STAINLESS STEEL PIPES

CONTENTS

TMK AT A GLANCE

TMK is an industrial engineering company and leading supplier of tubular solutions, structural materials, and related services for various industries. TMK manufactures steel pipes, including pipes made of specialty steels and alloys, pipeline systems, and other products for the oil and gas, energy, chemical, mechanical engineering, construction, and other industries.

The Company unites advanced production sites, including environmentally friendly electric steelmaking operations, a wide range of rolling mills and finishing capacities located across several Russian regions, along with domestic and international representative offices.

TMK also operates facilities for the development and production of pipeline components and equipment for the energy sector, pre-assembled units, heavy engineering products, and other complex items. Leveraging its own engineering and steel structure manufacturing capabilities, the Company delivers comprehensive turnkey infrastructure projects for its customers.

TMK includes oilfield service enterprises incorporated into TMK Oilfield Services and offering pipe repair, thread cutting, inventory management, coating application, and the production of downhole equipment.

The Company is continuously enhancing its R&D expertise, developing advanced solutions through its own R&D centers in Moscow and Chelyabinsk. TMK's facilities support the full cycle of creating advanced pipe solutions – from concept development to testing and production launch.

GOST 9940-81

Seamless hot-deformed pipes of corrosion-resistant steel

STEEL GRADES

08Kh17T, 08Kh13, 12Kh17, 08Kh20N14S2, 10Kh17N13M2T, 10Kh23N18, 08Kh18N10T, 08Kh17N15M3T, 15Kh25T, 12Kh18N10T, 08Kh22N6T, 12Kh18N12T, 08KhN12T, 04Kh18N10, 08Kh18N10, 12Kh18N10, 12Kh18N9, 17Kh18N9, 12Kh13

Chemical composition

Steel grade	Chemical composition, %									
	C	Mn	Si	P	S	Cr	Ni	Mo	Ti	Other
08Kh18N10T	≤0.08	≤2	≤0.8	≤0.035	≤0.02	17.0-19.0	9.0-11.0	–	5xC – 0.7	–
12Kh18N10T	≤0.12	≤2	≤0.8	≤0.035	≤0.02	17.0-19.0	9.0-11.0	–	5xC – 0.8	–
10Kh17N13M2T	≤0.10	≤2	≤0.8	≤0.035	≤0.02	16.0-18.0	12.0-14.0	2.0-3.0	5xC – 0.7	–

Mechanical properties at room temperature

Steel grade	Tensile strength, N/mm²	Relative elongation, %
	not less than	
08Kh18N10T	510	40
12Kh18N10T	529	40
10Kh17N13M2T	529	35

Pipe dimension tolerances

Outside diameter, mm	Limit deviations in manufacturing accuracy, %	
	usual	high
42-273	±1.5	±1.0

Wall thickness, mm	Limit deviations in manufacturing accuracy, %	
	usual	high
up to 8	+20.0/-15.0	+12.5/-15.0
from 8 to 20	±15.0	+12.5/-15.0
more than 20	+12.5/-15.0	±12.5

Notes:

1. The chemical composition of steels is regulated by GOST 5632.
2. Production of 08–30Kh15 grade pipes ranging from 57 mm to 219 mm in diameter.
3. Pipes of more than 114 mm in diameter of ferritic and austenitic-ferritic steel grades are manufactured by agreement between the parties.
4. 3 m to 12.1 m long pipes are manufactured by agreement between the parties when entering into the contract.
5. Pipes are supplied with no mill scale and are guaranteed to withstand the design hydraulic pressure.

Size range

Outside diameter, mm	Wall thickness, mm																															
	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	11	12	13	14	15	16	17	18	19	20	22	24	25	26	28	30	32	35
42																																
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168																																
180																																
194																																
219																																
245																																
273																																
325																																

GOST 9941-2022

Seamless cold-deformed pipes made of corrosion-resistant high-alloy steels

STEEL GRADES

04Kh18N10,* 08Kh20N14S2,* 10Kh23N18, 08Kh13, 12Kh13, 12Kh17, 15Kh25T, 10Kh17N13M2T, 03Kh18N11, 08Kh18N10T, 08Kh17N15M3T, 12Kh18N10T, 08Kh22N6T, 12Kh18N12T, 12Kh18N9,* 17Kh18N9,* 06KhN28MDT, 08Kh21N6M2T

Chemical composition

Steel grade	Chemical composition, %									
	C	Mn	Si	P	S	Cr	Ni	Mo	Ti	Other
04Kh18N10*	<0.04	<2.0	<0.8	<0.03	<0.02	17.0-19.0	9.0-11,0	-	-	
08Kh20N14S2*	<0.08	<1.5	2.0-3.0	<0.035	<0.025	19.0-22.0	12.0-15.0	-	-	
08Kh18N10T	≤0.08	≤2	≤0.8	≤0.040	≤0.02	17.0-19.0	9.0-11.0	–	5xC – 0.7	–
12Kh18N10T	≤0.12	≤2	≤0.8	≤0.040	≤0.02	17.0-19.0	9.0-11.0	–	5xC – 0.8	–
10Kh17N13M2T	≤0.10	≤2	≤0.8	≤0.035	≤0.02	16.0-18.0	12.0-14.0	2.0-3.0	5xC – 0.7	–
10Kh23N18	<0.10	<2.0	<1.0	<0.035	<0.02	22.0-25.0	17.0-20.0	-	-	
12Kh18N9*	<0.12	<2.0	<0.8	<0.040	<0.020	17.0-19.0	8.0-10.0	-	-	–
17Kh18N9*	0.13-0.21	<2.0	<0.8	<0.040	<0.020	17.0-19.0	8.0-10.0	-	-	–

Pipe dimension tolerances

Outside diameter, mm	Limit deviations in manufacturing accuracy		
	usual	improved	high
from 5 to 10	±0.3 mm	±0.2 mm	±0.15 mm
over 10 up to 30	±0.4 mm	±0.3 mm	±0.2 mm
over 30 up to 95	±1.2%	±1.0%	±0.8%
over 95	±1.0%	±1.0%	±0.8%

Wall thickness, mm	Limit deviations in manufacturing accuracy		
	usual	improved	high
0.2	±0.05 mm	±0.03 mm	–
from 0,3 up to 0,4	±0.07 mm	±0.05 mm	–
from 0,5 to 0,6	±0.10 mm	±0.07 mm	–
from 0,7 to 1	±0.15 mm	±0.10 mm	–
over 1 up to 3	+12.5%/-15.0%	±12.5%	+12.5%/-10.0%
over 3 up to 7	±12.5%	+12.5%/-10.0%	±10.0%
over 7	+12.5%/-10.0%	±10.0%	–

Mechanical properties

Steel grade	Tensile strength, N/mm²	Relative elongation, %
	not less than	
04Kh18N10*	490 (50)	45
08Kh20N14S2*	510 (52)	35
08Kh18N10T	549	37
12Kh18N10T	549	35
10Kh17N13M2T	529	35
10Kh23N18	529 (54)	35
12Kh18N9*	549 (56)	37
17Kh18N9*	568 (58)	35

Notes:

1. Pipes made of steel grades 08Kh13, 12Kh13 and 15Kh25T are available with outside diameters of at least 21 mm and wall thicknesses ranging from 2.0 mm to 7.0 mm.
2. Pipes made of steel grades 08Kh21N6M2T and 06KhN28MDT are available in diameters ranging from 14 mm to 68 mm.
3. Pipes of other sizes and lengths can be manufactured by agreement between the parties.
4. Pipes with wall thicknesses of 0.2 mm–0.4 mm are manufactured in limited batches by agreement between the parties.
5. Pipes made of steel grades TP304, TP304L, TP316, TP316L, and TR321 are manufactured by agreement between the parties.

