500	139.70	0.304	7.72	16.89	25.13
	20.00			0.361	9.17	19.83	29.52
	23.00			0.415	10.54	22.56	33.57
6 ⅝	20.00	6.625	168.28	0.288	7.32	19.51	29.06
	24.00			0.352	8.94	23.60	35.13
	28.00			0.417	10.59	27.67	41.18
	32.00			0.475	12.06	31.23	46.46
7	23.00	7.000	177.80	0.317	8.05	22.65	33.70
	26.00			0.362	9.19	25.69	38.21
	29.00			0.408	10.36	28.75	42.78
	32.00			0.453	11.51	31.70	47.20
	35.00			0.498	12.65	34.61	51.52
	38.00			0.540	13.72	37.29	55.52
9 ⅝	36.00	9.625	244.48	0.352	8.94	34.89	51.93
	40.00			0.395	10.03	38.97	57.99
	43.50			0.435	11.05	42.73	63.61
	47.00			0.472	11.99	46.18	68.75
	53.50			0.545	13.84	52.90	78.72

- Manufactured on request

## Tolerances

Outside diameter permissible deviations:	+1% -0.5%
Wall thickness permissible deviations:	-12.5% Positive deviations are limited by pipe weight
Weight deviation	+6.5% -3.5%

## Lengths supplied

Range 1: 16 - 25 feet (4.88 - 7.62 m)

Range 2: 25 - 34 feet (7.62 - 10.36 m)

Range 3: 34 - 41 feet (10.36 - 12.50 m)

## Steel grade

J55, K55, N80, L80-1, P110

## Mechanical properties of steel

Grade	Tensile strength, psi/MPa	Yield strength, psi/MPa	
	not less than	not less than	not more than
J-55	75000 (517)	55000 (379)	80000 (552)
K-55	95000 (655)	55000 (379)	80000 (552)
N-80	100000 (689)	80000 (552)	110000 (758)
L-80	95000 (655)	80000 (552)	95000 (655)
P-110	125000 (862)	110000 (758)	140000 (958)

## Protection

Pipes are supplied:

- black and bare
- external varnished with black or clear lacquer
- threaded ends of pipes and couplings are phosphatized

## Marking

Pipes are supplied with marking according to standard and customer request.

Marking is paint and/or die stencilled on the ends of pipes. The same data, as well as additional information per customer's request, is indicated on the bundle's tags.

## Delivery

Pipes are supplied in round bundles tied in at least five places with steel strip. Weight of bundle - up to 5000 kg upon request of customer.

Each bundle is furnished with three tags.

## Mill test certificate

MTC is issued in accordance with EN 10204

# Specification for line pipes - API 5L

Application: gas, water and oil transportation in both oil and natural gas

Pipe dimensions and weight								
NPS	Outside diameter		Wall thickness		Weight per length unit		Pipe type	
	inches	mm	inches	mm	lb/ft	kg/m	Seamless	Welded
1.315	1.315	33.4	0.133	3.4	1.68	2.52	•	
1.660	1.660	42.2	0.140	3.6	2.27	3.43	•	
1.900	1.900	48.3	0.145	3.7	2.72	4.07	•	
2 3/8	2.375	60.3	0.141	3.6	3.37	5.03	•	
			0.154	3.9	3.66	5.42	•	
			0.172	4.4	4.05	6.07	•	
			0.188	4.8	4.40	6.57	•	
			0.218	5.5	5.03	7.43	•	
2 1/2	2.875	73.0	0.156	4.0	4.53	6.81	•	
			0.172	4.4	4.97	7.44	•	
			0.188	4.8	5.40	8.07	•	
			0.203	5.2	5.80	8.69	•	
			0.216	5.5	6.14	9.16	•	
			0.250	6.4	7.02	10.51	•	
			0.276	7.0	7.67	11.39	•	
3 1/2	3.500	88.9	0.156	4.0	5.58	8.37	•	
			0.172	4.4	6.12	9.17	•	
			0.188	4.8	6.66	9.95	•	
			0.216	5.5	7.58	11.31	•	
			0.250	6.4	8.69	13.02	•	
			0.281	7.1	9.67	14.32	•	
4	4.000	101.6	0.300	7.6	10.26	15.24	•	
			0.141	3.6	6.41	9.63	•	
			0.156	4.0	6.41	9.63	•	
			0.172	4.4	7.04	10.55	•	
			0.188	4.8	7.66	11.46	•	
			0.226	5.7	9.12	13.48	•	
			0.250	6.4	10.02	15.02	•	
			0.281	7.1	11.17	16.55	•	
4 1/2	4.500	114.3	0.318	8.1	12.52	18.68	•	
			0.156	4.0	7.24	10.88	•	
			0.172	4.4	7.96	11.92	•	
			0.188	4.8	8.67	12.96	•	
			0.203	5.2	9.32	13.99	•	
			0.219	5.6	10.02	15.01	•	
			0.237	6.0	10.80	16.02	•	
			0.250	6.4	11.36	17.03	•	
			0.281	7.1	12.67	18.77	•	
			0.312	7.9	13.97	20.73	•	
			0.337	8.6	15.00	22.42	•	
5 1/16	5.563	141.3	0.438	11.1	19.02	28.25	•	
			0.531	13.5	22.53	33.56	•	
			0.258	6.6	14.63	21.92	•	
			0.281	7.1	15.87	23.50	•	
			0.312	7.9	17.51	25.99	•	
			0.344	8.7	19.19	28.45	•	
6 3/8	6.625	168.3	0.375	9.5	20.80	30.88	•	
			0.500	12.7	27.06	40.28	•	
			0.280	7.1	18.99	28.22	•	
			0.312	7.9	21.06	31.25	•	
			0.344	8.7	23.10	34.24	•	
			0.375	9.5	25.05	37.20	•	
			0.432	11.0	28.60	42.67	•	
			0.500	12.7	32.74	48.73	•	
			0.562	14.3	36.43	54.31	•	
			0.625	15.9	40.09	59.76	•	
			0.719	18.3	45.39	67.69	•	
			0.750	19.1	47.10	70.27	•	
			0.864	21.9	53.21	79.06	•	

# Pipe dimensions and weight (continued)

NPS	Outside diameter		Wall thickness		Weight per length unit		Pipe type	
	inches	mm	inches	mm	lb/ft	kg/m	Seamless	Welded
8 5/8	8.625	219.1	0.277	7.0	24.72	36.61	•	•
			0.312	7.9	27.73	41.14	•	•
			0.322	8.2	28.58	42.65	•	•
			0.344	8.7	30.45	45.14	•	
			0.375	9.5	33.07	49.10	•	
			0.438	11.1	38.33	56.94	•	
			0.500	12.7	43.43	64.64	•	
			0.562	14.3	48.44	72.22	•	
			0.625	15.9	53.45	79.67	•	
			0.719	18.3	60.77	90.62	•	
			0.750	19.1	63.14	94.20	•	
10 3/4	10.750	273.1	0.812	20.6	67.82	100.84	•	
			0.875	22.2	72.49	107.79	•	
			0.279	7.1	31.23	46.57	•	•
			0.307	7.8	34.27	51.03	•	•
			0.344	8.7	38.27	56.72	•	
			0.365	9.3	40.52	60.50	•	
			0.438	11.1	48.28	71.72	•	
			0.500	12.7	54.79	81.55	•	
			0.562	14.3	61.21	91.26	•	
			0.625	15.9	67.65	100.85	•	
			0.719	18.3	77.10	114.99	•	
12 3/4	12.750	323.9	0.812	20.6	86.26	128.27	•	
			0.875	22.2	92.37	137.36	•	
			0.312	7.9	41.48	61.56	•	•
			0.330	8.4	43.81	65.35	•	•
			0.344	8.7	45.62	67.62	•	•
			0.375	9.5	49.61	73.65	•	•
			0.406	10.3	53.57	79.65	•	
			0.438	11.1	57.65	85.62	•	
			0.500	12.7	65.48	97.46	•	
			0.562	14.3	73.22	109.18	•	
			0.625	15.9	81.01	120.76	•	
14	14.000	355.6	0.688	17.5	88.71	132.23	•	
			0.750	19.1	96.21	143.56	•	
			0.812	20.6	103.63	154.08	•	
			0.875	22.2	111.08	165.17	•	
			0.344	8.7	50.22	74.42		•
			0.375	9.5	54.62	81.08	•	•
			0.406	10.3	59.00	87.71	•	•
			0.438	11.1	63.50	94.30	•	
			0.469	11.9	67.84	100.86	•	
			0.500	12.7	72.16	107.39	•	
			0.562	14.3	80.73	120.36	•	
16	16.000	406.4	0.625	15.9	89.36	133.19	•	
			0.688	17.5	97.91	145.91	•	
			0.750	19.1	106.23	158.49	•	
			0.812	20.6	114.48	170.18	•	
			0.875	22.2	122.77	182.52	•	
			0.219	5.6	36.95	55.35	•	
			0.250	6.4	42.09	63.13		•
			0.281	7.1	47.22	69.91		•
			0.312	7.9	52.32	77.63		•
			0.344	8.7	57.57	85.32		•
			0.375	9.5	62.64	92.98		•
18	18.000	457.0	0.406	10.3	67.60	100.60		•
			0.219	5.6	41.63	62.34		•
			0.250	6.4	47.44	71.12		•
			0.281	7.1	53.23	78.77		•
			0.312	7.9	58.99	87.49		•
			0.344	8.7	64.93	96.18		•
			0.375	9.5	70.65	104.84		•

### Pipe dimensions and weight (continued)

NPS	Outside diameter		Wall thickness		Weight per length unit		Pipe type	
	inches	mm	inches	mm	lb/ft	kg/m	Seamless	Welded
20	20.000	508.0	0.219	5.6	46.31	69.38		•
			0.250	6.4	52.78	79.16		•
			0.281	7.1	59.23	87.70		•
			0.312	7.9	65.66	97.43		•
			0.344	8.7	72.28	107.12		•
			0.375	9.5	78.67	116.78		•
21	21.000	530.0	0.219	5.6	46.31	69.38		•
			0.250	6.4	52.78	79.16		•
			0.281	7.1	59.23	87.70		•
			0.312	7.9	65.66	97.43		•
			0.344	8.7	72.28	107.12		•
			0.375	9.5	78.67	116.78		•
40	40.000	1016	0.395	9.5	86.16	128.20		•
			0.375	9.5	158.85	235.79		•
			0.406	10.3	171.84	255.45		•
			0.438	11.1	185.24	275.07		•
			0.469	11.9	198.19	294.66		•
			0.500	12.7	211.13	314.22		•
			0.562	14.3	236.93	353.24		•

The sizes are produced upon agreement.

