



# SMITH-EMERY LABORATORIES

An Independent Commercial Testing Laboratory

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## TESTING SECTIONS OF PIPE

Samples: No specification pipe sections sampled and submitted by client  
Test Method: ASTM A 370-17

**TABLE I - TENSILE PROPERTIES OF PIPE SECTIONS**

Pipe Size	Specimen ID	Tensile Properties		
		Elon. 2-in Gage	*Yield Stress, psi	Tensile Stress, psi
16" OD x 0.250 (A)	Specimen 1 of 2	26 %	79, 275	91, 710
	Specimen 2 of 2	25 %	79, 780	92, 615
16" OD x 0.312 (B)	Specimen 1 of 2	31 %	68, 345	80, 870
	Specimen 2 of 2	30 %	66, 320	79, 995
16" OD x 0.500 (C)	Specimen 1 of 2	30 %	78, 885	91, 075
	Specimen 2 of 2	30 %	79, 870	90, 130
20" OD x 0.500 (D)	Specimen 1 of 2	35 %	64, 415	77, 870
	Specimen 2 of 2	33 %	66, 780	78, 150
24" OD x 0.375 (E)	Specimen 1 of 2	30 %	80, 895	91, 465
	Specimen 2 of 2	30 %	76, 785	91, 070
24" OD x 0.500 (F)	Specimen 1 of 2	39 %	62, 645	73, 345
	Specimen 2 of 2	39 %	58, 940	72, 830

\* 0.2% offset Yield Stress

**TABLE II - 180° PIPE BASE METAL BEND TEST**


Size	Specimen	Result
16" OD x 0.250 (A)	Specimen 1 of 2	Pass
	Specimen 2 of 2	Pass
16" OD x 0.312 (B)	Specimen 1 of 2	Pass
	Specimen 2 of 2	Pass
16" OD x 0.500 (C)	Specimen 1 of 2	Pass
	Specimen 2 of 2	Pass
20" OD x 0.500 (D)	Specimen 1 of 2	Pass
	Specimen 2 of 2	Pass
24" OD x 0.375 (E)	Specimen 1 of 2	Pass
	Specimen 2 of 2	Pass
24" OD x 0.500 (F)	Specimen 1 of 2	Pass
	Specimen 2 of 2	Pass

cont'd

**TABLE III - CHEMICAL COMPOSITIONS OF PIPE SECTIONS, wt %**

<u>Element, wt %</u>	<u>C</u>	<u>Mn</u>	<u>Si</u>	<u>P</u>	<u>S</u>	<u>Cr</u>	<u>Ni</u>	<u>Mo</u>	<u>Nb</u>	<u>Cu</u>	<u>V</u>	<u>Al</u>
16" OD x 0.250 (A)	0.11	1.48	0.23	0.013	0.067	0.02	0.01	0.001	0.04	0.01	0.02	0.04
16" OD x 0.312 (B)	0.09	1.23	0.27	0.014	0.082	0.01	0.004	--	0.01	0.01	--	0.03
16" OD x 0.500 (C)	0.08	1.54	0.024	0.011	0.052	0.02	0.01	0.002	0.03	0.01	0.02	0.04
20" OD x 0.500 (D)	0.08	1.61	0.26	0.009	0.044	0.02	--	--	0.03	0.01	0.02	0.04
24" OD x 0.375 (E)	0.06	1.54	0.22	0.010	0.032	0.01	--	--	0.03	0.01	0.02	0.03
24" OD x 0.500 (F)	0.06	0.98	0.21	0.010	0.029	0.02	--	--	0.002	0.01	--	0.03

Prepared By: \_\_\_\_\_

  
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