* Pipes produced by CHTPZ.

Size range

Outside diameter, mm	Wall thickness, mm																								
	0.2	0.3	0.4	0.5	0.6	0.8	1.0	1.2	1.4	1.5	1.8	2.0	2.2	2.5	2.8	3.0	3.2	3.5	4.0	4.5	5.0	5.5	6.0
	Pipe lengths as agreed by the parties within 1.0-25 m																						
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							
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80																							
83																							
85																							
89																							
95																							
100																							
102																							
114																							

Note: pipes are also available in intermediate sizes.

Size range*

Outside diameter, mm	Wall thickness, mm																														
	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	4	4.5	5	5.5	6	6.5	7	8	9	10
95																															
100																															
102																															
108																															
110																															
120																															
130																															
140																															
150																															
160																															
170																															
180																															
190																															
200																															
220																															
250																															
273																															
325																															
377																															
426																															

Sizes that can be manufactured by agreement between the customer and the manufacturer, with all additional requirements to be formalized in written form

* Pipes produced by CHTPZ.

Size range* (continued)

Outside diameter, mm	Wall thickness, mm																														
	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
95																														
100																														
102																														
108																														
110																														
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130																														
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150																														
160																														
170																														
180																														
190																														
200																														
220																														
250																														
273																														
325																														
377																														
426																														

GOST 10498-82

Seamless extremely thin-walled pipes of corrosion-resistant steel

STEEL GRADES

08Kh18N10T, 06Kh18N10T, 09Kh18N10T

Chemical composition

Steel grade	Chemical composition, %									
	C	Mn	Si	P	S	Cr	Ni	Mo	Ti	Other
06Kh18N10T	≤0.06	1.0-2.0	≤0.8	≤0.035	≤0.02	17.0-19.0	9.0-11.0	–	5xC-0.7	–
09Kh18N10T	0.07-01	1.0-2.0	≤0.8	≤0.035	≤0.02	17.0-19.0	9.0-11.0	–	5xC-0.7	–
08Kh18N10T	≤0.08	≤2	≤0.8	≤0.035	≤0.02	17.0-19.0	9.0-11.0	–	5xC-0.7	–

Mechanical properties

Steel grade	Tensile strength, N/mm²	Relative elongation, %
	not less than	
06kh18N10T	529	40
09Kh18N10T	529	40
08Kh18N10T	529	40

Size range

Pipe size, mm		Pipe length, m
Outside diameter	Wall thickness	
4.0-6.0	0.20-0.50	Random length: 1.0-5.0 Fixed length: as agreed
6.0-10.0	0.12-0.70	
10.0-25.0	0.12-1.0	
25.0-75.0	0.3-1.0	

Pipe dimension tolerances

Outside diameter, mm	Limit deviations in manufacturing accuracy			
	high		especially high	
	Sx≤0.5 mm	Sx>0.5 mm	Sx≤0.5 mm	Sx>0.5 mm
up to 6 incl.	±0.05 mm	–	±0.03 mm	–
over 6 to 10 incl.	±0.07 mm	±0.2 mm	±0.03 mm	±0.08 mm
over 10 to 20 incl.	±0.07 mm	±0.2 mm	±0.05 mm	±0.15 mm
over 20 to 35 incl.	±0.08 mm	±0.2 mm	±0.06 mm	±0.15 mm
over 35	±0.8%	±0.8%	±0.08 mm	±0.5%

Wall thickness, mm	Limit deviations in manufacturing accuracy	
	high	especially high
up to 0.2	±0.03 mm	up to 0,2
over 0.2 to 0.3	±0.05 mm	over 0,2 to 0,3
over 0.3 to 0.5	±0.07 mm	over 0,3 to 0,5
over 0.5 to 1.0	±10%	over 0,5 to 1,0

Sx – wall thickness

Notes:

1. Pipe sizes increase incrementally by 0.5 mm in diameter and 0.1 mm in wall thickness.
2. By agreement between the parties, other steel grades can be used.

GOST 14162-79

Steel tubes of small dimensions (capillary)

STEEL GRADES

08Kh18N10T, 12Kh18N10T, 12Kh18N12T, 48NKh

Chemical composition

Steel grade	Chemical composition, %									
	C	Mn	Si	P	S	Cr	Ni	Mo	Ti	Other
08Kh18N10T	≤0,08	≤2	≤0,8	≤0,040	≤0,02	17,0-19,0	9,0-11,0	–	5xC – 0,7	–
12Kh18N10T	≤0,12	≤2	≤0,8	≤0,040	≤0,02	17,0-19,0	9,0-11,0	–	5xC – 0,8	–
12Kh18N12T	≤0,12	≤2	≤0,8	≤0,035	≤0,02	16,0-18,0	12,0-14,0	2,0-3,0	5xC – 0,7	–
48NKh	≤0,05	0,3-0,6	≤0,3	≤0,015	≤0,015	0,7-1,0	48,0-49,5	–	5xC –0,7	–

Mechanical properties at room temperature

Steel grade	Tensile strength, N/mm²	Relative elongation, %
	not less than	
08Kh18N10T	529	37
12Kh18N10T	549	35
12Kh18N12T	510	26
48NKh	392	40

Size range

Outside diameter	Wall thickness	Pipe length, m
1.6	0.20-0.40	- random – not less than 0.3 m; - fixed – not more than 4 m; - multiple fixed – not more than 4 m, with 5 mm allowance per cut.
2.0-3.0	0.25-0.70	
3.0-4.0	0.32-1.00	
4.0-5.0	0.50-1.60	

HEAT TREATMENT TYPES:

Pipes are manufactured with heat treatment

GOST 19277-2016, GOST 19277-73

Seamless steel tubes for oil and fuel lines

STEEL GRADES

08Kh18N10T, 12Kh18N10T

Chemical composition

Steel grade	Chemical composition, %									
	C	Mn	Si	P	S	Cr	Ni	Mo	Ti	Other
12Kh18N10T	≤0.12	≤2	≤0.8	≤0.035	≤0.02	17.0-19.0	9.0-11.0	–	5x(C–0.02) – 0.7	–
08Kh18N10T	≤0.08	≤2	≤0.8	≤0.035	≤0.02	17.0-19.0	9.0-11.0	–	5C[3] – 0.70	–