Welding process: ERW-HFI. Length: 12 m

### Mechanical properties of steel according to PSL1

Steel Grade	Tensile strength, psi/MPa	Yield strength, psi/MPa
	not less than	
A25	45000 (310)	25000 (172)
A	48000 (331)	30000 (207)
B	60000 (414)	35000 (241)
X42	60000 (414)	42000 (290)
X46	63000 (434)	46000 (317)
X52	66000 (455)	52000 (359)
X56	71000 (490)	56000 (386)
X60	75000 (517)	60000 (414)

### Mechanical properties of steel according to PSL2

Steel Grade	Tensile strength, psi/MPa	Yield strength, psi/MPa
B	60000-110000 (414-758)	35000-65000 (241-488)
X42	60000-110000 (414-758)	42000-72000 (290-496)
X46	63000-110000 (434-758)	46000-76000 (317-524)
X52	66000-110000 (455-758)	52000-77000 (359-531)
X56	71000-110000 (490-758)	56000-79000 (386-544)
X60	75000-110000 (517-758)	60000-82000 (414-565)

### Tolerances

Outside diameter permissible deviation		Wall thickness permissible deviation	Weight deviations
up to 60.3 mm	Pipe body + 0.41/- 0.79 mm Pipe ends: up to OD 273.1 +1.59/-0.40 mm	OD up to 73.0 mm GrB +20.0/-12.5 % grades X42 and higher +15.0/-12.5 % OD above 73.0 mm +15.0/-12.5 %	+ 10.0% - 3.5%
above 60.3 mm	Pipe body ±0.75% Pipe ends: above OD 273.1 +2.38/-0.79 mm		

Steel grades for API 5L PSL1/PSL2 ERW line pipes: Grade B – X65 (X70).

In addition to API 5L, we produce line pipes according to customer specifications or other standards (including double or triple standards conformity): ISO 3183, ASTM, DIN, GOST.

# Seamless carbon steel pipe for high-temperature service tools - **ASTM A106**

Application: steam, water, gas and air pipelines as well  
as general machinery and tools for industry and construction

## Pipe dimensions and weight

NPS	Outside diameter		Wall thickness		Weight per length unit		Weight class
	inches	mm	inches	mm	lb/ft	kg/m	
1	1.315	33.4	0.133	3.38	1.68	2.50	STD
1 ¼	1.660	42.2	0.140	3.56	2.27	3.39	STD
1 ½	1.900	48.3	0.145	3.68	2.72	4.05	STD
2	2.375	60.3	0.141	3.58	3.36	5.01	-
			0.154	3.91	3.65	5.44	STD
			0.172	4.37	4.05	6.03	-
			0.188	4.78	4.39	6.54	-
			0.218	5.54	5.02	7.48	XS
2 ½	2.875	73.0	0.141	3.58	4.12	6.13	-
			0.156	3.96	4.53	6.74	-
			0.172	4.37	4.97	7.40	-
			0.188	4.78	5.40	8.04	-
			0.203	5.16	5.79	8.63	STD
			0.216	5.49	6.13	9.14	-
			0.250	6.35	7.01	10.44	-
3	3.500	88.9	0.276	7.01	7.66	11.41	XS
			0.375	9.53	10.01	14.92	-
			0.188	4.78	6.65	9.92	-
			0.216	5.49	7.58	11.29	STD
			0.250	6.35	8.68	12.93	-
			0.281	7.14	9.66	14.40	-
3 ½	4.000	101.6	0.300	7.62	10.25	15.27	XS
			0.438	11.13	14.32	21.35	-
			0.188	4.78	7.65	11.41	-
			0.226	5.74	9.11	13.57	STD
4	4.500	114.3	0.250	6.35	10.01	14.92	-
			0.281	7.14	11.16	16.63	-
			0.318	8.08	12.50	18.63	XS
			0.219	5.56	10.01	14.91	-
			0.237	6.02	10.79	16.07	STD
5	5.563	141.3	0.337	8.56	14.98	22.32	XS
			0.438	11.13	19.00	28.32	-
			0.531	13.49	22.51	33.54	-
			0.258	6.55	14.62	21.77	STD
6	6.625	168.3	0.375	9.53	20.78	30.97	XS
			0.500	12.70	27.04	40.28	-
			0.625	15.88	32.96	49.11	-
			0.280	7.11	18.97	28.26	STD
8	8.625	219.1	0.432	10.97	28.57	42.56	XS
			0.562	14.27	36.39	54.20	-
			0.719	18.26	45.35	67.56	-
			0.277	7.04	24.70	36.81	-
			0.322	8.18	28.55	42.55	STD
			0.406	10.31	35.64	53.08	-
			0.500	12.70	43.39	64.64	XS
			0.594	15.09	50.95	75.92	-
			0.719	18.26	60.71	90.44	-
			0.812	20.62	67.76	100.92	-
			0.906	23.01	74.69	111.27	-

## Pipe dimensions and weight (continued)

NPS	Outside diameter		Wall thickness		Weight per length unit		Weight class
	inches	mm	inches	mm	lb/ft	kg/m	
10	10.750	273.0	0.307	7.80	34.24	51.03	-
			0.365	9.27	40.48	60.31	STD
			0.500	12.70	54.74	81.55	XS
			0.594	15.09	64.43	96.01	-
			0.719	18.26	77.03	114.70	-
			0.844	21.44	89.29	133.09	-
			1.000	25.40	104.13	155.15	XXS
			1.125	28.58	115.64	172.21	-
12	12.750	323.8	0.330	8.38	43.77	65.20	-
			0.406	10.31	53.52	79.73	-
			0.562	14.27	73.15	108.92	-
			0.688	17.48	88.63	132.04	-
			0.844	21.44	107.32	159.86	XXS
			1.000	25.40	125.49	186.97	-
			1.125	28.58	139.67	208.14	-
			1.312	33.32	160.27	238.68	STD
14	14.000	355.6	0.375	9.53	54.57	81.33	-
			0.438	11.13	63.44	94.55	-
			0.594	15.09	85.05	126.71	-
			0.750	19.05	106.13	158.10	-
			0.938	23.83	130.85	194.96	-
			1.094	27.79	150.79	224.65	-
			1.250	31.75	170.21	253.56	-
			1.406	35.71	189.11	281.70	-

The sizes are produced upon agreement.

STD - standard weight wall thickness

XS - extra strong wall thickness

XXS - double extra strong wall thickness

## Mechanical properties of steel

Parameters	Mechanical properties of steel, not less than		
	A	B	C
Tensile strength, psi/MPa	48000 (330)	60000 (415)	70000 (485)
Yield limit, psi/MPa	30000 (205)	35000 (240)	40000 (275)

## Tolerances

Steel Grade	Outside diameter permissible deviation		Wall thickness permissible deviation	Weight deviations
A, B, C	up to 4" (114.3mm)	± 0.031" (0.79 mm)	- 12.5%	+ 10.0% - 3.5%
	above 5" (141.3mm)	+ 0.062" (1.59 mm)		
	up to 8" (219.1mm)	- 0.031" (0.79 mm)		
	above 10" (273.0mm)	+ 0.093" (2.38 mm) - 0.031" (0.79 mm)		

## Lengths supplied

Line pipes according to API 5L, ASTM A53 and ASTM A106 are supplied in single random (SRL), double random (DRL), or fixed length

SRL Single Random Length		DRL Double Random Length		Fixed Lengths upon request	
from	up to	from	up to	from	up to
16 ft (4.800 m)	22 ft (6.700 m)	22 ft (6.700 m)	35 ft (10.700 m)	16 ft (4.800 m)	41 ft (12.500 m)

## Protection

Pipes are supplied:

- black and bare
- external varnished with black or clear lacquer
- oiled

Upon request, pipes ends are protected by plastic caps

## Marking

Pipes are supplied with marking according to standard and customer request.

Marking is paint and/or die stenciled on the ends of pipes. The same data, as well as additional information per customer's request, is indicated on the bundle's tags.

## Delivery

Pipes are supplied in hexahedral (up to OD114 mm) or round (above 121 mm) bundles tied in at least five places with steel strip.

Weight of bundle - up to 5000 kg upon request of customer.

