



# 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 API 5L

Spec	API 5L NPS 1/8 -- 26			
<b>Scope</b>	Covers WELDED and SEAMLESS pipe suitable for use in conveying gas, water and oil in both the oil and natural gas industries			
<b>Kinds of Steel Permitted for Pipe Material</b>	Open-hearth Basic Oxygen Electric-furnace			
<b>Hot-Dipped Galvanized</b>	May be ordered Galvanized.			
<b>Permissible Variations in Wall Thickness</b>		Grade A, B, A25	X42 through X80	
	NPS 2 1/2 and Smaller--Seamless and Welded, %	+20 -- 12.5	+15 -- 12.5	
	NPS 3 --Seamless and Welded, %	+18 -- 12.5	+15 -- 12.5	
	NPS 4 through 18 -- Seamless and Welded, %	+15 -- 12.5	+15 -- 12.5	
	NPS 20 and larger -- Welded, %	+17.5 -- 10.0	+19.5 -- 8.0	
	NPS 20 and larger -- Seamless, %	+15.0 -- 12.5	+17.5 -- 10.0	
<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>	Lists minimum yield and tensile strength for all grades as well as a maximum tensile strength for X80. Maximum yield-to-tensile ratios outlined for cold-expanded pipe-- may be waived when a fracture toughness requirement is specified.			
<b>Hydrostatic Testing</b>	Lists hydrostatic inspection test pressures for all sizes and grades covered by the specification.	Test Pressures are held for not less than: Seamless (all sizes) -- 5 seconds Welded (NPS 18 smaller) -- 5 seconds (NPS 20 and larger) --10 seconds		
<b>Permissible Variations in Weights Per Foot</b>	For each length of Standard Weight, Regular Weight, Extra Strong, and Double Extra Strong -- Not more than	10% minus 5%.		
	Extra Strong, and Double Extra Strong -- Not more than	10% minus 5%.		
	plus 10% minus 3.5%.	For carload Lots -- Not more than minus 1.75%		
<b>Permissible Variations in Outside Diameter</b>	<b>Outside Diameter</b>	<b>Sizes</b>	<b>Over</b>	<b>Under</b>
	at any point shall not vary from standard specified more than:-----			
		NPS 1 1/2 and smaller	1/64"	1/32"
		NPS 2 through 4	1%	1% (BW Only)
		NPS 2 through 18	.75%	.75%
		NPS 20 through 26		
		Non-expanded	1%	1%
<b>Mechanical Tests Specified</b>	<b>Tensile Test</b>	<b>Bending Test (Cold)--2" and smaller Buttweld.</b>		
	Seamless and Buttwelded--All sizes--Longitudinal Specimens	<u>Degree of Bend</u>	<u>Diameter of Mandrel</u>	
	Electric Weld -- NPS 6 and smaller --Longitudinal	For all API uses 90	12x OD of pipe	
	NPS 8 and Larger -- Transverse			
<b>Number of Tests Required</b>		<b>On One Length From Each Lot of</b>	<b>Flattening</b>	
	<b>Tensile</b>		Non-Expanded Electric-Weld for single lengths crop ends from each length. For multiple lengths, crop ends from each length, plus 2 intermediate rings.	
	5 and smaller	40 or less		
	6 through 12	200 or less		
	14 and larger	100 or less		
	2 and smaller (BW)	25 tons or less		
	<b>Bending</b>			
	1 1/2 and smaller (BW)	50 tons or less		



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**Pipe Specification API 5L**

<b>Spec</b>	<b>API 5L</b>	<b>NPS 1/8 -- 26</b>		
<b>Lengths</b>			<b>Minimum</b>	
		<b>Shortest</b>	<b>Shortest</b>	<b>Average</b>
		<b>Length</b>	<b>Length in 95%</b>	<b>Length</b>
	<b>Threaded &amp; Coupled Pipe</b>	<b>In Entire Shipment</b>	<b>of Entire Shipment</b>	<b>of Entire Shipment</b>
	Single Random	16' 0"	18' 0"	--
	Double Random	22' 0"	--	35' 0"
<b>Required Markings on Each Length (On Tags attached to each Bundle in case of Bundled Pipe)</b>	<b>Paint Stenciled or Die Stamped (by agreement)</b>			
	Manufacturer's name or mark. Spec 5L, size, weight per foot, grade, process of manufacture, type of steel, length (NPS 4 and larger only). Test pressure when higher than labulated (NPS 2 and larger only).			
	Heat treat symbols, as applicable -- HN, HS, HA or HQ.			
<b>General Information</b>	Supplementary Requirements available when specified.			
	SR5--Charpy impact Testing--Welded Pipe 20" & larger--Grade X52 or higher.			
	SR3 -- Color Identifications SR6 -- Drop Weight Tear testing -- Welded Pipe 20" & larger -- Grade X52 or higher.			
	SR4 -- Nondestructive Inspection of Seamless Pipe. SR8 -- Fracture Toughness Testing of Line Pipe.			