Mechanical properties

Steel grade	Tensile strength, N/mm²	Relative elongation, %
	not less than	
12Kh18N10T, 08Kh18N10T	529	40

Size range

Pipe size, mm		Pipe length, m
Outside diameter	Wall thickness	
4; 5	0.5-0.8	Random - from 1.5 to 7 m; Fixed - within random length; Multiple fixed - within random length with not more than 5 mm allowance per cut.
6	0.5-1.4	
7	0.5-1.5	
8-21	0.5-2.0	
22-26	0.5-3.0	
27	0.5; 0.6; 0.8-1.2; 1.5	
28	0.5; 0.6; 0.8-2.0	
30-40	0.5-3.0	
42-70	1.0-3.0	

Pipe dimension tolerances

Outside diameter, mm	Limit deviations in manufacturing accuracy	
	usual	improved
from 4 to 18 incl.	±0.15 mm	±0.10 mm
over 18 to 30 incl.	±0.20 mm	±0.15 mm
over 30 to 40 incl.	±0.30 mm	±0.20 mm
over 40 to 70 incl.	±0.40 mm	±0.30 mm

Wall thickness, mm	Limit deviations in manufacturing accuracy	
	usual	improved
from 0.5 to 0.6 incl.	+0.10 mm/-0.05 mm	±0.05 mm
over 0.6 to 0.9 incl.	+0.15 mm/-0.05 mm	+0.10 mm/-0.05 mm
over 0.9	+15%/-7.5%	+10%/-7.5%

Note: pipes are manufactured to Group A specifications with diameters of 4 mm–70 mm and to Group B specifications with diameters of 6 mm–70 mm with ground outer surface (or, by agreement, with electrochemically polished surface).

GOST R 70731.2

Steel pipes for manufacturing of equipment and piping of nuclear power plants. General specifications. Part 2. Seamless steel pipes of austenitic steel grades 08Kh18N10T and 08Kh18N10T-Sh

STEEL GRADES

08Kh18N10T, 08Kh18N10T-Sh

Size range

Outside diameter, mm	Wall thickness, mm	Pipe length, m
10.2-17.2	2.0	Random length: from 1.5 to 8.0 m Fixed length: not more than 7.0 m
17.2; 21.3; 26.9	2.0-3.2	
33.7	2.6-3.6	
42.4	2.6-5.0	
60.3	2.9-3.6	
76.1	3.2	
88.9	3.2	
88.9-90	3.0-16.0	Random length from 1.5 to 12 meters inclusive. In the random-length batch of the 1st category not more than 6% of pipes with a length not more than 750 mm shorter than the minimum length and of the 2nd category – 15% of pipes with length not more than 500 mm shorter than minimum length are allowed.
95-100	3.0-16.0	
101.6-108	3.0-18.0	
110-114	3.6-18.0	
120-130	3.6-26.0	
130-139.7	4.0-26.0	
140-152	4.0-28.0	
152.4-159	4.5-28.0	
160-170	4.5-28.0	
177.8-193.7	4.5-28.0	
194-200	5.0-28.0	
219-220	5.0-28.0	
244.5-250	6.3-28.0	
273	6.3-28.0	
323.9	7.0-28.0	
325	6.0-28.0	
351	8.0-28.0	
355.6	8.0-28.0	
377	8.0-28.0	
406.4	8.0-28.0	
426	10.0-28.0	

HEAT TREATMENT TYPES:

Quenching (austenitization) + stabilizing annealing (if necessary)

TU 14-3-935-80*

Seamless cold-deformed pipes of steel grade 08Kh18N10T ranging from 102 mm to 273 mm in diameter with improved surface quality

STEEL GRADES

08Kh18N10T

Chemical composition

Steel grade	Chemical composition, %								
	C	Mn	Si	Cr	Ni	Ti	S	P	N
	not more than						not more than		
08Kh18N10T	0.08	1.5	0.8	17.0-19.0	10.0-11.0	5C-6	0.020	0.035	0.05

Pipe dimension tolerances

Outside diameter, mm	Limit deviations		
	Diameter, %	Wall thickness, %	Out-of-straightness per 1 m, not more than, mm
102-273	±1	±12.5	1

Mechanical properties

Steel grade	Room test temperature			Test temperature 350°C
	Ultimate tensile strength, σ_B, MPa (kgf/mm^2)	Relative elongation, δ_5, %		Yield strength at the temperature 350°C, $\sigma_{0,2}$, MPa (kgf/mm^2)
	not less than			
08Kh18N10T	549 (56)	37		186-333 (19-34)

Note: for pipes with a wall thickness above 15 mm, the minimum ultimate tensile strength σ_B is 490 MPa (50 kgf/mm^2).

* Pipes produced by CHTPZ.

Size range

Outside diameter, mm	Wall thickness, mm													
	5	6	7	8	9	10	11	12	13	14	15	16	17	18
102														
108														
110														
114														
120														
121														
127														
130														
133														
140														
146														
150														
152														
159														
160														
168														
170														
180														
194														
200														
219														
220														
245														
273														

TU 14-3-1109-82

Seamless cold- and warm-deformed pipes of corrosion-resistant steel

STEEL GRADES

08Kh18N10T, 08Kh18N12T, 12Kh18N10T, 12Kh18N12T, 10Kh17N13M2T

Size range

Outside diameter, mm	Wall thickness, mm	Pipe length, m
5.0	0.2-1.0	In accordance with GOST 9941-2022 Length of fixed-length pipes in accordance with TU 14-3-1109-82
6.0; 7.0	0.2-1.5	
8.0; 9.0	0.2-2.0	
10.0- 13.0	0.2-2.5	
14.0-17.0	0.2-3.0	
18.0; 19.0	0.2-3.5	
20.0	0.2-4.0	
21.0-24.0	0.3-4.0	
25.0-28.0	0.3-4.5	
30.0-35.0	0.3-5.5	
36.0	0.4-5.5	
38.0-45.0	0.4-6.0	
48.0-50.0	0.4-7.0	
51.0-60.0	0.5-7.0	
63.0-75.0	1.5-7.0	

HEAT TREATMENT TYPES:

Quenching and/or stabilizing annealing. By agreement with the customer, pipes can be manufactured without heat treatment

TU 14-3-1330-85*

Seamless cold-deformed extremely thin-walled pipes of corrosion-resistant steel

STEEL GRADES

08Kh18N10T, 12Kh18N10T, 10Kh17N13M2T

Chemical composition

Steel grade	Chemical composition, %									
	C	Mn	Si	P	S	Cr	Ni	Mo	Ti	Other
08Kh18N10T	<0.08	<2	<0.8	<0.035	<0.02	17.0-19.0	9.0-11.0	-	5xC – 0.7	-
12Kh18N10T	<0.12	<2	<0.8	<0.035	<0.02	17.0-19.0	9.0-11.0	-	5xC – 0.8	-
10Kh17N13M2T	<0.10	<2	<0.8	<0.035	<0.02	16.0-18.0	12.0-14.0	2.0-3.0	5xC – 0.7	-

Pipe dimension tolerances

Outside diameter, mm	Wall thickness, mm	Limit deviations	
		Diameter, %	Wall, %
100-250	1.5-2.5 incl.	±1.2	±15.0
	2.5-4		+12.5; -15.0

Mechanical properties

Steel grade	Ultimate tensile strength, σ_B, N/mm² (kgf/mm²)	Yield strength $\sigma_{0.2}$, N/mm² (kgf/mm²)	Relative elongation, δ_5, %
	not less than		
08Kh18N10T	549 (56)	optional	37
12Kh18N10T	549 (56)		35
10Kh17N13M2T	529 (54)	205 (21)	35

* Pipes produced by CHTPZ.

