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Pipe Specification A106

<b>Specification</b>	<b>A106 NPS 1/8 -- 48 ANSI Schedules to 160</b>											
<b>Scope</b>	Covers SEAMLESS carbon steel nominal wall pipe for high-temperature service, suitable for bending, flanging and similar forming operations. NPS 1 1/2 and under may be either hot finished or cold drawn. NPS 2 and larger shall be hot finished unless otherwise specified.											
<b>Kinds of Steel Permitted For Pipe Material</b>	Killed Steel Open-hearth Electric-furnace Basic-oxygen											
<b>Hot-Dipped Galvanizing</b>	Not covered in specification.											
<b>Permissible Variations in Wall Thickness</b>	The minimum wall thickness at any point shall not be more than 12.5% under the nominal wall thickness specified.											
<b>Chemical Requirements</b>	<b>Grade A</b>	<b>Grade B</b>	<b>Grade C</b>									
Carbon max. %.....	0.25	0.30	0.35									
Manganese %.....	0.27 to 0.93	0.29 to 1.06	0.29 to 1.06									
Phosphorous, max. %.....	0.025	0.025	0.025									
Sulfur, max. %.....	0.025	0.025	0.025									
Silicon, min. %.....	0.10	0.10	0.10									
<b>Tensile Requirements</b>	<b>Seamless</b>											
	<b>Grade A</b>	<b>Grade B</b>	<b>Grade C</b>									
Tensile Strength, min., psi.....	48,000	60,000	70,000									
Yield Strength, min., psi.....	30,000	35,000	40,000									
<b>Hydrostatic Testing</b>	Inspection test pressures produce a stress in the pipe wall equal to 60% or specified minimum yield strength (SMYS) at room temperature. Maximum Pressures are not to exceed 2500 psi for NPS 3 and under and 2800 psi for the larger sizes. Pressure is maintained for not less than 5 seconds.											
<b>Permissible Variations in Weights per Foot</b>	Weight of any length shall not vary more than 10% over and 3.5% under that specified. NOTE -- NPS 4 and smaller -- weighed in lots. Larger sizes -- by length											
<b>Permissible Variations in Outside Diameter</b>	<b>Outside Diameter</b> at any point shall not vary from standard specified more than--											
	<b>NPS</b>	<b>Over</b>	<b>Under</b>									
	1 1/2 and smaller	1/64"	1/32"									
	2 -- 4	1/32"	1/32"									
	5 -- 8	1/16"	1/32"									
	10 -- 18	3/32"	1/32"									
	20 -- 26	1/8"	1/32"									
<b>Mechanical Tests Specified</b>	<b>Tensile Test</b> -- NPS 8 and larger -- either transverse or longitudinal acceptable Smaller than NPS 8 -- weighed in lots. Larger sizes -- by length. <b>Flattening Test</b> -- NPS 2 and larger. <b>Bending Test(Cold)</b> -- NPS 2 and under. <table style="width: 100%; border: none;"> <tr> <td></td> <td style="text-align: center;"><b>Degree of Bend</b></td> <td style="text-align: center;"><b>Diameter of Mandrel</b></td> </tr> <tr> <td></td> <td style="text-align: center;">For Normal A106 uses 90</td> <td style="text-align: center;">12 x nom. dia. of pipe</td> </tr> <tr> <td></td> <td style="text-align: center;">For Close Coiling 180</td> <td style="text-align: center;">8 x nom. dia. of pipe</td> </tr> </table>				<b>Degree of Bend</b>	<b>Diameter of Mandrel</b>		For Normal A106 uses 90	12 x nom. dia. of pipe		For Close Coiling 180	8 x nom. dia. of pipe
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	For Normal A106 uses 90	12 x nom. dia. of pipe										
	For Close Coiling 180	8 x nom. dia. of pipe										
<b>Number of Tests Required</b>	<b>NPS</b>	<b>On One Length From Each Lot of</b>										
<b>Tensile</b>	5 and smaller	400 or less										
	6 and larger	200 or less										
<b>Bonding</b>	2 and smaller	400 or less										
<b>Flattening</b>	2 through 5	400 or less										
	6 and over	200 or less										
<b>Lengths</b>	Lengths required shall be specified on order. No "joints" permitted unless otherwise specified. If no definite lengths required, following practice applies: <b>Single Random</b> -- 16' - 22'. 5% may be 12' - 16' <b>Double Random</b> -- Minimum length 22', Minimum average 35'. 5% may be 16' - 22'.											
<b>Required Markings on Each Length (On Tags attached to each Bundle in case of Bundled Pipe)</b>	Rollo Stamped or Stenciled (Mfrs. option) Manufacturer's name or brand. Length of pipe. A106 A, A106 B, A106 C. ANSI schedule number. Hydrostatic test pressure and/or NDE. Weight per foot (NPS 4 and larger) or NH if neither is specified. Additional "S" if tested supplementary requirements.											
<b>General Information</b>	* Unless otherwise specified, pipe furnished with plain ends. * Purchaser may specify NDE * Surface finish standards are outlined in specification. in lieu of hydrostatic test or neither											