



ARTROM STEEL TUBES S.A.

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 Subscribed and Paid Share Capital: 291.587.538,34 lei

SEAMLESS STEEL PIPE FOR LOW TEMPERATURE SERVICE

1. Standards

EN 10216-4, ASTM A333, ASTM A334

2. Used for

Low-temperature service.

3. Dimensions

According EN 10216-4 or ASME B36.10M in dimensional range corresponding to the workshop CPE (Tab.1) or ASSEL (Tab.2) or Cold rolling and drawing (Tab.3).

4. Tolerances

Standard	Outside Diameter	Wall Thickness
EN 10216-4, hot finished	$\pm 1.0\%$ or $\pm 0.5\text{mm}$ (which is higher)	$\pm 12.5\%$ or $\pm 0.4\text{mm}$ (which is higher)
EN 10216-4, cold finished	$\pm 0.5\%$ or $\pm 0.3\text{mm}$ (which is higher)	$\pm 10\%$ or $\pm 0.2\text{mm}$ (which is higher)
ASTM A333	OD \leq 48.3; +0.4/-0.8mm 48.3<OD \leq 114.3; $\pm 0.8\text{mm}$ 114.3<OD \leq 219.1; +1.6/-0.8mm OD>219.1; +2.4/-0.8mm	+12.5%/-10%
ASTM A334 , hot finished	OD \leq 100; +0.4/-0.8mm 100<OD \leq 200; +0.4/-1.2mm 200<OD \leq 225; +0.4/-1.6mm	OD \leq 100 si WT \leq 2.4; +40%/0 OD \leq 100 si 2.4<WT \leq 3.8; +35%/0 OD \leq 100 si 3.8 <WT \leq 4.6; +33%/0 OD \leq 100 si WT>4.6; +28%/0 OD>100 si 2.4<WT \leq 3.8; +35%/0 OD>100 si 3.8 <WT \leq 4.6 ; +33%/0 OD>100 si WT>4.6; +28%/0
ASTM A334 , cold finished	OD<25; +0.1/-0.1mm 25 \leq OD \leq 40; +0.15/-0.15mm 40<OD<50; +0.2/-0.2mm 50 \leq OD<65; +0.25/-0.25mm 65 \leq OD<75; +0.3/-0.3mm 75 \leq OD \leq 100; +0.38/-0.38mm 100<OD \leq 200; +0.38/-0.64mm 200<OD \leq 225; +0.38/-1.14mm	OD \leq 38.1; +20%/0 OD>38.1; +22%/0

5. Chemical Composition (%)

Steel group	C max	Mn max	Si max	S max	P max	Cr max	Cu max	Mo max	Ni max	Ti max	V max
P215NL	0.15	0.40÷1.20	0.35	0.020	0.025	0.30	0.30	0.08	0.30	0.04	0.02
P265NL	0.20	0.60÷1.40	0.40	0.020	0.025	0.30	0.30	0.08	0.30	0.04	0.02
Grade6	0.30	0.29÷1.06	Min.0.10	0.025	0.025						

6. Mechanical Properties

Steel group	Tensile Strength	Yield Strength min.	Elongation min.	Min. impact energy	
	MPa	MPa	%	J	°C
P215NL	360÷480	215	25	40	-40
P265NL	410÷570	265	24	40	-40
Grade 6	min. 415	240	30	18	-45

7. Lengths

- Random lengths or fixed lengths in length range corresponding to the -workshop CPE (Tab.1) or ASSEL (Tab.2) or Cold rolling and drawing (Tab.3).

8. Protection

- unprotected;
- external varnished with black or clear lacquer;
- if required, the plain end pipes can be delivered with plastic plugs at both ends

9. Marking

According to standard or per customer request.

10. Delivery

In bundles up to 4000 kg (8800 lbs) tied in minimum six places with steel strip. Quantity tolerances: $\pm 5\%$ per size or / and per total.

11. Mill test report

Mill test reports are issued to customer requirements. Usually they comply with DIN 50049, EN 10204.

12. Quality certified

TUV-PED, AD; DNV