Size range

Outside diameter, mm	Wall thickness, mm																								
	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0
102																										
108																										
110																										
120																										
130																										
140																										
150																										
160-200																										
220																										
250																										

TU 14-158-135-2003*

Cold-deformed corrosion-resistant pipes for process pipelines

STEEL GRADES

08Kh18N10T, 12Kh18N10T, 12Kh18N12T, 08Kh18N10, 03Kh18N11, 08Kh17N13M2T, 10Kh17N13M3T, 03Kh17N14M2, 20Kh23N18, 10Kh23N18, 06KhN28MDT, 03KhN28MDT, 05KhN32T, KhN78T, KhN65MVU

Chemical composition

Steel grade	Chemical composition, %									
	C	Mn	Si	P	S	Cr	Ni	Mo	Ti	Other
08Kh18N10T	<0.08	<2.0	<0.8	<0.035	<0.02	17.0-19.0	9,0-11,0	-	5xC - 0,7	-
12Kh18N10T	<0.12	<2.0	<0.8	<0.035	<0.02	17.0-19.0	9,0-11,0	-	5xC - 0,8	-
10Kh17N13M2T	<0.10	<2.0	<0.8	<0.035	<0.02	16.0-18.0	12,0-14,0	2,0-3,0	5xC - 0,7	-
12Kh18N12T*	<0.12	<2.0	<0.8	<0.040	<0.020	17.0-19.0	11.0-13.0	-	5xC - 0,7	-
08Kh18N10*	<0.08	<2.0	<0.8	<0.040	<0.020	17.0-19.0	9,0-11,0	-	-	-
03Kh18N11*	<0.030	0.70-2.0	<0.8	<0.030	<0.020	17.0-19.0	10.5-12.5	-	-	-
08Kh17N13M2T*	<0.08	<2.0	<0.8	<0.035	<0.02	16.0-18.0	12,0-14,0	2,0-3,0	5xC - 0,7	-
10Kh17N13M3T*	<0.10	<2.0	<0.8	<0.035	<0.02	16.0-18.0	12,0-14,0	3,0-4,0	5xC - 0,7	-
20Kh23N18*	<0.2	<2.0	<1.0	<0.035	<0.02	22.0-25.0	17.0-20.0	-	-	-
10Kh23N18*	<0.1	<2.0	<1.0	<0.035	<0.02	22.0-25.0	17.0-20.0	-	-	-
06KhN28MDT	<0.06	<0.8	<0.8	<0.035	<0.02	19.0-22.0	26.0-29.0	2.50-3.0	0.50-0.90	-
03KhN28MDT *	<0.030	<0.8	<0.8	<0.035	<0.02	22.0-25.0	26.0-29.0	2.5-3.0	-	Cu 2.5-3.5
05KhN32T *	<0.05	<0.70	<0.70	<0.030	<0.020	19.0-22.0	30.0-34.0	-	0.25-0.60	Al <0.50
KhN78T *	<0.12	<0,7	<0.8	<0.015	<0.01	19.0-22.0	Bas.	-	-	Al <0.15
KhN65MVU	<0.02	<1.0	<0.1	<0.015	<0.012	14.5-16.5	Bas.	15.0-17.0		W 3.0-4.5

Note: steel grades (alloys) marked with "*" are only used to manufacture semi-finished pipes.

Pipe dimension tolerances

Outside diameter, mm	Wall thickness, mm	Limit deviations	
		Diameter, %	Wall, %
219	6-8	1	10
245	6-8		
273	6-8		
325	6-10		
377	6-10		
426	6-10		

Mechanical properties

Steel grade	Ultimate tensile strength, σ_B, N/mm² (kgf/mm²)	Relative elongation, δ_5, %
	not less than	
12Kh18N10T	549 (56)	35
08Kh18N10T	549 (56)	37
12Kh18N12T	549 (56)	35
08Kh18N10	529 (54)	37
03Kh18N11	460 (47)	45
08Kh17N13M2T	500 (51)	35
10Kh17N13M2T	529 (54)	35
10Kh17N13M3T	560 (57)	35
20Kh23N18	529 (54)	35
10Kh23N18	529 (54)	35
06KhN28MDT	490 (50)	30
03KhN28MDT	490 (50)	30
KhN32T	470 (48)	35
KhN78T	640 (65)	30

* Pipes produced by CHTPZ.

Size range*

Outside diameter, mm	Wall thickness, mm				
	6	7	8	9	10
219					
245					
273					
325					
377					
426					

* Pipes produced by CHTPZ.

TU 14-3-1630-89*

Hexagonal seamless cold-deformed steel pipes

STEEL GRADES

04Kh14T3R1F (ChS 82)

Chemical composition

Steel grade	Chemical composition, %									
	C	Mn	Si	P	S	Cr	Ni	Al	Ti	Other
04Kh14T3R1F (ChS 82)	0.02-0.06	<0.50	<0.5	<0.030	<0.020	13.0-16.0	<0.50	<0.5	2.3-2.5	V 0.15-0.30 B 1.3-1.8
04Kh14T3R1F-Sh (ChS 82)										

Pipe dimension tolerances

"Turn-key" outside diameter, mm	Wall thickness, mm	Limit deviations		
		Diameter, %	Wall, %	Outside radius of fin rounding
257	6	+2.0;-3.0	+ 2.0; - 1	20

Mechanical properties

Steel grade	Ultimate tensile strength, $\sigma_в$, N/mm² (kgf/mm²)	Yield strength, $\sigma_{0.2}$, N/mm² (kgf/mm²)	Relative elongation, δ_5, %
	not less than		
04Kh14T3R1F (ChS 82)	441 (45)	245 (25)	10
04Kh14T3R1F-Sh (ChS 82)			

* Pipes produced by CHTPZ.

