

Scope

1.1 This specification² covers two grades of electric-resistance-welded steel pipe in NPS 2 to NPS 30 inclusive, with nominal sizes NPS ¾ to NPS 5 inclusive with nominal (average) wall thickness 0.083 in. (2.11mm) to 0.134 in. (3.40 mm), depending on size. Pipe having other dimensions may be furnished provided such pipe complies with all other requirements of this specification. The pipe is intended for conveying gas, vapor, water or other liquid; only Grade A is adapted for flanging and bending. The suitability of pipe for various purposes is somewhat dependent upon its dimensions, properties, and conditions of service, so that the purpose for which the pipe is intended should be stated in the order. The pipe may be furnished either momexpanded or cold expanded at the option of the manufacturer. When pipe is cold expanded, the amount of expansion shall not exceed 1.5% of the outside diameter pipe size.

TABLE 1 Tensile Requirements

	Grade A	Grade B
Tensile strength, min, ksi (MPa)	48 (331)	60 (414)
Yield strength, min, ksi (MPa)	30 (207)	35 (241)
Elongation in 2 in. (50 mm), min, %:		
Basic minimum elongation for walls 5/16 in. (7.9 mm) and over in thickness longitudinal strip tests, and for all small sizes tested in full section.	35	30
For longitudinal strip tests, the width of the gage section shall be 1 ½ in. (38.1 mm) and a deduction for each 1/32-in. (0.8-mm) decrease in wall thickness below 5/16 in. (7.9 mm) from the basic minimum elongation of the following percentage points.	1.75 ^A	1.50 ^A

^A Table 3 gives computed minimum values.

TABLE 2 Chemical Requirements

Element	Composition, max, %	
	Grade A	Grade B
Carbon	0.25	0.30
Manganese	0.95	1.20
Phosphorus	0.035	0.035
Sulfur	0.035	0.035

TABLE 3 Computed Minimum Values

Wall Thickness, in.	Elongation in 2 in. (50 mm), min, %	
	Grade A	Grade B
5/16 (0.312) (7.9 mm)	35.00	30.00
9/32 (0.281) (7.1 mm)	33.25	28.50
¼ (0.250) (6.4 mm)	31.50	27.00
7/32 (0.219) (5.6 mm)	29.75	25.50
3/16 (0.188) (4.8 mm)	28.00	24.00
5/32 (0.156) (4.0 mm)	26.25	22.50
1/8 (0.125) (3.2 mm)	24.50	21.00
3/32 (0.094) (2.4 mm)	22.75	19.50
1/16 (0.062) (1.6 mm)	21.00	18.00