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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 Tab.1 and Tab.2

Tab. 1 HOT ROLLING - ASSEL MILL

WT	mm in	6.3 0.248	7.1 0.280	8.0 0.315	8.8 0.346	10.0 0.394	11.0 0.433	12.5 0.492	14.2 0.559	16.0 0.630	17.5 0.689	20.0 0.787	22.2 0.874	25.0 0.984	28.0 1.102	30.0 1.181	32.0 1.260	35.0 1.378	36.0 1.417	40.0 1.575
OD		Max Length [m]																		
mm	in																			
70.0	2.756						12.0	11.0	11.0	11.0	10.0									
73.0	2.874						10.5	10.5	10.5	10.5	10.0									
76.1	2.996						11.0	10.5	10.5	10.0	10.0	10.0								
82.5	3.248						11.0	10.5	10.5	10.0	9.5	9.5	9.0							
88.9	3.500							10.0	10.0	9.0	9.0	9.0	9.0	8.0						
95.0	3.740							10.0	10.0	10.0	10.0	9.0	8.5	8.0						
101.6	4.000							9.0	9.0	8.5	8.0	8.0	8.0	8.0						
108.0	4.252							9.0	9.0	9.0	8.5	8.5	8.0	8.0	8.0	7.0				
114.3	4.500							10.0	10.0	8.0	8.5	7.5	7.0	7.0	6.5	6.5	6.5			
127.0	5.000	12.5	12.5	12.0	12.0	11.0	11.0	10.0	9.5	9.0	8.5	8.0	8.0	7.5	7.5	7.5	7.0	7.0	7.0	
133.0	5.236	12.5	12.5	12.0	12.0	11.0	10.0	10.0	9.5	9.0	8.5	8.0	8.0	7.5	7.0	7.0	7.0	7.0	7.0	
139.7	5.500	12.5	12.5	12.0	12.0	11.0	11.0	10.0	9.5	9.0	8.5	8.0	8.0	7.5	7.0	7.0	7.0	6.5	6.5	6.0
141.3	5.560	12.0	12.0	12.0	12.0	11.0	11.0	9.0	9.0	9.0	8.5	8.0	8.0	8.0	7.5	7.0	7.0	6.5	6.3	6.0
152.4	6.000	12.0	12.0	12.0	12.0	11.0	11.0	9.0	9.0	9.0	8.5	8.0	8.0	8.0	7.5	7.0	7.0	7.0	7.0	6.5
159.0	6.260	12.0	12.0	12.0	12.0	11.0	11.0	9.0	9.0	9.0	8.5	8.0	8.0	8.0	7.5	7.0	7.0	7.0	7.0	6.5
168.3	6.626		12.5	12.0	11.5	11.0	11.2	10.0	9.0	8.5	8.5	8.0	8.0	8.0	8.0	7.5	7.0	7.0	7.0	7.0
177.8	7.000		12.0	12.0	11.5	11.0	10.5	10.0	9.0	8.4	8.2	8.0	8.0	8.0	7.5	7.0	7.0	7.0	7.0	6.5
193.7	7.626			11.0	10.5	10.0	10.0	9.5	9.0	8.3	8.2	8.0	8.0	7.5	7.5	7.0	7.0	7.0	7.0	7.0
219.1	8.626				10.5	10.5	10.0	9.5	9.0	8.8	8.5	8.5	8.5	8.0	7.5	7.0	7.0	7.0	6.5	6.0

-category H1 (OD/WT>12.5)

-Category H2 (4<OD<12.5 and reducing mill)

-category H3 (4<OD/WT<12.5 and calibrating mill)

-Category H4 (OD/WT<4)

1. Interm.sizes are available as follow:

-for OD<82,5 and OD/WT<12.5, any time

-for OD<82,5 or OD/WT>12.5, subject of argument before ordering.

2. Weight: $We = 10.68 (OD-WT) \times WT$ [lbs/ft]

$We = 0.02466 \times (OD-WT) \times WT$ [kg/m]

Tab. 2 HOT ROLLING - CPE MILL

WT	mm in	2.3 0.091	2.6 0.102	2.9 0.114	3.2 0.126	3.6 0.142	4 0.157	4.5 0.177	5 0.197	5.6 0.220	6.3 0.248	7.1 0.280	8.0 0.315	8.8 0.346	10.0 0.394	11.0 0.433
OD		Max Length (m)														
mm	in															
21.3	0.839	9.0	9.0	9.0	9.0	9.0										
26.9	1.059	9.0	9.0	9.0	9.0	9.0	9.0	9.0								
33.7	1.327		9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0						
38.0	1.496		9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0					
42.4	1.669		9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0					
48.3	1.902		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0				
51.0	2.008		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0			
54.0	2.126			12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		
57.0	2.244			12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		
60.3	2.374			12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		
63.5	2.500			12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
70.0	2.756			12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
73.0	2.874			12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
76.1	2.996			12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
82.5	3.248				12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
88.9	3.500				12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
101.6	4.000					12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	10.0
108.0	4.252					12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	10.0
114.3	4.500					12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	10.0

HP1 - rolling R1 (OD<48.3)

HP2 - rolling R1 or R2 (OD>=48.3 and OD/WT>=10)

HP3 - rolling R2 (OD>=48.3 and OD/WT<10)

Note:

Weight:

$We = 10.68 (OD-WT) \times WT$ [lbs/ft]

$We = 0.0246615 \times (OD-WT) \times WT$ [kg/m]



4. Tolerances

<i>Standard</i>	<i>Outside Diameter</i>	<i>Wall Thickness</i>
EN 10216-4	±1.0% or ±0.5mm, Whichever is the greater	±12.5% or ±0.4, Whichever is the greater

5. Chemical Composition (%)

<i>Steel group</i>	<i>C max</i>	<i>Mn max</i>	<i>Si max</i>	<i>S max</i>	<i>P max</i>
P215NL	0.15	0.40+1.20	0.35	0.020	0.025
P255QL	0.17	0.40+1.20	0.35	0.020	0.025
Grade 6	0.30	0.29+1.06	0.10 min	0.025	0.025

6. Mechanical Properties

<i>Steel group</i>	<i>Tensile Strength</i>	<i>Yield Strength min.</i>	<i>Elongation min.</i>
	<i>MPa</i>	<i>MPa</i>	<i>%</i>
P215NL	360+480	215	25
P255QL	360+490	255	23
Grade 6	min. 415	240	30

7. Lengths

<i>Standard</i>	<i>Nominal Length</i>	<i>Min. Length</i>		<i>Average Length</i>		<i>Max. Length</i>	
		<i>ft</i>	<i>m</i>	<i>ft</i>	<i>m</i>	<i>ft</i>	<i>m</i>
EN 10216-4, ASTM A333 & ASTM A334	20ft (6m) 40ft (12m)	16 22	4.88 6.71	17.5 35.0	5.33 10.67	22.0 39.4	6.86 12.00

8. Protection

- unprotected;
- external varnished with black or clear lacquer;
- if required , the plain end pipes can be delivered with plastic caps 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: ±5% per size or / and per total.

11. Mill test report

Mill test reports are issued to customer requirements. Usually they comply with EN 10204 , type 3.1.

12. Quality certified

TUV; GL; PED; DNV