

# ASTM A53 Type E Grade B Pipe



**Scope**

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

**Manufacturer**

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

**Seismic Design Aids**

We are the only fire sprinkler pipe manufacturer that provides seismic data to use in the design of your structure. And our pipe meets or exceeds the NFPA's seismic requirements. To download the design tables please visit our website.

**Hot-Dipped 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/A 53M 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 NPS 2 and larger.

**Chemical Requirements**

Composition, max. %

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

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

**Tensile Requirements**

Tensile Strength, min. 60 000 psi  
 Yield Strength, min. 35 000 psi  
 Elongation in 2" Refer to A53 Table x 4.1

**End Finish**

**Plain End:** NPS 2 and larger, STD and XS weights: ends beveled to angle of 300, +50, -00 with a root face of 1/16" + 1/32"

**Threaded:** To ANSI Standard B 1.20.1

**Couplings:** To ASTM Standard A 865

**Technical Data Chart**

PRODUCT NPS	NOMINAL I.D.	WT/FT LBS	WT/F H <sub>2</sub> O FILLED	PCS per 1 Ton Lift 21'	PCS per 1 Ton Lift 25'
1"	1.049	1.681	2.055	65	55
1 1/4"	1.380	2.275	2.922	48	40
1 1/2"	1.610	2.720	3.602	39	35
2"	2.067	3.656	5.109	28	25
2 1/2"	2.469	5.798	7.871	18	n/a
3"	3.068	7.583	10.783	14	n/a
4"	4.026	10.80	16.311	10	n/a
5"	5.047	14.631	23.262	7	n/a
6"	6.065	18.992	31.498	5	n/a

**Product Marketing**

Each length of pipe is continuously stenciled to show the manufacturer, the grade of pipe (ASTM A 53), the kind of pipe E for Electric Resistance Welded, B for Grade B, the size, XS for extra strong, and length. Stencil markings indicate UL Listing and FM Approval for sizes 1" through 6" nominal for use in Fire Sprinkler Pipe Applications. Bar coding is acceptable as a supplementary identification method.

Project: \_\_\_\_\_ Contractor: \_\_\_\_\_ Date: \_\_\_\_\_

Engineer: \_\_\_\_\_ Specification Reference: \_\_\_\_\_ System Type: \_\_\_\_\_

Locations: \_\_\_\_\_ Comments: \_\_\_\_\_



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