Each bundle is furnished with three tags.

## Mill test certificate

MTC is issued in accordance with EN 10204

# Pipe, steel, black and hot-dipped, zinc-coated, welded and seamless - **ASTM A 53/A 53M**

Application: steam, water, gas and air pipelines.  
Pipes are supplied non-galvanized with plain ends.

## Pipe dimensions and weight

NPS	Outside diameter		Wall thickness		Weight per length unit		Weight class	Pipe type	
	inches	mm	inches	mm	lb/ft	kg/m		Seamless	Welded
1	1.315	33.4	0.133	3.38	1.68	2.50	STD	•	•
1 ¼	1.660	42.2	0.140	3.56	2.27	3.39	STD	•	•
1 ½	1.900	48.3	0.145	3.68	2.72	4.05	STD	•	•
2	2.375	60.3	0.141	3.58	3.36	5.01	-	•	•
			0.154	3.91	3.65	5.44	STD	•	
			0.172	4.37	4.05	6.03	-	•	
			0.188	4.78	4.39	6.54	-	•	
			0.218	5.54	5.02	7.48	XS	•	
2 ½	2.875	73.0	0.141	3.58	4.12	6.13	-	•	
			0.156	3.96	4.53	6.74	-	•	
			0.172	4.37	4.97	7.40	-	•	
			0.188	4.78	5.40	8.04	-	•	
			0.203	5.16	5.79	8.63	STD	•	
			0.216	5.49	6.13	9.14	-	•	
			0.250	6.35	7.01	10.44	-	•	
			0.276	7.01	7.66	11.41	XS	•	
3	3.500	88.9	0.375	9.53	10.01	14.92	-	•	
			0.188	4.78	6.65	9.92	-	•	
			0.216	5.49	7.58	11.29	STD	•	
			0.250	6.35	8.68	12.33	-	•	
			0.281	7.14	9.66	14.40	-	•	
			0.300	7.62	10.25	15.27	XS	•	
3 ½	4.000	101.6	0.438	11.13	14.32	21.35	-	•	
			0.600	15.24	18.58	27.68	XXS	•	
			0.188	4.78	7.65	11.41	-	•	
			0.226	5.74	9.11	13.57	STD	•	
			0.250	6.35	10.01	14.92	-	•	
4	4.500	114.3	0.281	7.14	11.16	16.63	-	•	
			0.318	8.08	12.50	18.63	XS	•	
			0.203	5.16	9.32	13.89	-	•	
			0.219	5.56	10.02	14.91	-	•	
			0.237	6.02	10.79	16.07	STD	•	
			0.250	6.35	11.35	16.90	-	•	
			0.281	7.14	12.66	18.87	-	•	
			0.312	7.92	13.98	20.78	-		



# Pipe dimensions and weight (continued)

NPS	Outside diameter		Wall thickness		Weight per length unit		Weight class*	Pipe type	
	inches	mm	inches	mm	lb/ft	kg/m		Seamless	Welded
5	5.563	141.3	0.258	6.55	14.62	21.77	STD	•	
			0.281	7.14	15.85	23.62	-	•	
			0.312	7.92	17.50	26.05	-	•	
			0.344	8.74	19.17	28.57	-	•	
			0.375	9.53	20.78	30.97	XS	•	
			0.500	12.70	27.04	40.28	-	•	
			0.625	15.88	32.96	49.11	-	•	
			0.750	19.05	38.55	57.43	XXS	•	
6	6.625	168.3	0.280	7.11	18.97	28.26	STD	•	•
			0.312	7.92	21.04	31.32	-	•	
			0.344	8.74	23.08	34.39	-	•	
			0.375	9.53	25.03	37.31	-	•	
			0.432	10.97	28.57	42.56	XS	•	
			0.562	14.27	36.39	54.20	-	•	
			0.719	18.26	45.35	67.56	-	•	
8	8.625	219.1	0.277	7.04	24.70	36.81	-		•
			0.312	7.92	27.70	41.24	-	•	•
			0.322	8.18	28.55	42.55	STD	•	
			0.344	8.74	30.42	45.34	-	•	
			0.375	9.53	33.04	49.25	-	•	
			0.406	10.31	35.64	53.08	-	•	
			0.438	11.13	38.30	57.08	-	•	
			0.500	12.70	43.39	64.64	XS	•	
			0.594	15.09	50.95	75.92	-	•	
			0.719	18.26	60.71	90.44	-	•	
			0.812	20.62	67.76	100.92	-	•	
			0.875	22.23	72.42	107.92	XXS	•	
			0.906	23.01	74.69	111.27	-	•	
10	10.750	273.0	0.307	7.80	34.24	51.03	-	•	•
			0.344	8.74	38.23	56.98	-	•	
			0.365	9.27	40.48	60.31	STD	•	
			0.438	11.13	48.24	71.90	-	•	
			0.500	12.70	54.74	81.55	XS	•	
			0.594	15.09	64.43	96.01	-	•	
			0.719	18.26	77.03	114.75	-	•	
			0.844	21.44	89.29	133.06	-	•	
			1.000	25.40	104.13	155.15	XXS	•	
			1.125	28.58	115.64	172.33	-	•	

## Pipe dimensions and weight (continued)

NPS	Outside diameter		Wall thickness		Weight per length unit		Weight class*	Pipe type	
	inches	mm	inches	mm	lb/ft	kg/m		Seamless	Welded
12	12.750	323.8	0.330	8.38	43.77	65.20	-	•	•
			0.344	8.74	45.58	67.93	-	•	•
			0.375	9.53	49.56	73.88	STD	•	
			0.406	10.31	53.52	79.73	-	•	
			0.438	11.13	57.59	85.84	-	•	
			0.500	12.70	65.42	97.46	XS	•	
			0.562	14.27	73.15	108.96	-	•	
			0.688	17.48	88.63	132.08	-	•	
			0.844	21.44	107.32	159.91	-	•	
			1.000	25.40	125.49	186.97	XXS	•	
			1.125	28.58	139.67	208.14	-	•	
14	14.000	355.6	1.312	33.32	160.27	238.76	-	•	
			0.312	7.92	45.61	67.90	-		•
			0.344	8.74	50.17	74.76	-	•	•
			0.375	9.53	54.57	81.33	STD	•	
			0.438	11.13	63.44	94.55	-	•	
			0.469	11.91	67.78	100.94	-	•	
			0.500	12.70	72.09	107.39	XS	•	
			0.594	15.09	85.05	126.71	-	•	
			0.750	19.05	106.13	158.10	-	•	
			0.938	23.83	130.85	194.96	-	•	
			1.094	27.79	150.79	224.65	-	•	
16	16.000	406.4	1.250	31.75	170.21	253.56	-	•	
			2.000	50.80	256.32	381.83	-	•	
			2.125	53.98	269.50	401.50	-	•	
			0.219	5.56	36.94	54.86	-		•
			0.250	6.35	42.05	62.64	-		•
			0.281	7.14	47.17	70.30	-		•
			0.312	7.92	52.27	77.83	-		•
			0.344	8.74	57.52	85.71	-		•
			0.375	9.52	62.58	93.17	STD		•
18	18.000	457.0	0.219	5.56	41.59	61.90	-		•
			0.250	6.35	47.39	70.57	-		•
			0.281	7.14	53.18	79.21	-		•
			0.312	7.92	58.94	87.71	-		•
			0.344	8.74	64.87	96.61	-		•
			0.375	9.53	70.59	105.16	STD		•
20	20.000	508.0	0.219	5.56	46.27	68.89	-		•
			0.250	6.35	52.73	78.55	-		•
			0.281	7.14	59.18	88.19	-		•
			0.312	7.92	65.60	97.67	-		•
			0.344	8.74	72.21	107.60	-		•
			0.375	9.53	78.60	117.15	STD		•

The sizes are produced upon agreement.

STD - standard weight wall thickness

XS - extra strong wall thickness

XXS - double extra strong wall thickness

## Mechanical properties of steel

Parameters	Mechanical properties of steel, not less than	
	Grade A	Grade B
Tensile strength, psi/MPa	48000 (330)	60000 (415)
Yield strength, psi/MPa	30000 (205)	35000 (240)

## Tolerances

Steel Grade	Outside diameter permissible deviation		Wall thickness permissible deviation	Weight deviations
A, B	up to 1-1/2" (48.3 mm)	± 1/4" (0.4 mm)	- 12.5%	+/- 10.0 %
	2" (60.3 mm) and above	+/- 1%		

# Seamless hot-rolled steel tubes - GOST 8731-74/GOST 8732-78

Application: for transportation of gas, air, water and oil, as well as general purpose