TU 1361-023-00212179-2005

Seamless cold- and warm-deformed pipes of steel grades 08Kh14MF and 08Kh14MF-Sh

STEEL GRADES

08Kh14MF, 08Kh14MF-Sh

Chemical composition

Steel grade	Chemical composition, %									
	C	Mn	Si	P	S	Cr	Ni	Mo	Ti	Other
08Kh14MF	0.05-0.10	0.8-1.2	0.20-0.45	≤0.035	≤0.020	13.0-14.8	–	0.2-0.4	–	V:0.15-0.30
08Kh14MF-Sh	0.05-0.10	0.8-1.2	0.20-0.45	≤0.035	≤0.015	13.0-14.8	–	0.2-0.4	–	V:0.15-0.30

Mechanical properties

Steel grade	Tensile strength, N/mm²	Relative elongation, %
	not less than	
08Kh14MF	441	25
08Kh14MF-Sh	441	25

Size range

Pipe size, mm		Pipe length, m
Outside diameter	Wall thickness	
6-68	1.0-9.0 and more depending on the outside diameter	Random length: from 3.0-12.5 Fixed length: from 3.0-7.0 Multiple length: with the fixed length

Limit deviations of outside diameter

Outside diameter, mm	Limit deviations in	
	usual accuracy, quality category “B”	improved accuracy, quality category “A”
from 6 to 15	±0.2 mm	±0.2 mm
from 16 to 30	+0.3 mm	+0.25 mm
from 31 to 50	±0.45 mm	±0.4 mm
from 51 to 68	±1%	±8%

Limit deviations of wall thickness

Wall thickness, mm	Limit deviations in	
	usual accuracy, quality category “B”	improved accuracy, quality category “A”
from 1 to 2 incl.	±15%	±12.5%
over 2 to 5 incl. for Ø 50 incl.	+12.5%/-10%	+10%
over 2 to 5 incl. for Ø over 50	±12.5%	±10%
over 5	±12.5%	±10%

TU 24.20.13-001-65052752-2024

Seamless cold-deformed pipes of the KhN60VT (EI-868, VZh-98) alloy

STEEL GRADES

KhN60VT, KhN60VT-VD

Chemical composition

Steel grade	Chemical composition, %									
	C	Mn	Si	P	S	Cr	Ni	Mo	Ti	Other
KhN60VT	≤0.1	≤0.5	≤0.8	≤0.035	≤0.013	23.5-26.5	base	≤1.5	0.3-0.7	W: 13.0-16.0; Fe≤0.6; Al≤0.15

Mechanical properties

Alloy grade	Tensile strength, N/mm²	Relative elongation, %
	not less than	
KhN60VT	686	30

Size range

Pipe size, mm		Pipe length, m
Outside diameter	Wall thickness	
6	0.5; 1.0; 1.2; 1.5	2.0-6.0
7	1.5	
8	1.0; 1.5	
10	1.0; 1.5	
12	1.0; 1.5; 2.0	
14	1.0; 1.5	
16	1.0; 1.5; 2.0	
18	1.0	
20	1.0	
As agreed		2.0-6.0
22	1.0	
25	1.0	
30	1.0	
38	3.0	

TU 14-3R-55-2001

Seamless pipes for steam boilers and pipelines

STEEL GRADES

12Kh18N12T

Chemical composition

Steel grade	Chemical composition, %									
	C	Mn	Si	P	S	Cr	Ni	Nb	Ti	Cu
12Kh18N12T	≤0.12	1.0-2.0	≤0.8	≤0.030	≤0.015%	17.0-19.0	11.0-13.0	–	5x(C-0.02)≤0.7	≤0.3

Mechanical properties at room temperature

Steel grade	Tensile strength, N/mm²	Yield strength, N/mm²	Relative elongation, %	Hardness HB
	not less than			not more than
12Kh18N12T	539-686	216-392	35	190

Pipe dimension tolerances

Steel grade	Outside diameter, mm	Limit deviations
12Kh18N12T	from 10 to 42	±0.70 %
	from 42 to 89	±0.25 mm

Steel grade	Wall thickness, mm	Limit deviations, %
12Kh18N12T	from 2 to 4 incl.	±10
	over 4.0	±8

Size range

Outside diameter, mm	Wall thickness, mm																										
	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	7.0	8.0	9.0	10.0	11.0	12.0	14.0	16.0	18.0	20.0	22.0	24.0	26.0	28.0	30.0
	Pipe length – up to 12.0 m																										
10																											
12																											
16																											
20																											
22																											
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121																											
133																											
140																											
145																											
152																											
159																											
168																											
194																											
219																											

Note: pipes of other sizes and lengths can be manufactured by agreement between the parties.

TU 14-3P-197-2001

Seamless pipes of corrosion-resistant steel grades with improved surface quality

STEEL GRADES

08Kh18N10T, 08Kh18N12T, 08Kh18N10T-U

Chemical composition

Steel grade	Chemical composition, %									
	C	Mn	Si	P	S	Cr	Ni	Ti	N	Co
08Kh18N10T	≤0.08	≤1.5	≤0.8	≤0.035	≤0.02	17.0-19.0	10.0-11.0	5xC – 0.6	≤0.05	-
08Kh18N12T	<0.08	<2.0	<0.8	<0.040	<0.020	17.0-19.0	11.0-13.0	5xC – 0.6	<0.05	-
08Kh18N10T-U	<0.08	<1.5	<0.8	<0.035	<0.02	17.0-19.0	10.0-11.0	5xC – 0.6	<0.05	<0.025

Notes: ограничение по кобальту оговаривается в заказе

Pipe dimension tolerances

Outside diameter, mm	Limit deviations in manufacturing accuracy		
	usual		improved
	hot-deformed	cold-deformed	
from 6 to 16	-	±0.2 mm	±0.2 mm
from 16 to 31	-	±0.3 mm	±0.25 mm
from 31 to 51	±1.25%	±0.45 mm	±0.4 mm
from 51 to 70	±1.25%	±1%	±0.8 mm
from 70 to 146	±1.25%		±1.25%
from 146 to 273	±1.25%		±1%
from 273*	±1.25%		±1.25 %

Inside diameter*, mm	Limit deviations, mm	
	For inside diameter	For wall thickness
279	+ 0; - 4	+ 4; - 0
346	+ 0; - 4	+ 4; - 0

Wall thickness, mm	Limit deviations of the wall thickness in manufacturing accuracy		
	usual		improved
	hot-deformed	cold-deformed	
from 1 to 2	-	±15 %	±15 %
from 2 to 5 incl. for Ø to 50 incl.	±12.5%	+12.5/-10%	±10 %
from 2 to 5 incl. for Ø over 50	±12.5%		±10 %
from 3 to 5 incl. for diameter over 95	±12.5%		±10 %
over 5	±12.5%		±12.5%

Note: pipes of other sizes and lengths can be manufactured by agreement between the parties.

