



# Columbia Specialty Company, Inc.

Distributor of Mechanical and Industrial Piping Products

Phone: (562) 634-6425 Fax: (562) 408-2914

Company: \_\_\_\_\_

Project: \_\_\_\_\_

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## Pipe Specification A53

Specification	A53	NPS 1/8 -- 26 STD. XS and XXS, ANSI Schedules 10 through 160			
<b>Scope</b>	Covers Seamless and Welded, Black and hot-dipped galvanized nominal (average) wall pipe for coiling, bending, flanging and other special purposes and is suitable for welding, Continuous-Welded pipe is not intended for flanging. Purpose for which pipe is intended should be stated on order.				
<b>Kinds of Steel Permitted for Pipe Material</b>	Open-hearth Basic Oxygen Electric-furnace				
<b>Hot-Dipped Galvanizing</b>	Sets standards for coating of pipe with zinc inside and outside by the hot-dipped process. Weight of coating must not average less than 1.8oz. Per square foot and not less than 1.6oz. Per square foot.				
<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>		<u>C max %</u>	<u>Mn max %</u>	<u>P max %</u>	<u>S max %</u>
	Seamless or ERW				
	Grade A	0.25	0.95	0.05	0.06
	Grade B	0.30	1.20	0.05	0.06
	Continuous-weld	-	-	0.08	0.06
<b>Tensile Requirements</b>		<u>Continuous-Weld</u>		<u>Seamless and Electric-resistance-welded</u>	
				<u>Grade A</u>	<u>Grade B</u>
	Tensile Strength, min., psi.....	45,000		48,000	60,000
	Yield Strength, min., psi.....	25,000		30,000	35,000
<b>Hydrostatic Testing</b>	Hydrostatic inspection test pressures for plain end and threaded and coupled pipe are specified. Hydrostatic pressure shall be maintained for not less than 5 seconds for all sizes of seamless and electric resistance-weld pipe.				
<b>Permissible Variations in Weights per Foot</b>	Plus or Minus 10%				
<b>Permissible Variations in Outside Diameter</b>	Outside Diameter at any point shall not vary from standard specified more than -- <u>For NPS 1 1/2 and Smaller Sizes</u> <u>For NPS 2 and Larger Sizes</u> 1/64"    1/32" under    1% over 1% under				
<b>Mechanical Tests Specified</b>	Tensile Test -- Transverse required on ERW for NPS 8 and larger. Sending Test (Cold) -- STD and XS-NPS 2 and under XXS-NPS 1 1/4 and under. <u>Degree of Bend</u> <u>Diameter of Mandrel</u> For Normal A53 uses                      90                      12 x nom. dia. of pipe For Close Coiling                      180                      8 x nom. dia. of pipe Flattening Test -- NPS 2 and larger STD and XS. (Not required for XXS pipe.)				
<b>Number of Tests Required</b>	Seamless and Electric-Resistance-Welded -- Bending, flattening, tensile on one length of pipe from each lot of 500 lengths or less of a size Continuous-Weld -- Bending, flattening, tensile <u>NPS 1 1/2 &amp; smaller</u> <u>NPS 2 &amp; larger</u> one/25 tons    one/50 tons				
<b>Lengths</b>	Standard Weight Single Random -- 16' - 22'. 5% may be jointers. If Plain Ends -- 5% may be 12' - 16'. Double Random -- Shortest Length 22', minimum average for orders 35'. Extra Strong & Double Extra Strong Single Random -- 12' - 22'. 5% may be 6' - 12'. Double Random (XS and lighter) -- Shortest Length 22', minimum average for order 35'. Lengths longer than single random with wall thickness heavier than XS subject to negotiation.				
<b>Required Markings on Each Length (On Tags attached to each Bundle in case of Bundled Pipe)</b>	Rolled, Stamped or Stenciled (Mfgs. Option) Name or brand of manufacturer. Kind of pipe, that is, Continuous Welded, Electric-Resistance-Welded A, Electric-Resistance-Welded B, Seamless A; or Seamless B; XS for extra strong, XXS for double extra strong. ASTM A53 Length of pipe.				



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<b>General Information</b>	Couplings -- Applied handling tight. Couplings, 2" and smaller straight tapped, other sizes taper tapped. Thread Protection -- Applied to pipe 4" and large. End Finish (unless otherwise specified) -- STD or XS, or wall thickness less than 0.500 in. (excluding XXS): Plain and beveled. All XXS and wall thickness over 0.500 in.: Plain end square cut.