## Pipe dimensions and weight

Outside diameter, mm	Weight per meter,kq, for wall thickness, mm																					
	3.0	3.2	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	11.0	12.0	13.0	14.0	15.0	16.0
32	2.15	2.27	2.46	2.76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33.7	2.27	2.41	2.61	2.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	2.59	2.75	2.98	3.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	2.89	3.06	3.32	3.75	4.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42.4	2.91	3.09	3.36	3.79	4.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	3.11	3.30	3.58	4.04	4.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48.3	3.35	3.56	3.87	4.37	4.86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	3.48	3.69	4.01	4.54	5.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	3.55	3.77	4.10	4.64	5.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	4.62	5.23	5.83	6.41	6.99	7.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	4.88	5.52	6.16	6.78	7.39	7.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60.3	-	-	4.90	5.55	6.19	6.82	7.43	8.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63.5	-	-	5.18	5.87	6.55	7.21	7.87	8.51	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70	-	-	5.74	6.51	7.27	8.02	8.75	9.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73	-	-	6.00	6.81	7.60	8.39	9.16	9.91	10.66	11.39	12.12	12.82	13.52	14.21	14.88	15.54	16.82	-	-	-	-	-
76	-	-	6.26	7.10	7.94	8.76	9.56	10.36	11.14	11.91	12.67	13.42	14.15	14.87	15.58	16.28	17.63	-	-	-	-	-
83	-	-	6.86	7.79	8.71	9.62	10.51	11.39	12.26	13.12	13.96	14.80	15.62	16.43	17.22	18.00	19.53	21.01	22.44	23.82	25.16	26.44
89	-	-	7.38	8.39	9.38	10.36	11.33	12.28	13.23	14.16	15.07	15.98	16.88	17.76	18.63	19.48	21.16	22.70	24.37	25.90	27.37	28.81
95	-	-	-	8.98	10.04	11.10	12.14	13.17	14.19	15.19	16.18	17.16	18.13	19.09	20.03	20.96	22.79	24.56	26.29	27.97	29.59	31.17
102	-	-	-	9.67	10.82	11.96	13.09	14.21	15.31	16.40	17.48	18.55	19.60	20.64	21.67	22.69	24.69	26.63	28.53	30.38	32.18	33.93
108	-	-	-	10.26	11.49	12.70	13.90	15.09	16.27	17.44	18.59	19.73	20.86	21.97	23.08	24.17	26.31	28.41	30.46	32.46	34.40	36.30
114	-	-	-	10.85	12.15	13.44	14.72	15.98	17.23	18.47	19.70	20.91	22.12	23.31	24.48	25.65	27.94	30.19	32.38	34.53	36.62	38.67
121	-	-	-	-	-	14.30	15.67	17.02	18.35	19.68	20.99	22.29	23.58	24.86	26.12	27.37	29.84	32.26	34.62	36.94	39.21	41.63
127	-	-	-	-	-	15.04	16.48	17.90	19.32	20.72	22.10	23.48	24.84	26.19	27.53	28.85	31.47	34.03	36.55	39.01	41.43	43.80
133	-	-	-	-	-	15.78	17.29	18.79	20.28	21.75	23.21	24.66	26.10	27.52	28.93	30.33	33.10	35.81	38.47	41.09	43.65	46.17
140	-	-	-	-	-	16.65	18.24	19.83	21.40	22.96	24.51	26.04	27.57	29.08	30.57	32.06	35.00	37.88	40.72	43.50	46.24	48.93
146	-	-	-	-	-	17.39	19.06	20.72	22.36	24.00	25.62	27.23	28.82	30.41	31.98	33.54	36.62	39.66	42.64	45.57	48.46	51.30
152	-	-	-	-	-	18.13	19.87	21.60	23.32	25.03	26.73	28.41	30.08	31.74	33.39	35.05	38.25	41.43	44.56	47.65	50.68	53.66
159	-	-	-	-	-	18.99	20.82	22.64	24.45	26.24	28.02	29.79	31.55	33.29	35.03	36.75	40.15	43.50	46.81	50.06	53.27	56.43
168	-	-	-	-	-	-	-	23.97	25.89	27.79	29.69	31.57	33.44	35.29	37.13	38.97	42.59	46.17	49.69	53.17	56.60	59.98
180	-	-	-	-	-	-	-	-	-	29.87	31.91	33.93	35.95	37.95	39.95	41.93	45.85	49.72	53.54	57.31	61.04	64.71
194	-	-	-	-	-	-	-	-	-	32.28	34.50	36.70	38.89	41.06	43.23	45.38	49.64	53.86	58.03	62.15	66.22	70.24
203	-	-	-	-	-	-	-	-	-	33.84	36.16	38.47	40.77	43.06	45.33	47.60	52.09	56.52	60.91	65.25	69.55	73.79
219	-	-	-	-	-	-	-	-	-	36.60	39.12	41.63	44.13	46.61	49.08	51.54	56.43	61.26	66.04	70.78	75.46	80.10
245	-	-	-	-	-	-	-	-	-	41.09	43.93	46.76	49.58	52.38	55.17	57.95	63.48	68.95	74.38	79.76	85.08	90.36
273	-	-	-	-	-	-	-	-	-	45.92	49.11	52.28	55.45	58.60	61.73	64.86	71.07	77.24	83.36	89.42	95.44	101.41
299	-	-	-	-	-	-	-	-	-	-	-	57.41	60.90	64.37	67.83	71.27	78.13	84.93	91.69	98.40	105.06	111.67
325	-	-	-	-	-	-	-	-	-	-	-	62.54	66.35	70.14	73.92	77.68	85.18	92.63	100.03	107.38	114.68	121.93
351	-	-	-	-	-	-	-	-	-	-	-	-	-	75.91	80.01	84.10	92.23	100.32	108.36	116.35	124.29	132.19
356	-	-	-	-	-	-	-	-	-	-	-	-	-	77.02	81.17	85.33	93.59	101.80	109.97	119.08	126.14	134.16
377	-	-	-	-	-	-	-	-	-	-	-	-	-	81.68	86.10	90.51	99.29	108.02	116.70	125.33	133.91	142.45

The sizes are produced upon agreement. Intermediate sizes are subject to additional agreement.

## Pipe dimensions and weight (continued)

Outside diameter, mm	Weight per meter,kg, for wall thickness, mm																					
	17.0	18.0	19.0	20.0	22.0	24.0	25.0	26.0	28.0	30.0	32.0	34.0	35.0	36.0	38.0	40.0	42.0	45.0	48.0	50.0	56.0	60.0
89	30.19	31.52	32.80	34.03	36.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95	32.70	34.18	35.61	36.99	39.61	42.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102	35.64	37.29	38.89	40.45	43.40	46.17	46.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108	38.15	39.95	41.70	43.40	46.66	49.72	51.17	52.58	55.24	-	-	-	-	-	-	-	-	-	-	-	-	-
114	40.67	42.62	44.51	46.36	49.92	53.27	54.87	5643	59.39	-	-	-	-	-	-	-	-	-	-	-	-	-
121	43.60	45.72	47.79	49.82	53.71	57.41	59.19	60.91	64.22	-	-	-	-	-	-	-	-	-	-	-	-	-
127	46.12	48.39	50.61	52.78	56.97	60.96	62.89	64.76	68.36	71.77	-	-	-	-	-	-	-	-	-	-	-	-
133	48.63	51.05	53.42	55.74	60.22	64.51	66.58	68.61	72.51	76.20	79.71	-	-	-	-	-	-	-	-	-	-	-
140	51.57	54.16	56.70	59.19	64.02	68.66	70.90	73.10	77.34	81.38	85.23	88.88	90.63	92.33	-	-	-	-	-	-	-	-
146	54.08	56.82	59.51	62.15	67.28	72.21	74.60	76.94	81.48	85.82	89.97	9351	95.81	97.66	-	-	-	-	-	-	-	-
152	56.60	59.48	62.32	65.11	71.53	75.76	78.30	80.79	85.73	90.26	94.70	9854	100.99	102.99	-	-	-	-	-	-	-	-
159	59.53	62.59	65.60	68.56	74.33	79.90	82.62	85.28	90.46	95.44	100.22	104.81	107.03	109.20	-	-	-	-	-	-	-	-
168	63.31	A6.59	69.82	73.00	79.21	85.23	88.16	91.05	96.67	102.10	107.33	112.36	114.80	117.19	121.83	126.27	130.51	136.50	-	-	-	-
180	68.34	71.91	75.44	78.92	85.72	92.33	95.56	98.75	104.96	110.98	116.80	122.42	125.16	127.85	133.07	138.10	142.94	149.82	-	-	-	-
194	74.21	78.13	82.00	85.82	93.32	100.62	104.20	107.72	114.63	121.34	127.85	134.16	137.24	140.28	146.19	151.92	157.44	165.36	-	-	-	-
203	77.98	82.12	86.22	90.26	98.20	105.95	109.74	113.49	120.84	127.99	134.95	141.71	145.01	148.27	154.63	160.79	166.76	175.34	183.48	208.39	-	-
219	84.69	89.23	93.71	98.15	106.88	115.42	119.61	123.75	131.89	139.83	147.57	155.12	158.82	162.47	169.62	176.58	183.33	193.10	202.42	208.39	-	-
245	95.59	100.77	105.90	110.98	120.99	130.80	135.64	140.42	149.84	159.07	168.09	176.92	181.26	185.55	193.99	202.22	210.26	221.95	233.20	24045	-	-
273	107.33	113.20	119.02	124.79	136.18	147.38	152.90	158.38	169.18	179.78	190.19	200.40	205.43	210.41	220.23	229.85	239.27	253.03	266.34	274.98	-	-
299	118.23	124.74	131.20	137.61	150.29	162.77	168.93	175.05	187.13	199.02	210.71	222.20	227.87	233.50	244.59	255.19	266.20	281.88	297.12	307.04	335.59	353.65
325	129.13	136.28	143.38	150.44	164.39	178.16	184.96	191.72	205.09	218.25	231.23	244.00	250.31	256.58	268.96	281.14	293.13	310.74	327.90	339.10	371.50	392.12
351	140.03	147.82	155.57	163.26	178.50	193.54	200.99	208.39	223.04	237.49	251.74	265.80	272.76	279.66	293.32	306.79	320.06	338.59	358.68	371.16	407.41	430.59
356	142.11	150.04	157.90	165.72	181.21	196.49	204.07	211.58	226.49	241.19	255.67	269.98	277.05	284.08	297.99	311.70	325.22	345.12	364.57	377.30	414.29	437.96
377	150.93	159.36	167.75	176.08	192.61	208.93	217.02	225.06	240.99	256.73	272.26	287.60	295.20	302.74	317.69	332.44	346.99	368.44	389.45	403.22	442.32	469.06

The sizes are produced upon agreement. Intermediate sizes are subject to additional agreement.

