

EN 10220, DIN 1629

Seamless circular tubes of non-alloy steels with special quality requirements

Chemical composition

Steel grade	Elements content, %						
	C	Mn	Si	S	P	N*	Al
	Not more						
St 37.0	0.17	-	-	0.040	0.040	0.009	-
St 44.0	0.21	-	-	0.040	0.040	0.009	-
St 52.0	0.22	1.60	0.55	0.040	0.035	-	≥0.02

Note:

Exceeding the specified Nitrogen content exceeding is possible if for every 0,001% of Nitrogen the Phosphorus content goes down by 0,005 % from the specified value, but not more than 0,012% in heat analysis.



Mechanical properties

Steel grade	Yield strength, R_{eH} , N/mm ² For wall thickness, mm			Tensile strength R_m , N/mm ²	Elongation A, %	
	≤16	>16≤40	>40≤65		Longitudinal direction	Transverse direction
	Not less				Not less	
St 37.0	235	225	215	350-480	25	23
St 44.0	275	265	255	420-550	21	19
St 52.0	355	345	335	500-650	21	19

Hot-rolled

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
Up to 100	± 1 % (but not less than ±0.5 mm)
Above 100 up to 200	± 1 %
Above 200	± 1 %

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		
+ 15%	+ 12.5%	±9%	+ 17.5%	+ 15%	±12.5%	+ 20%	+ 15%	+ 12.5%
- 10%	- 10%		- 12.5%	- 10%		- 15%	- 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.