



Standard Steel Pipe ASTM A53 TYPE E GRADE A & B PIPE

Submittal Data Sheet

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, gas and air lines. SMINC's ASTM A53 is UL Listed and FM Approved, sizes 1" through 6" nominal, for use in Fire Sprinkler Pipe Applications. Pipe is suitable for welding, threading and grooving. Produced to the latest revision of ASTM A53 / 53M.

Manufacture

For Grade B pipes 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-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 / 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 NPS 2 and larger.

Chemical Requirements

Composition

Max. % Carbon	Manganese	Phosphorus
0.3	1.2	0.05
Sulfur	Copper	Nickel
0.045	0.4	0.4
Chromium	Molybdenum	Vanadium
0.4	0.15	0.08

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

Tensile Requirements (MIN)

TENSILE STRENGTH	YIELD STRENGTH	ELONGATION IN 2"
60000 psi	35,000 psi	Refer to A53 table x 4.1

Bending Test (Cold)

NPS DEGREE OF BEND DIAMETER OF MANDREL 2 and under 90° 12x pipe OD.

Flattening Test

As a test for ductility of the weld for pipe 2 1/2" NPS and larger, position the weld at 0° and alternately at 90° to the direction of force and flatten until the OD is 2/3 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: NPS 2 and larger, STD and XS weights: ends beveled to angle of 30°, +5°, -0° with a root face of 1/16" ± 1/32" Threaded: To ANSI Standard B 1.20.1 Couplings: To ASTM Standard A 865.

Weights and Dimensions Charts

Available upon request.

Permissible Variations in Wall Thickness

Minimum wall thickness at any point shall not be more than 12.5% under nominal wall thickness specified. Permissible Variations in Outside Diameter

Pipe NPS 2 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 continuously stenciled to show the manufacturer, the grade of pipe (ASTM A53), the kind of pipe E for Electric Resistance Welded, B for Grade B, the size, SCH80/XS for extra strong, and length.

Sunbelt Marketing, Inc. – N10-319M