## Tolerances

Outside diameter, mm	Outside diameter permissible deviation		Wall thickness, mm	Wall thickness permissible deviation	
	extra accuracy	regular accuracy		extra accuracy	regular accuracy
up to 50 cold-formed	± 0.4 mm	± 0.4 mm	up to 5 mm	± 10%	± 10%
hot-rolled	± 0.5 mm	± 0.5 mm	above 5 up to 12 mm (cold-formed)	± 8%	± 8%
above 50 up to 219	± 0.8 %	± 1.0 %	up to 15 (hot-rolled)	+ 12.5%	+ 12.5%
			above 15 up to 30	+ 10.0%	- 15.0%
			above 30	- 12.5%	± 12.5%
above 219	± 1.0 %	± 1.25 %	up to 15	± 10.0%	+ 10.0%
			above 15 up to 30	± 12.5%	- 12.5%
			above 30	+ 12.5%	± 12.5%

## Length supplied

- random from 4.5 up to 12.5 meters
- fixed within the random length range

## Mechanical properties of steel

Steel Grade	Tensile strength, N/mm <sup>2</sup> (kgf/mm <sup>2</sup> )	Yield strength, N/mm <sup>2</sup> (kgf/mm <sup>2</sup> )	Elongation, %
	not less than		
Ст2cn	343 (35)	216 (22)	24
Ст4cn	412 (42)	245 (25)	20
Ст5cn	490 (50)	274 (28)	17
Ст6cn	588 (60)	304 (31)	14
10	353 (36)	216 (22)	24
20	412 (42)	245 (25)	21
35	510 (52)	294 (30)	17
45	588 (60)	323 (33)	14
20X	431 (44)	-	16
40X	657 (67)	-	9
30XГСА	686 (70)	-	11
15XM	431 (44)	225 (23)	21
15XMA	588 (60)	392 (40)	13

# ERW longitudinally welded steel tubes - GOST 10705-80/GOST 10704-91

Application: pipelines and pipes for general purpose

## Pipe dimensions and weight

Outside diameter, mm	Weight per meter, kg, for wall thickness, mm															
	1.0	1.2	1.4	1.5	1.6	1.8	2.0	2.2	2.5	2.8	3.0	3.2	3.5	3.8	4.0	4.5
12	0.271	0.320	0.366	0.388	0.410	-	-	-	-	-	-	-	-	-	-	-
13	0.296	0.349	0.401	0.425	0.450	-	-	-	-	-	-	-	-	-	-	-
14	0.321	0.379	0.435	0.462	0.489	-	-	-	-	-	-	-	-	-	-	-
15	0.345	0.408	0.470	0.499	0.529	-	-	-	-	-	-	-	-	-	-	-
16	0.370	0.438	0.504	0.536	0.568	-	-	-	-	-	-	-	-	-	-	-
18	0.419	0.497	0.573	0.610	0.719	-	-	-	-	-	-	-	-	-	-	-
19	0.444	0.527	0.608	0.647	0.687	0.764	0.838	-	-	-	-	-	-	-	-	-
20	0.469	0.556	0.642	0.684	0.726	0.808	0.888	-	-	-	-	-	-	-	-	-
21.3	0.501	0.595	0.687	0.732	0.777	0.866	0.952	-	-	-	-	-	-	-	-	-
22	0.518	0.616	0.711	0.758	0.805	0.897	0.986	-	-	-	-	-	-	-	-	-
25	0.592	0.704	0.815	0.869	0.923	1.03	1.13	1.24	1.39	-	-	-	-	-	-	-
26	0.617	0.734	0.849	0.906	0.963	1.07	1.18	1.29	1.45	-	-	-	-	-	-	-
27	0.641	0.764	0.884	0.943	1.00	1.12	1.23	1.35	1.51	-	-	-	-	-	-	-
28	0.666	0.793	0.918	0.980	1.04	1.16	1.28	1.40	1.57	-	-	-	-	-	-	-
30	0.715	0.852	0.987	1.05	1.12	1.25	1.38	1.51	1.70	-	-	-	-	-	-	-
32	-	-	1.06	1.13	1.20	1.34	1.48	1.62	1.82	-	-	-	-	-	-	-
33	-	-	1.09	1.17	1.24	1.38	1.53	1.67	1.88	-	-	-	-	-	-	-
33.7	-	-	1.12	1.19	1.27	1.42	1.56	1.71	1.92	2.13	-	-	-	-	-	-
36	-	-	1.19	1.28	1.36	1.52	1.68	1.83	2.07	2.29	-	-	-	-	-	-
38	-	-	1.26	1.35	1.44	1.61	1.78	1.94	2.19	2.43	-	-	-	-	-	-
40	-	-	1.33	1.42	1.52	1.70	1.87	2.05	2.31	2.57	2.74	-	-	-	-	-
42	-	-	1.40	1.50	1.59	1.78	1.97	2.16	2.44	2.71	2.89	-	-	-	-	-
45	-	-	1.51	1.61	1.71	1.92	2.12	2.32	2.62	2.91	3.11	-	-	-	-	-
48	-	-	1.61	1.72	1.83	2.05	2.27	2.48	2.81	3.12	3.33	3.54	-	-	-	-
51	-	-	1.71	1.83	1.95	2.18	2.42	2.65	2.99	3.33	3.55	3.77	-	-	-	-
54	-	-	1.82	1.94	2.07	2.32	2.56	2.81	3.18	3.54	3.77	4.01	-	-	-	-
57	-	-	1.92	2.05	2.19	2.45	2.71	2.97	3.36	3.74	4.00	4.25	-	-	-	-
60	-	-	2.02	2.16	2.30	2.58	2.86	3.14	3.55	3.95	4.22	4.48	-	-	-	-
63.5	-	-	2.14	2.29	2.44	2.74	3.03	3.33	3.76	4.19	4.48	4.76	-	-	-	-
76	-	-	-	-	-	-	-	-	4.53	5.05	5.40	5.75	-	-	-	-
89	-	-	-	-	-	-	-	-	-	-	6.36	6.77	7.38	7.98	8.38	-
102	-	-	-	-	-	-	-	-	-	-	7.32	7.80	8.50	9.20	9.67	-
108	-	-	-	-	-	-	-	-	-	-	7.77	8.27	9.02	9.76	10.26	11.49
114	-	-	-	-	-	-	-	-	-	-	8.21	8.74	9.54	10.33	10.85	12.15

## Pipe dimensions and weight (continued)

Outside diameter, mm	Weight per meter, kg, for wall thickness, mm											
	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
152	16.37	18.13	19.87	21.60	-	-	-	-	-	-	-	-
159	17.15	18.99	20.82	22.64	24.44	26.24	-	-	-	-	-	-
168	18.14	20.10	22.04	23.97	25.89	27.79	-	-	-	-	-	-
219	-	26.39	28.96	31.52	34.06	36.60	39.12	41.63	-	-	-	-
273	-	33.05	36.28	39.51	42.72	45.92	49.11	52.28	-	-	-	-
325	-	-	43.34	47.20	51.06	54.90	58.73	62.54	66.35	70.14	73.91	-
355.6	-	-	47.49	51.73	55.95	60.18	64.38	68.58	72.75	76.93	81.08	-
406.4	-	-	54.38	59.25	64.10	68.95	73.77	78.60	83.40	88.20	92.98	-
426	-	-	-	62.15	67.25	72.33	77.41	82.47	87.52	92.55	97.58	102.59
530	-	-	-	-	-	90.29	96.64	102.99	109.32	115.64	121.94	128.24

## Tolerances

Outside diameter, mm	Outside diameter permissible deviation		Wall thickness permissible deviation
	regular accuracy	extra accuracy	
up to 30	±0.3 mm	±0.25 mm	±10 %
above 30 up to 51	±0.4 mm	±0.35 mm	
above 51 up to 114	±0.8%	±0.7%	
above 152 up to 168	±0.8%	±0.7%	+0.40 -0.50 - for wall thickness up to 5.5 mm
above 219 up to 426	+0.75%	+0.65%	+0.40 -0.60 - for wall thickness above 5.5 up to 7.5 mm
530	±0.7%	±0.65%	+0.35 -0.80 - for wall thickness above 7.5 up to 10 mm
			+0.40 -0.80 - for wall thickness above 10 up to 12 mm

## Lengths supplied

- random from 6 up to 9 meters for outside diameter up to 159 mm
- random from 10 up to 12 meters for outside diameter 219 mm and above
- fixed length within the random length range