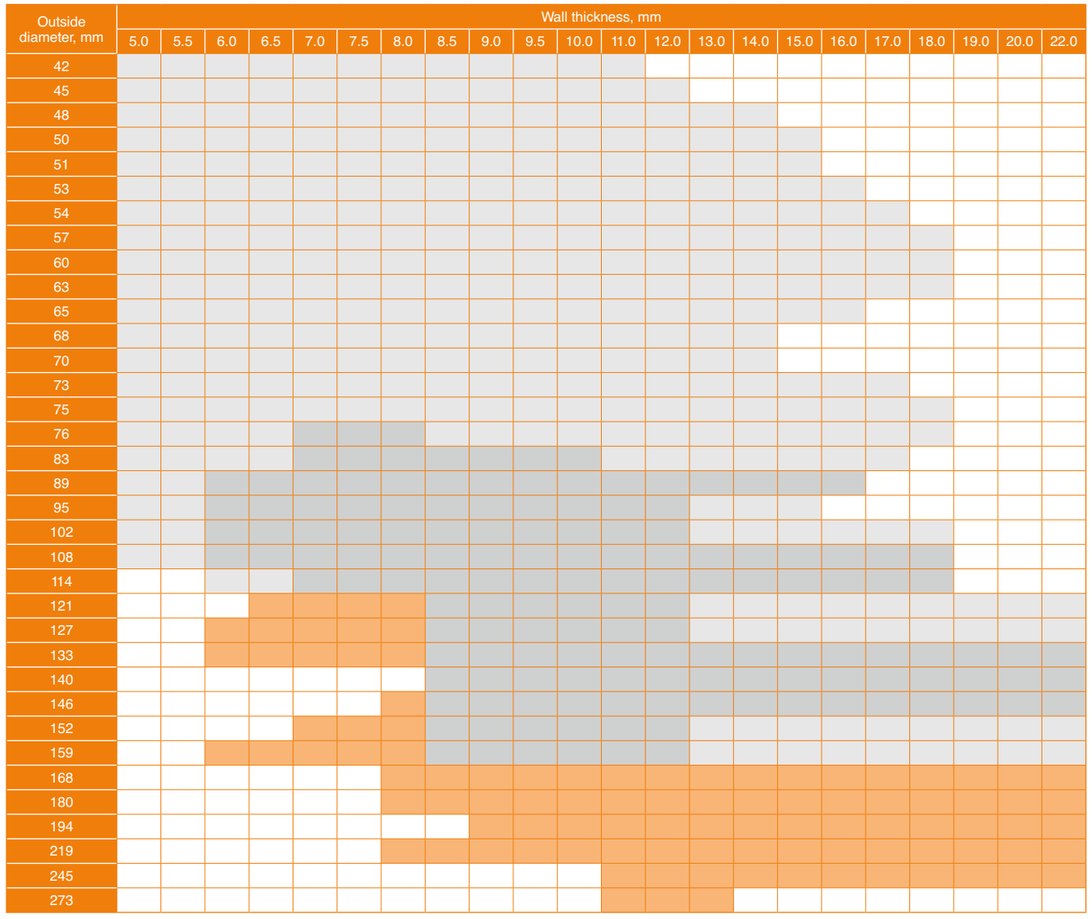
Mechanical properties

Pipe sizes, mm	As-supplied state			After austenitization
	Ultimate tensile strength at temperaature 20°C, σ_B, N/mm² (kgf/mm²)	Relative elongation at temperature 20°C, δ_5, %	Yield strength at temperature 350°C, $\sigma_{0.2}$, N/mm² (kgf/mm²)	Yield strength at temperature 350°C, $\sigma_{0.2}$, N/mm² (kgf/mm²)
	Not less than			
Diameters up to 17 incl.	549 (56)	35	196-343 (20-35)	176-323 (18-33)
Diameters over 17 to 76 incl.	549 (56)	37	196-343 (20-35)	176-323 (18-33)
Diameters over 76 with wall thickness up to 15 incl.	549 (56)	37	186-333 (19-34)	–
Diameters over 95 with wall thickness up to 15 incl.*	549 (56)	37	186-333 (19-34)	–

REQUIREMENTS FOR PIPE SURFACE:

Cold-deformed pipes are supplied with electrochemically polished surface or without electrochemical polishing, with ground or lightly etched surface as well as with surface heat treated in a bright annealing furnace. Hot-deformed pipes are supplied with machined outer and inner surfaces or lightly etched outer surface.

Size range of hot-deformed pipes



lightly etched

lightly etched or machined

machined

Notes:

1. 1.5 m to 7 m long pipes can be manufactured by agreement between the parties.
2. Automated ultrasonic testing is only used to inspect the outer surface of pipes with an inner diameter of less than 35 mm.

Size range of cold-deformed pipes

Outside diameter, mm	Wall thickness, mm																												
	1.0	1.2	1.4	1.5	1.8	2.0	2.2	2.5	2.8	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	14.0
	Pipe lengths as agreed by the parties within 1.5-16.0 m																											
6																												
7																												
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85																												
89																												
90																												

Note: pipes of other sizes and lengths can be manufactured by agreement between the parties.

Size range*

Outside diameter, mm	Wall thickness, mm																																										
	3	3.5	4	4.5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
95																																									
100																																									
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180																																									
194																																									
200																																									
220																																									
250																																									
273-325																																									
351-377																																									
426																																									
in. 279																																									
in. 346																																									

Note: pipes of other sizes and lengths can be manufactured by agreement between the parties.

* Pipes produced by CHTPZ.

TU 14-3R-139-2014

Seamless tubing and corrosion-resistant alloy pipes (plain-end)

STEEL GRADES

110CrNi

Size range

Outside diameter, mm	Wall thickness, mm	Pipe length, m
88.9	6.45	from 8.0 to 12.0 m

HEAT TREATMENT TYPES:

Pipes are manufactured without heat treatment

TU 14-3R-769-2010

Seamless cold-deformed scratch-free steel pipes of corrosion-resistant steels

STEEL GRADES

08Kh18N12T, 12Kh18N10T produced through air melting and secondary melting (-VD) or (-Sh)

Size range

Outside diameter, mm	Wall thickness, mm	Pipe length, m
6.0	0.5-1.5	Randoь length: from 1.5 to 7.0 m Fixed length within the random length Multiple fixed length: within random length with not more than 5.0 mm allowance per cut.
7.0	0.5-1.5	
8.0-25.0	0.5-2.0	
26.0	1.5	
27.0-40.0	0.5-2.0	
42.0-70.0	1.0-2.0	

HEAT TREATMENT TYPES:

Quenching and/or stabilizing annealing

ASTM A213/A213M
ASME SA-213/SA-213M

Seamless ferritic and austenitic alloy-steel boiler, superheater, and heat-exchanger tubes

