

EN 10220, DIN 1630

High-performance seamless circular unalloyed steel pipes

Chemical composition

Steel grade	Elements content, %					
	C	Si	S	P	Mn	Al
	Not more					
St 37.4	0.17	0,35	0.040	0.040	≥0.35	≥0.02
St 44.4	0.20	0,35	0.040	0.040	≥0.40	≥0.02
St 52.4	0.22	0.55	0.040	0.035	≤1.60	≥0.02

Mechanical properties

Steel grade	Yield strength, R_{eH} N/mm ² For wall thickness, mm			Tensile strength R_m , N/mm ²	Elongation A, %		Impact test, KV, J Test temperature +20°C	
	≤16	>16≤40	>40≤65		l	t	l	t
	Not less				Not less		Not less	
St 37.4	235	225	215	350-480	25	23	43	27
St 44.4	275	265	255	420-550	21	19	43	27
St 52.4	355	345	335	500-650	21	19	43	27

Note:

l – Longitudinal sample, t- transverse sample.



Outside diameter, mm	3,2	3,6	4,0	5,0	6,3	8,0	10,0	12,5	14,2	16,0	20,0	25,0	30,0	32,0	36,0	40,0	45,0	50,0	55,0	60,0	65,0	
33,7																						
42,4																						
48,3																						
60,3																						
76,1																						
88,9																						
101,6																						
114,3																						
139,7																						
168,3																						
177,8																						
193,7																						
219,1																						
244,5																						
273,0																						
323,9																						
355,6																						

Dimensional tolerances

Outside diameter, mm	Outside diameter permissible deviation	
	Pipe body	Pipe ends (100 mm from pipe end)
≤ 100	± 1% (not less than ±0,5 mm)	± 0,4 mm
100 <D ≤ 200	± 1%	± 0,5 %
> 200	± 1%	± 0,6 % (Permissible deviation might be referred to inside diameter upon agreement, but should take into account wall thickness deviation)

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

Lengths

Pipes are supplied with lengths according to standard requirements.
Any lengths different from the standard ones are subject to additional negotiations.

Protection

Pipes are supplied:

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

Upon request pipes ends are protected with plastic caps.

Marking

Pipes are supplied with marking according to standards and customer requests.
Marking is painted and/or hard stenciled on pipe ends. The same data, as well as additional information according to customer's request, are indicated on the bundle tags.

Certification

Pipes are supplied with 3.1. inspection certificate, in conformity with EN 10204.