## Mechanical properties of steel

Steel Grade	Tensile strength, N/mm <sup>2</sup> (kgf/mm <sup>2</sup> ), for outside diameter, mm			Yield strength, N/mm <sup>2</sup> (kgf/mm <sup>2</sup> )	Elongation %, for outside diameter, mm		
	above 12 up to 19	above 19 up to 60	above 60 up to 114		above 10 up to 60,		63.5 and above
					more than 0.06 D	0,06 D and less	
not less than							
08пс, 08кп, Ст1кп, Ст1пс	372 (38)	314 (32)	294 (30)	176 (18)	6	15	23
08,Ст1пс	372 (38)	314 (32)	294 (30)	186 (19)	6	15	23
Ст2кп, 10кп	372 (38)	333 (34)	314 (32)	176 (18)	6	15	23
Ст2пс, 10пс	372 (38)	333 (34)	314 (32)	186 (19)	6	15	23
Ст2сп,10	372 (38)	333 (34)	314 (32)	196 (20)	6	15	23
15кп	441 (45)	372 (38)	353 (36)	186 (19)	5	14	21
15пс, 20кп	441 (45)	372 (38)	353 (36)	196 (20)	5	14	21
15, 20пс	441 (45)	372 (38)	353 (36)	206 (21)	5	14	21
20	441 (45)	372 (38)	353 (36)	216 (22)	5	14	21
Ст3кп	441 (45)	392 (40)	372 (38)	196 (20)	5	13	20
Ст3пс	441 (45)	392 (40)	372 (38)	206 (21)	5	13	20
Ст3сп	441 (45)	392 (40)	372 (38)	216 (22)	5	13	20

# Steel welded pipes

## for main oil-and-gas pipelines, ERW - GOST 20295-85

Application: pipelines for gas, water and oil transportation  
Pipes are produced full body heat treated

### Pipe dimensions and weight

Outside diameter, mm	Weight per meter, kg, for wall thickness										
	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
159	18.99	20.82	22.64	24.44	26.24	-	-	-	-	-	-
168	20.10	22.04	23.97	25.89	27.79	-	-	-	-	-	-
219	26.39	28.96	31.52	34.06	36.60	39.12	41.63	-	-	-	-
273	33.05	36.28	39.51	42.72	45.92	49.11	52.28	-	-	-	-
325	-	43.34	47.20	51.05	54.90	58.73	62.54	66.35	70.14	73.91	-
426	-	-	62.15	67.25	72.33	77.41	82.47	87.52	92.56	97.58	102

### Tolerances

Outside diameter, mm	Outside diameter permissible deviation, mm	Wall thickness, mm	Wall thickness permissible deviation, mm
159 and 168	±1.5	up to 5.5	+0.40 -0.50
above 168 up to 325	±2.0	above 5.5 up to 7.5	+0.40 -0.60
above 325	±2.2	above 7.5	+0.35 -0.80

### Lengths supplied

- random above 10 up to 12.5 meters
- fixed length 12 meters

### Mechanical properties

Grade	Tensile strength, N/mm <sup>2</sup> (kgf/mm <sup>2</sup> )	Yield strength, N/mm <sup>2</sup> (kgf/mm <sup>2</sup> )	Elongation, %
	not less than		
K34	333 (34)	206 (21)	24
K38	372 (38)	235 (24)	22
K42	412 (42)	245 (25)	21

# Seamless circular unalloyed steel tubes subject to special requirements - EN 10220/DIN 1629

Application: commercial pipes for construction, pipeworks and other general engineering purposes

## Dimensions and weight

Outside diameter, mm	S <sub>n</sub> , mm	Weight per unit length, kg/m																											
		3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0	8.8	10.0	11.0	12.5	14.2	16.0	17.5	20.0	22.2	25.0	28.0	30.0	32.0	36.0	40.0	45.0	50.0	55.0	
33.7	2.6	2.41	2.67	2.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
38.0	2.6	2.75	3.05	3.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
42.4	2.6	3.09	3.44	3.79	4.21	4.61	5.08	5.61	6.18	6.79	7.29	7.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
44.5	2.6	3.26	3.63	4.00	4.44	4.87	5.37	5.94	6.55	7.20	7.75	8.51	9.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
48.3	2.6	3.56	3.97	4.37	4.86	5.34	5.90	6.53	7.21	7.95	8.57	9.45	10.1	11.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
51.0	2.6	3.77	4.21	4.64	5.16	5.67	6.27	6.94	7.69	8.48	9.16	10.1	10.9	11.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
54.0	2.6	4.01	4.47	4.93	5.49	6.04	6.68	7.41	8.21	9.08	9.81	10.9	11.7	12.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
57.0	2.9	4.25	4.74	5.23	5.83	6.41	7.10	7.88	8.74	9.67	10.5	11.6	12.5	13.7	15.0	-	-	-	-	-	-	-	-	-	-	-	-	-	
60.3	2.9	4.51	5.03	5.55	6.19	6.82	7.55	8.39	9.32	10.3	11.2	12.4	13.4	14.7	16.1	17.5	-	-	-	-	-	-	-	-	-	-	-	-	
63.5	2.9	4.76	5.32	5.87	6.55	7.21	8.00	8.89	9.88	10.9	11.9	13.2	14.2	15.7	17.3	18.7	-	-	-	-	-	-	-	-	-	-	-	-	
70.0	2.9	-	5.90	6.51	7.27	8.01	8.89	9.90	11.0	12.2	13.3	14.8	16.0	17.7	19.5	21.3	-	-	-	-	-	-	-	-	-	-	-	-	
73.0	2.9	-	6.16	6.81	7.60	8.38	9.31	10.04	11.5	12.8	13.9	15.5	16.8	18.7	20.6	22.5	-	-	-	-	-	-	-	-	-	-	-	-	
76.1	2.9	-	6.44	7.11	7.95	8.77	9.74	10.8	12.1	13.4	14.6	16.3	17.7	19.6	21.7	23.7	-	-	-	-	-	-	-	-	-	-	-	-	
82.5	3.2	-	7.57	7.74	8.66	9.56	10.6	11.8	13.2	14.7	16.0	17.9	19.4	21.6	23.9	26.2	-	-	-	-	-	-	-	-	-	-	-	-	
88.9	3.2	-	6.76	8.38	9.37	10.3	11.5	12.8	14.3	16.0	17.4	19.5	21.1	23.6	26.2	28.8	30.8	-	-	-	-	-	-	-	-	-	-	-	
101.6	3.6	-	-	9.63	10.8	11.9	13.3	14.8	16.5	18.5	20.1	22.6	24.6	27.5	30.6	33.8	36.3	40.2	43.5	-	-	-	-	-	-	-	-	-	
108.0	3.6	-	-	10.3	11.5	12.7	14.1	15.8	17.7	19.7	21.5	24.2	26.3	29.4	32.8	36.3	39.1	43.4	47.0	51.2	55.2	-	-	-	-	-	-	-	
114.3	3.6	-	-	10.9	12.2	13.5	15.0	16.8	18.8	21.0	22.9	25.7	28.0	31.4	35.1	38.8	41.8	46.5	50.4	55.1	59.6	-	-	-	-	-	-	-	
127.0	4.0	-	-	-	-	15.0	16.8	18.8	21.0	23.5	25.7	28.9	31.5	35.3	39.5	43.8	47.3	52.8	57.4	62.9	68.4	71.8	75.0	-	-	-	-	-	
133.0	4.0	-	-	-	-	15.8	17.6	19.7	22.0	24.7	27.0	30.3	33.1	37.1	41.6	46.2	49.8	55.7	60.7	66.6	72.5	76.2	79.7	-	-	-	-	-	
139.7	4.0	-	-	-	-	16.6	18.5	20.7	23.2	26.0	28.4	32.0	34.9	39.2	43.9	48.8	52.7	59.0	64.3	70.7	77.1	81.2	85.0	92.1	-	-	-	-	
152.4	4.5	-	-	-	-	18.2	20.3	22.7	25.4	28.5	31.2	35.1	38.4	43.1	48.4	53.8	58.2	65.3	71.3	78.5	85.9	90.6	95.0	103	-	-	-	-	
159.0	4.5	-	-	-	-	-	-	23.7	26.6	29.8	32.6	36.7	40.1	45.2	50.7	56.4	61.1	68.6	74.9	82.6	90.5	95.4	100	109	117	127	-	-	
168.3	4.5	-	-	-	-	-	-	25.2	28.2	31.6	34.6	39.0	42.7	48.0	54.0	60.1	65.1	73.1	80.0	88.3	96.6	102	108	117	127	137	-	-	
177.8	5.0	-	-	-	-	-	-	26.6	29.9	33.5	36.7	41.4	45.2	51.0	57.3	63.8	69.2	77.8	85.2	94.2	103	109	115	126	136	147	-	-	
193.7	5.6	-	-	-	-	-	-	29.1	32.7	36.6	40.1	45.3	49.6	55.9	62.9	70.1	76.0	85.7	93.9	104	114	121	128	140	152	165	-	-	
219.1	6.3	-	-	-	-	-	-	-	37.1	41.6	45.6	51.6	56.5	63.7	71.8	80.1	87.0	98.2	108	120	132	140	148	163	177	193	209	-	
244.5	6.3	-	-	-	-	-	-	-	41.6	46.7	51.2	57.8	63.3	71.5	80.6	90.2	98.0	111	122	135	149	159	168	185	202	221	240	-	
273.0	6.3	-	-	-	-	-	-	-	46.6	52.3	57.3	64.9	71.1	80.3	90.6	101	110	125	137	153	169	180	190	210	230	253	275	296	
323.9	7.1	-	-	-	-	-	-	-	55.5	62.3	68.4	77.4	84.9	96.0	108	121	132	150	165	184	204	217	230	256	280	310	338	365	
355.6	8.0	-	-	-	-	-	-	-	68.6	75.3	85.2	93.5	106	120	134	146	166	183	204	226	241	255	284	311	345	377	408	-	

The sizes are produced upon request. Intermediate sizes are subject to additional agreement.