STEEL GRADES

TP304, TP304L, TP304H, TP316L, TP316, TP321, TP321H, TP310S, TP347H, TP347, TP316Ti

Mechanical properties

Steel grade	Yield strength, min. N/mm² (MPa)	Tensile strength, min. N/mm² (MPa)	Elongation, min. %	Hardness HRB max.
TP304	205	515	35	90
TP304L	170	485	35	90
TP316	205	515	35	90
TP316L	170	485	35	90
TP316Ti	205	515	35	90
TP321	205	515	35	90
TP347	205	515	35	90
TP304H	205	415	20	90
TP321H	205	515	35	90
TP347H	205	515	35	90
TP310S	205	515	35	90

Size range

Outside diameter. mm	Wall thickness. mm																Pipe length. m
	0.5	1.0	1.2	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	
5.0-10.0																	up to 7.0
10.0-20.0																	up to 7.0
20.0-30.0																	up to 7.0
30.0-40.0																	up to 7.0
40.0-50.0																	up to 7.0
48.0-127.0																	up to 7.0
50.0-61.0																	up to 7.0
141.3																	up to 7.0

ASTM A 312/A 312M
ASME SA 312/SA 312M

Seamless and welded austenitic stainless steel pipes

STEEL GRADES

TP304, TP304L, TP304H, TP316L, TP316, TP317L, TP321, TP321H, TP310S, TP310H, TP347, TP347H, TP316Ti

Mechanical properties

Steel grade	Yield strength, min. N/mm² (MPa)	Tensile strength, min. N/mm² (MPa)	Elongation, min. %	Hardness HRB max.
TP304	205	515	35	90
TP304L	170	485	35	90
TP316	205	515	35	90
TP316L	170	485	35	90
TP316Ti	205	515	35	90
TP321	205	515	35	90
TP317L	205	515	35	90
TP347	205	515	35	90
TP304H	205	415	20	90
TP321H	205	515	35	90
TP347H	205	515	35	90
TP310S	205	515	35	90
TP310H	205	515	35	90

Size range

Outside diameter			Wall thickness, mm															
			Sch 5S		Sch 10S		Sch 30S		Sch 40S		Sch 80S		Sch 120		Sch 160		SchXXS	
NPS	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
⅛	0.405	10.29	-	-	0.049	1.24	0.057	1.45	0.068	1.73	0.095	2.41	-	-	-	-	-	-
¼	0.540	13.72	-	-	0.065	1.65	0.073	1.85	0.088	2.24	0.119	3.02	-	-	-	-	-	-
⅜	0.675	17.15	-	-	0.065	1.65	0.073	1.85	0.091	2.31	0.126	3.20	-	-	-	-	-	-
½	0.840	21.34	0.065	1.65	0.083	2.11	0.095	2.41	0.109	2.77	0.147	3.73	-	-	-	4.78	-	-
¾	1.050	26.67	0.065	1.65	0.083	2.11	0.095	2.41	0.113	2.87	0.154	3.91	-	-	-	5.56	0.308	7.82
1	1.315	33.40	0.065	1.65	0.109	2.77	0.114	2.90	0.133	3.38	0.179	4.55	-	-	-	6.35	0.358	9.09
1¼	1.660	42.16	0.065	1.65	0.109	2.77	0.117	2.97	0.140	3.56	0.191	4.85	-	-	-	6.35	0.382	9.7
1½	1.900	48.26	0.065	1.65	0.109	2.77	0.125	3.18	0.145	3.68	0.200	5.08	-	-	0.287	7.14	0.400	10.15
2	2.375	60.33	0.065	1.65	0.109	2.77	0.125	3.18	0.154	3.91	0.218	5.54	-	-	0.344	8.74	0.436	11.07
2½	2.875	73.03	0.083	2.11	0.120	3.05	0.188	4.78	0.203	5.16	0.276	7.01	-	-	0.375	9.53	0.552	14.02
3	3.500	88.9	0.083	2.11	0.120	3.05	0.188	4.78	0.216	5.49	0.300	7.62	-	-	0.438	11.13	0.600	15.24
3½	4.000	101.6	-	2.11	0.120	3.05	0.188	4.78	0.006	7.54	0.318	8.08	-	-	0.500	12.70	0.636	16.15
4	4.500	114.3	-	2.11	0.120	3.05	0.188	4.78	0.237	6.02	0.337	8.56	0.380	11.13	0.531	13.48	0.674	17.12
5	5.563	141.3	-	-	-	-	-	-	0.258	6.55	0.375	9.52	0.500	12.70	0.625	15.88	0.750	19.05
6	6.625	168.28	-	-	-	-	-	-	0.280	7.11	0.432	10.97	0.562	14.27	0.719	18.26	0.864	21.95
8	8.625	219.08	-	-	-	-	-	-	0.322	8.18	0.500	12.70	0.719	18.26	0.906	23.01	0.875	22.23
10	10.750	273.05	-	-	-	-	-	-	0.365	9.27	0.594	12.70	0.844	18.26	-	-	-	-
12	12.750	323.85	-	-	-	-	-	-	0.406	10.31	0.688	17.48	-	-	-	-	-	-

cold-rolled pipes

hot-deformed pipes

ASTM A269/A269M

Seamless austenitic stainless steel tubing for general service

STEEL GRADES

TP316

Chemical composition

Steel grade	Chemical composition, %											
	C	Mn	P	S	Si	Ni	Cr	Mo	Ti	Nb	N	Other
TP316	≤0.08	≤2.0	≤0.045	≤0.030	≤1.0	10.0-14.0	16.0-18.0	2.00-3.00	–	–	–	–

Size range

Outside diameter, mm	Wall thickness, mm									Pipe length, m
	0.5	1.0	1.2	1.5	2.0	3.0	4.0	5.0	6.0	
5.0-10.0										up to 7
10.0-20.0										up to 7
20.0-30.0										up to 7
30.0-40.0										up to 7
40.0-50.0										up to 7
50.0-61.0										up to 7

DIN EN 10216-5

Seamless steel tubes for pressure purposes.
Technical delivery conditions. Part 5. Stainless steel tubes

STEEL GRADES

1.4301 (X5CrNi18-10), 1.4306 (X2CrNi19-11), 1.4307 (X2CrNi18-9), 1.4401 (X5CrNiMo17-12-2), 1.4404 (X2CrNiMo17-12-2) , 1.4541 (X6CrNiTi18-10), 1.4571 (X6CrNiMoTi17-12-2)

