

Standard Steel Pipe

ASTM A53 TYPE E GRADE B Submittal Data Sheet



Scope

Covers black and hot-dip galvanized electric resistance welded Grade B pipe. Pipe is intended for mechanical and pressure applications and is acceptable for ordinary uses in steam, water, gas and air lines. Wheatland ASTM A53 is suitable for welding, threading and grooving. Produced to the latest revision of ASTM A53/53M, Federal Specification WW-P404 and ASME B36.10M.

Manufacture

The weld seam shall be heat treated after welding to a minimum of 1400°F or be otherwise processed in such a manner that no untempered martensite remains.

Hot-dip Galvanized

The average weight of zinc coating shall be not less than 1.8 oz. per sq. ft. of surface (inside and outside). When galvanized pipe is bent or otherwise fabricated to a degree which causes zinc coating to stretch or compress beyond the limit of elasticity, some flaking of the coating may occur.

Hydrostatic and Nondestructive Electric Testing

Hydrostatic inspection test pressures for plain-end pipe are listed in Table X 2.2 of the A53/A53M specification. Test pressures shall be maintained for a minimum of five seconds. Nondestructive electric testing of the weld seam is required on each length of ERW pipe 2 NPS and larger.

Chemical Requirements

Composition, max. %

Carbon	Manganese	Phosphorus	Sulfur		
.30	1.20	.05	.045		
Copper*	Nickel*	Chromium*	Molybdenum*	Vanadium*	
.40	.40	.40	.15	.08	

*The combination of these five elements shall not exceed 1.00%.

Tensile Requirements

TENSILE STRENGTH, MIN.	YIELD STRENGTH, MIN.	ELONGATION IN 2"
60,000 psi	35,000 psi	Refer to A53 table x 4.1

Flattening Test

As a test for ductility of the weld for pipe 2½ NPS and larger, position the weld at 0° and alternately at 90° to the direction of force and flatten until the OD is ¾ of the original outside diameter. No cracks shall occur along the inside or outside surface of the weld.

Frequency of Tests

Tensile tests are required on one length of pipe from each lot of 500 lengths or fraction thereof for each size. Refer to A53 specification for frequency of flattening tests.

End Finish

Plain End: 2 NPS and larger, STD and Sch. 40 weights: ends beveled to angle of 30°, +5°, -0° with a root face of ⅛" ± ½z"

Threaded: to ANSI® Standard B 1.20.1

Couplings: to ASTM Standard A 865

Weights and Dimensions

Permissible Variations in Wall Thickness

Minimum wall thickness at any point shall not be more than 12.5% under nominal wall thickness specified.

NPS	OD	NOMINAL WALL	WEIGHT
	in.	in.	lbs./ft.
8	8.625	0.322	28.58
10	10.750	0.365	40.52
12	12.750	0.375	49.61
14	14.000	0.375	54.62
16	16.000	0.375	62.64
18	18.000	0.375	70.65

Permissible Variations in Outside Diameter

Pipe 2 NPS and larger shall not vary more than ± 1% from the standard specified.

Permissible Variations in Weight per Foot

Pipe shall not vary more than ± 10% from the standard specified.

Product Marking

Each length of pipe is stenciled to show the manufacturer, the specification (ASTM A53), the grade of pipe (Grade B), the kind of pipe (ERW for Electric Resistance Welded), the size, the schedule or wall, and the length.

SUBMITTAL INFORMATION

PROJECT:

ENGINEER:

LOCATIONS:

CONTRACTOR:

SPECIFICATION REFERENCE:

COMMENTS:



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