S<sub>n</sub> - normal wall thickness

## Tolerances

Outside diameter, mm	Outside diameter permissible deviation	
	Pipe body	Pipe end (subject to additional agreement)
Up to 100	± 1 % (but not less than ± 0.5mm)	± 0.4 mm
Above 100 up to 200	± 1 %	± 0.5 %
Above 200	± 1 %	± 0.6 %

### Wall thickness permissible deviation for diameter D

D up to 130 mm			D above 130 mm and up to 320 mm and wall thickness S			D above 320 mm		
WT up to 2S <sub>n</sub>	WT above 2 S <sub>n</sub> up to 4 S <sub>n</sub>	WT above 4 S <sub>n</sub>	WT up to 0.05D	WT above 0.05D up to 0.11D	WT above 0.11D	WT up to 0.05D	WT above 0.05D up to 0.9D	WT above 0.09D
+15% -10%	+12.5% 10%	±9%	+17.5% -12.5%	±12.5%	±10%	+20% -15%	+15% -12.5%	+12.5% -10%



## Mechanical properties of steel

Steel Grade		Tensile strength	Yield strength for wall thickness, mm			Elongation		Impact toughness		
			up to 16	above 16 up to 40	above 40	longitudinal	transversal	longitudinal	transversal	testing temperature
		N/mm <sup>2</sup> (MPa)	N/mm <sup>2</sup> (MPa)			%		J		°C
			not less than			not less than		not less than		
DIN 1629	St37.0	350-480 (35.7-49.0)	235 (24.0)	225 (23.0)	215 (21.9)	25	23	-	-	-
	St44.0	420-550 (42.9-56.1)	275 (28.0)	265 (27.0)	255 (26.0)	21	19	-	-	-
	St52.0	500-650 (51.0-66.3)	355 (36.2)	345 (35.2)	335 (34.2)	21	19	-	-	-
DIN 1630	St37.4	350-480 (35.7-49.0)	235 (24.0)	225 (23.0)	215 (21.9)	25	23	43	27	+20
	St44.4	420-550 (42.9-56.1)	275 (28.0)	265 (27.0)	255 (26.0)	21	19	43	27	+20
	St52.4	500-650 (51.0-66.3)	355 (36.2)	345 (35.2)	335 (34.2)	21	19	43	27	+20

## High-performance seamless circular unalloyed steel pipes - EN 10220/DIN 1630

Application: commercial pipes for construction, pipeworks and other general engineering purposes

### Dimensions and weight

Outside diameter, mm	S <sub>n</sub> , mm	Weight per unit length, kg/m																											
		3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0	8.8	10.0	11.0	12.5	14.2	16.0	17.5	20.0	22.2	25.0	28.0	30.0	32.0	36.0	40.0	45.0	50.0	55.0	
33.7	2.6	2.41	2.67	2.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
38.0	2.6	2.75	3.05	3.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
42.4	2.6	3.09	3.44	3.79	4.21	4.61	5.08	5.61	6.18	6.79	7.29	7.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
44.5	2.6	3.26	3.63	4.00	4.44	4.87	5.37	5.94	6.55	7.20	7.75	8.51	9.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
48.3	2.6	3.56	3.97	4.37	4.86	5.34	5.90	6.53	7.21	7.95	8.57	9.45	10.1	11.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
51.0	2.6	3.77	4.21	4.64	5.16	5.67	6.27	6.94	7.69	8.48	9.16	10.1	10.9	11.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
54.0	2.6	4.01	4.47	4.93	5.49	6.04	6.68	7.41	8.21	9.08	9.81	10.9	11.7	12.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
57.0	2.9	4.25	4.74	5.23	5.83	6.41	7.10	7.88	8.74	9.67	10.5	11.6	12.5	13.7	15.0	-	-	-	-	-	-	-	-	-	-	-	-	-	
60.3	2.9	4.51	5.03	5.55	6.19	6.82	7.55	8.39	9.32	10.3	11.2	12.4	13.4	14.7	16.1	17.5	-	-	-	-	-	-	-	-	-	-	-	-	
63.5	2.9	4.76	5.32	5.87	6.55	7.21	8.00	8.89	9.88	10.9	11.9	13.2	14.2	15.7	17.3	18.7	-	-	-	-	-	-	-	-	-	-	-	-	
70.0	2.9	-	5.90	6.51	7.27	8.01	8.89	9.90	11.0	12.2	13.3	14.8	16.0	17.7	19.5	21.3	-	-	-	-	-	-	-	-	-	-	-	-	
73.0	2.9	-	6.16	6.81	7.60	8.38	9.31	10.04	11.5	12.8	13.9	15.5	16.8	18.7	20.6	22.5	-	-	-	-	-	-	-	-	-	-	-	-	
76.1	2.9	-	6.44	7.11	7.95	8.77	9.74	10.8	12.1	13.4	14.6	16.3	17.7	19.6	21.7	23.7	-	-	-	-	-	-	-	-	-	-	-	-	
82.5	3.2	-	7.57	7.74	8.66	9.56	10.6	11.8	13.2	14.7	16.0	17.9	19.4	21.6	23.9	26.2	-	-	-	-	-	-	-	-	-	-	-	-	
88.9	3.2	-	6.76	8.38	9.37	10.3	11.5	12.8	14.3	16.0	17.4	19.5	21.1	23.6	26.2	28.8	30.8	-	-	-	-	-	-	-	-	-	-	-	
101.6	3.6	-	-	9.63	10.8	11.9	13.3	14.8	16.5	18.5	20.1	22.6	24.6	27.5	30.6	33.8	36.3	40.2	43.5	-	-	-	-	-	-	-	-	-	
108.0	3.6	-	-	10.3	11.5	12.7	14.1	15.8	17.7	19.7	21.5	24.2	26.3	29.4	32.8	36.3	39.1	43.4	47.0	51.2	55.2	-	-	-	-	-	-	-	
114.3	3.6	-	-	10.9	12.2	13.5	15.0	16.8	18.8	21.0	22.9	25.7	28.0	31.4	35.1	38.8	41.8	46.5	50.4	55.1	59.6	-	-	-	-	-	-	-	
127.0	4.0	-	-	-	-	15.0	16.8	18.8	21.0	23.5	25.7	28.9	31.5	35.3	39.5	43.8	47.3	52.8	57.4	62.9	68.4	71.8	75.0	-	-	-	-	-	
133.0	4.0	-	-	-	-	15.8	17.6	19.7	22.0	24.7	27.0	30.3	33.1	37.1	41.6	46.2	49.8	55.7	60.7	66.6	72.5	76.2	79.7	-	-	-	-	-	
139.7	4.0	-	-	-	-	16.6	18.5	20.7	23.2	26.0	28.4	32.0	34.9	39.2	43.9	48.8	52.7	59.0	64.3	70.7	77.1	81.2	85.0	92.1	-	-	-	-	
152.4	4.5	-	-	-	-	18.2	20.3	22.7	25.4	28.5	31.2	35.1	38.4	43.1	48.4	53.8	58.2	65.3	71.3	78.5	85.9	90.6	95.0	103	-	-	-	-	
159.0	4.5	-	-	-	-	-	-	23.7	26.6	29.8	32.6	36.7	40.1	45.2	50.7	56.4	61.1	68.6	74.9	82.6	90.5	95.4	100	109	117	127	-	-	
168.3	4.5	-	-	-	-	-	-	25.2	28.2	31.6	34.6	39.0	42.7	48.0	54.0	60.1	65.1	73.1	80.0	88.3	96.6	102	108	117	127	137	-	-	
177.8	5.0	-	-	-	-	-	-	26.6	29.9	33.5	36.7	41.4	45.2	51.0	57.3	63.8	69.2	77.8	85.2	94.2	103	109	115	126	136	147	-	-	
193.7	5.6	-	-	-	-	-	-	29.1	32.7	36.6	40.1	45.3	49.6	55.9	62.9	70.1	76.0	85.7	93.9	104	114	121	128	140	152	165	-	-	
219.1	6.3	-	-	-	-	-	-	-	37.1	41.6	45.6	51.6	56.5	63.7	71.8	80.1	87.0	98.2	108	120	132	140	148	163	177	193	209	-	
244.5	6.3	-	-	-	-	-	-	-	41.6	46.7	51.2	57.8	63.3	71.5	80.6	90.2	98.0	111	122	135	149	159	168	185	202	221	240	-	
273.0	6.3	-	-	-	-	-	-	-	46.6	52.3	57.3	64.9	71.1	80.3	90.6	101	110	125	137	153	169	180	190	210	230	253	275	296	
323.9	7.1	-	-	-	-	-	-	-	55.5	62.3	68.4	77.4	84.9	96.0	108	121	132	150	165	184	204	217	230	256	280	310	338	365	
355.6	8.0	-	-	-	-	-	-	-	68.6	75.3	85.2	93.5	106	120	134	146	166	183	204	226	241	255	284	311	345	377	408	-	

The sizes are produced upon request. Intermediate sizes are subject to additional agreement.