Size range

Diameter, mm	Wall thickness, mm	Pipe length, mm
cold-deformed		
4.00	1.00	Random or fixed up to 7.0 m
5.00	0.30	
6.00	0.30-0.70	
8.00	1.00	
10.00-10,29	1.00; 1.24; 1.73; 2.00; 2.50	
12.00	1.50	
13.50-13.72	1.00; 1.65; 1.70; 2.24	
16.00	1.00-2.60	
17.15-17.20	1.65; 2.31	
18.00	1.50	
19.05	1.65-2.11	
20.00	1.00-4.00	
21.30-21.34	1.65; 2.11; 2.60; 2.77; 3.20; 3.73; 4.78	
25.00-26.90	1.65; 2.00; 2.11; 2.30; 2.50; 2.60; 2.87; 3.20; 3.91	
28.00	2.00	
30.00	2.00-5.00	
32.00	2.00-5.00	
33.40	1.65; 2.77; 3.38; 4.55	
33.70	2.60-4.50	
38.00	4.00-5.00	
42.16-42.40	1.65; 2.00; 2.77; 3.56; 4.85	
44.50	2.60	
48.26	1.65; 2.77; 3.68; 5.08	
48.30	2.00-3.20	
51.00	2.60-3.20	
54.00	2.00	
57.00	3.00	
60.30-60.33	1.65; 2.77; 2.90; 3.20; 3.60; 3.91; 5.54	
73.00-76.10	2.60-3.60	
88.90	3.05	
hot-deformed		
44.5-55.0	4.0-11.0	
60.0	4.0-15.0	
60.3	4.0-15.0	
63.0[4)]	6.5	
76.1	4.0-15.0	
80.0	4.0-15.0	
88.9	4.0-15.0	
101.6	4.0-15.0	
108.0	4.0-15.0	
114.3	5.0-15.0	
133.0	5.0-15.0	
139.7	5.0-15.0	
152.4	6.0-15.0	
159.0	5.0-15.0	
168.3	6.5-15.0	
196.0	7.0-15.0	
219.1	7.0-15.0	
245.0	12.5[4)]-15.0	
273.0[2)]	8.0-15.0	

HEAT TREATMENT TYPES:

Pipes are manufactured with or without heat treatment

WELDED STAINLESS STEEL PIPES

Key manufacturing standards

Technical standards	
DIN EN 10217-7	Welded steel tubes for pressure purposes Technical delivery conditions – stainless steel tubes.
DIN EN 10357	Austenitic, austenitic-ferritic and ferritic longitudinally welded stainless steel tubes for the food and chemical industry (replaced DIN 11850).
GOST 11068-81	Electric-welded pipes made of corrosion-resistant steel for pipelines and various structures
ASTM A554	Standard specification for welded stainless steel mechanical tubing
ASTM A268/268M	Seamless and welded ferritic and martensitic stainless steel tubing for general service
ASTM A249	Welded austenitic steel boiler, superheater, heat-exchanger, and condenser tubes

STEEL GRADES

Steel classification	Grade			Chemical composition, %									
	ASTM	GOST	EN	C	Si	Mn	Ni	Cr	S	P	N	Mo	Ti
Austenitic	AISI 304	12Kh18N9	1.4301	0.08	0.75	2.0	8.0-10.5	18-20	0.03	0.045	0.1	-	-
Austenitic	AISI 304L	03Kh18N10	1.4307	0.03	0.75	2.0	8.0-12.0	18-20	0.03	0.045	0.1	-	-
Austenitic	AISI 321	08Kh18N10T	1.4541	0.08	0.75	2.0	9-12	17-19	0.03	0.045	0.1	-	0.7
Austenitic	AISI 316L	03Kh17N14M3	1.4404	0.3	0.75	2.0	10-14	16-18	0.03	0.045	0.41	2-3	-
Austenitic	AISI 316Ti	10Kh17N13M2T	1.4574	0.08	0.75	2.0	10-14	16-18	0.03	0.045	0.1	2-3	0.7
Austenitic	AISI 201	-	-	0.15	1.0	10	5.5	18	0.05	0.05	0.25	-	-
Ferritic	AISI 409	03Kh13	1.4512	0.03	1.0	1.0	0.5	10.5-11.7	0.02	0.04	0.03	-	-
Ferritic	AISI 439	04Kh17T	1.4510	0.03	1.0	1.0	0.5	17-19	0.03	0.04	0.03	-	-

Notes:
1. Other steel grades can be used by agreement between the parties.
2. Pipe dimension tolerances are as per technical standards.
3. By agreement between the parties, pipes may be manufactured with tolerances outside the technical standards.
4. 100% of pipes are inspected as per DIN EN ISO 10893-2.

Size range

Diameter/wall, mm	0.5	0.6	0.8	1.0	1.2	1.5	2.0	2.5	3.0	4.0
6										
7.5										
8.0										
9.0										
10.0										
12.0										
14.0										
16.0										
18.0										
20.0										
21.3										
22.0										
25.0										
26.9										
28.0										
30.0										
32.0										
33.0										
33.7										
35.0										

Size range (continued)

Diameter/wall, mm	0.5	0.6	0.8	1.0	1.2	1.5	2.0	2.5	3.0	4.0
38.0										
40.0										
42.4										
45.0										
48.0										
48.3										
50.8										
52.0										
53.0										
57.0										
60.3										
63.5										
70.0										
76.1										
85.0										
88.9										
101.6										
108.0										
114.3										

ASTM A554 HOLLOW SECTIONS

STEEL GRADES

AISI 304 (12Kh18N9), AISI 304L, AISI 321 (08-12Kh18N10T), AISI 316L, AISI 409

Size range

Size/ wall, mm		0.8	1.0	1.2	1.5	2.0	2.5	3.0	4.0
15.0	15.0								
20.0	10.0								
20.0	15.0								
20.0	20.0								
25.0	10.0								
25.0	25.0								
30.0	15.0								
30.0	20.0								
30.0	30.0								
35.0	15.0								
35.0	35.0								
40.0	10.0								
40.0	20.0								
40.0	25.0								
40.0	30.0								
40.0	40.0								
50.0	25.0								
50.0	30.0								
50.0	50.0								
60.0	40.0								
60.0	60.0								
80.0	40.0								
80.0	80.0								
100.0	60.0								

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SALES OFFICES

CATALOGS

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* On March 17, 2022, the API Monogram/APIQR Program discontinued certification services within the Russian Federation to comply with restrictions on financial and business activities imposed by the US and Russian Governments. As a result, all TMK enterprises are no longer allowed to apply the API monogram to their products.

TMK plants held the API certification for more than 25 years, accumulating a wealth of experience in manufacturing pipes to API standards for customers from all over the world. Since 2003, TMK enterprises have produced more than 3 million tonnes of casing, tubing, drill pipes, and line pipes to API standards and using the API monogram.

The quality and reliability of TMK products are confirmed by a strong track record of shipments.

Despite the restrictions on the use of the API monogram, TMK enterprises are still allowed to provide statements of conformity with API standards or specifications for their products provided they really meet the relevant API standard or specification requirements. As before, TMK guarantees full conformity with the requirements of API standards and the high quality of supplied products.

To provide additional assurance for our customers, in summer 2022, TMK enterprises were audited by AJA Registrars CIS Ltd. The audit confirmed that the enterprises meet the requirements of API Spec 5CT, API Spec 5L, API Spec 5DP, and API Spec Q1.

An independent third-party inspection may be carried out during order production to verify that all products are manufactured in strict accordance with API standards and customer specifications. Third-party laboratory tests may also be commissioned.

NOTES