S<sub>n</sub> - normal wall thickness

## Tolerances

Outside diameter, mm	Outside diameter permissible deviation	
	Pipe body	Pipe end (subject to additional agreement)
Up to 100	± 1 % (but not less than ± 0.5mm)	± 0.4 mm
above 100 up to 200	± 1 %	± 0.5 %
above 200	± 1 %	± 0.6 %

### Wall thickness permissible deviation for diameter D

D up to 130 mm			D above 130 mm and up to 320 mm and wall thickness S			D above 320 mm		
WT up to 2Sn	WT above 2 Sn up to 4 Sn	WT above 4 Sn	WT up to 0.05D	WT above 0.05D up to 0.11D	WT above 0.11D	WT up to 0.05D	WT above 0.05D up to 0.9D	WT above 0.09D
+15% -10%	+12.5% 10%	±9%	+17.5% -12.5%	±12.5%	±10%	+20% -15%	+15% -12.5%	+12.5% -10%

## Mechanical properties of steel

Steel Grade		Tensile strength	Yield strength for wall thickness, mm			Elongation		Impact toughness		
			up to 16	above 16 up to 40	above 40	longitudinal	transversal	longitudinal	transversal	testing temperature
		N/mm <sup>2</sup> (MPa)	N/mm <sup>2</sup> (MPa)			%		J		°C
			not less than			not less than		not less than		
DIN 1629	St37.0	350-480 (35.7-49.0)	235 (24.0)	225 (23.0)	215 (21.9)	25	23	-	-	-
	St44.0	420-550 (42.9-56.1)	275 (28.0)	265 (27.0)	255 (26.0)	21	19	-	-	-
	St52.0	500-650 (51.0-66.3)	355 (36.2)	345 (35.2)	335 (34.2)	21	19	-	-	-
DIN 1630	St37.4	350-480 (35.7-49.0)	235 (24.0)	225 (23.0)	215 (21.9)	25	23	43	27	+20
	St44.4	420-550 (42.9-56.1)	275 (28.0)	265 (27.0)	255 (26.0)	21	19	43	27	+20
	St52.4	500-650 (51.0-66.3)	355 (36.2)	345 (35.2)	335 (34.2)	21	19	43	27	+20

# Plain end seamless hot rolled tubes with specified room temperature properties and with special delivery conditions - NF A 49-112

## Pipe dimensions and weight

Outside diameter, mm	Weight of 1 meter of a pipe, kg, with wall thickness, mm																				
	5.0	5.6	6.3	7.1	8.0	8.8	10.0	11.0	12.5	14.2	16.0	17.5	20.0	22.2	25.0	28.0	30.0	32.0	40.0	45.0	50.0
76.1	-	9.74	10.8	12.1	13.4	14.6	16.3	17.7	-	-	28.8	-	-	-	-	-	-	-	-	-	-
88.9	-	11.5	12.8	14.3	16.0	17.4	19.5	21.1	23.6	26.2	33.8	30.8	-	-	-	-	-	-	-	-	-
101.6	-	13.3	14.8	16.5	18.5	20.1	22.6	24.6	27.5	30.6	36.3	36.3	40.2	43.5	-	-	-	-	-	-	-
108.0	12.7	14.1	15.8	17.7	19.7	21.5	24.2	28.0	29.4	32.8	38.8	39.1	43.4	47.0	51.2	55.2	-	-	-	-	-
114.3	13.5	15.0	15.8	18.8	21.0	22.9	26.3	31.5	31.4	35.1	43.8	41.8	46.5	50.4	55.1	59.6	-	-	-	-	-
127.0	15.0	16.8	16.8	21.0	23.5	25.7	25.7	35.3	35.1	39.5	47.3	47.3	52.8	57.4	62.9	68.4	71.8	75.0	-	-	-
133.0	15.8	17.6	18.8	22.0	24.7	27.0	28.9	33.1	37.1	41.6	46.2	49.8	55.7	60.7	66.6	72.5	76.2	79.7	-	-	-
139.7	16.6	18.5	19.7	23.2	26.0	30.3	32.0	34.9	39.2	43.9	48.8	52.7	59.0	64.3	70.7	77.1	81.2	85.0	-	-	-
159.0	-	-	20.7	26.6	29.8	28.4	36.7	40.1	45.2	50.7	56.4	61.1	68.6	74.9	82.6	90.5	95.4	100	117	127	-
168.3	-	-	23.7	28.2	31.6	32.6	39.0	42.7	48.0	54.0	60.1	65.1	73.1	80.0	88.3	96.9	102	108	127	137	-
193.7	-	-	25.2	32.7	36.6	34.6	45.3	49.6	55.9	62.9	70.1	76.0	85.7	93.9	104	114	121	128	152	165	-
219.1	-	-	29.1	37.1	41.6	40.1	51.6	56.5	63.7	71.8	80.1	87.0	98.2	108	120	132	140	148	177	193	209
244.5	-	-	-	41.6	46.7	45.6	57.8	63.3	71.5	80.6	90.2	98.0	111	122	135	149	159	168	202	221	240
273.0	-	-	-	46.6	52.3	57.3	64.9	71.1	80.3	90.6	101	110	125	137	153	169	180	190	230	253	275
323.9	-	-	-	55.5	62.3	68.4	77.4	84.9	96.0	108	121	132	150	165	184	204	217	230	280	310	338
355.6	-	-	-	-	68.6	75.3	85.2	93.5	106	120	134	146	166	183	204	226	241	255	311	345	377

The sizes are produced upon agreement.

## Tolerances

Outside diameter:	Outside diameter permissible deviation $\pm 1\%$ but not less than $\pm 0.5$ mm	
Wall thickness:		
for outside diameter	Wall thickness T or T/D ratio	Wall thickness permissible deviation
OD up to 101.6	T up to 10 mm T above 10 mm	$\pm 12.5\%$ but not less than $\pm 0.5$ mm $\pm 10\%$
OD above 101.6	T/D above 0.100 T/D above 0.050 up to 0.100 T/D above 0.025 up to 0.050 T/D up to 0.025	$\pm 10\%$ $\pm 12.5\%$ $\pm 15\%$ $\pm 20\%$

## Mechanical properties of steel

Steel Grade	Tensile strength, N/mm <sup>2</sup> (MPa)		Yield strength, N/mm <sup>2</sup> (MPa) for wall thickness, mm		Elongation, %
	not less than	not more than	up to 16	above 16	
TUE220A	360 (36.7)	500 (51.0)	220 (22.5)	200 (20.4)	23
TUE235A	410 (41.8)	550 (56.1)	235 (24.0)	215 (21.9)	21

### Lengths supplied:

Pipes for general purpose are supplied of  
- random length 4.5-12.5 m  
- fixed length within the random length range

### Protection

Pipes are supplied:  
- black and bare  
- external varnished with black or clear - oiled  
Upon request pipes ends are protected with plastic caps

### Marking

Pipes are supplied with marking according to standard and customer request.  
Marking is paint and/or die stencilled on the ends of pipes. The same data, as well as additional information per customer's request, is indicated on the bundle's tags.

### Delivery

Pipes are supplied in hexahedral (up to OD 114mm) or round (above 121 mm) bundles tied in at least five places with steel strip. Weight of bundle - up to 5000 kg upon request of customer. Each bundle is furnished with three tags.

### Mill test certificate

MTC is issued in accordance with EN 10204

# Steel pipes for pipelines

## for combustible fluids - EN 10208-1

### Dimensions and weight of tubes

Outside Diameter, mm	Weight per, kg/m and per wall thickness, mm													
	2,0	2,3	2,6	2,9	3,2	3,6	4,0	4,5	5,0	5,6	6,3	7,1	8,0	8,8
33,7	1,56	1,78	1,99	2,20	2,41	2,67	-	-	-	-	-	-	-	-
42,4	1,99	2,27	2,55	2,82	3,09	3,44	3,79	-	-	-	-	-	-	-
48,3	2,28	2,61	2,93	3,25	3,56	3,97	4,37	-	-	-	-	-	-	-
60,3	-	-	3,70	4,11	4,51	5,03	5,55	-	-	-	-	-	-	-
76,1	-	-	4,71	5,24	5,75	6,44	7,11	-	-	-	-	-	-	-
88,9	-	-	-	-	6,76	7,57	8,38	-	-	-	-	-	-	-
101,6	-	-	-	-	7,77	8,70	9,63	10,8	-	-	-	-	-	-
114,3	-	-	-	-	8,77	9,83	10,9	12,2	-	-	-	-	-	-
168,3	-	-	-	-	-	-	-	-	20,1	22,5	25,2	28,2	-	-
219,1	-	-	-	-	-	-	-	-	26,4	29,5	33,1	37,1	41,6	-
273,0	-	-	-	-	-	-	-	-	33,0	36,9	41,4	46,6	52,3	-
323,9	-	-	-	-	-	-	-	-	-	44,0	49,3	55,5	62,3	68,4
355,6	-	-	-	-	-	-	-	-	-	48,3	54,3	61,0	68,6	75,3
406,4	-	-	-	-	-	-	-	-	-	55,4	62,2	69,9	78,6	86,3

### Lengths supplied:

Length groups	Length range,	Minimum average length, m	Shortest length, m
r 1	6 – 11	8	4
r 2	9 – 14	11	6
r 3	10 – 16	13	7
r 4	11 – 18	15	8

### Mechanical properties:

Steel grades	Chemical composition of steel
L210GA, L235GA, L245GA, L290GA, L360GA	EN 10208-1

Obligatory testing includes:

- control of chemical composition;
- NDT of seam welding;
- hydrostatic test;
- tensile strength test;
- bend test.

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