



SUBMITTAL DATA SHEET ASTM A53 TYPE E Grade B.



Scope

Black electric resistance welded Grade B pipe which is intended for mechanical and pressure applications. It is acceptable for ordinary uses in steam, water, gas and air lines. Pipe is suitable for welding, bending, threading and grooving. Produced to the latest revision of ASTM A53/A53M.

Manufacture

The electric resistance welded Grade B pipe is finished through hot stretch reduction process so that no untempered martensite remains.

Hydrostatic and Non-destructive Electric Testing

Hydrostatic inspection is conducted for plain-end pipe.

- Test pressure as per Table X 2.2 of the A53/A53M specification.
- Minimum hold time of 5 seconds.

Nondestructive testing of the weld seam is performed on all sizes.

Chemical Composition Requirements, % Max

C ^①	Mn	S	P	Si	Mo ^②	Cr ^②	V ^②	Ni ^②	Cu ^②
0.30	1.20	0.045	0.05	0.10 Min	0.15	0.40	0.08	0.40	0.40

①For each reduction of 0.01% below the specified carbon, an increase of 0.06% manganese above the specified maximum will be permitted up to a maximum of 1.65%

②The combination of these five elements shall not exceed 1.00% maximum

Tensile Requirements

Yield Strength	Tensile Strength	Elongation in 2"
Min 35,000 psi (Table x 4.1 of the latest revision of A53/A53M specification)	Min 60,000 psi	Min 30%

Bend Test (Cold)

	Degree of Bend	Diameter of Mandrel
Standard	90°	12 x pipe O.D.
Close Coiling	180°	8 x pipe O.D.

Flattening Test

Weld located 0°/90° degree from line of direction of force.

- For weld ductility, flatten until OD is $\frac{2}{3}$ of the original outside diameter.
- For ductility of steel, flatten until OD is $\frac{1}{3}$ of the original outside diameter.

No cracks shall occur along the inside or outside surface of the weld. As per section 7.3 of the A53/A53M specification.

Frequency of Tests

Tensile tests are required on one length of pipe from each lot of 400 lengths or a fraction thereof for each size.

Dimensions and Weights

The dimensions and weights furnished are in accordance with this specification and the standardized dimensions and weights specified in ASME ANSI B 36.10.



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Permissible Variations in Outside Diameter

± 1/64"

Lengths and Shipping Tolerance

Lengths: 19' 20' 21'

Shipping Tolerance: +/- 10%

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 Weight per Foot

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

End Finish

¾ "–1 ½ "OD: Plain End (Machined Square Cut and De-burred)

¾ "–1 ½ "OD: Plain Beveled End (30°, +5°, -0° with a root face of 1/16 "± 1/32"

Workmanship

As per section 12 of the A53/A53M specification.

Coating

Each piece of pipe is individually coated with UV cured polymer in a vacuum chamber.

Product Marking

Each length of pipe is continuously stenciled to show the manufacturer, specification (ASTM A53), the kind of pipe (E for electric resistance welded), B for Grade B, size (O.D. & wall), length, hydrotest, heat number and lot number.

Nominal IPS Size Schedule 40	OD (in.)	Wall (in.)	Wt/Ft (lbs.)	Ft/ton	Hex Bundle
¾"	1.050	0.113	1.131	1768	91
1"	1.315	0.133	1.679	1191	91
1 ¼"	1.660	0.140	2.273	880	61
1 ½"	1.900	0.145	2.718	736	61
Schedule 80					
¾"	1.050	0.154	1.474	1357	91
1"	1.315	0.179	2.172	921	91
1 ¼"	1.660	0.191	2.997	667	61
1 ½"	1.900	0.200	3.631	551	61

Schedule 160 and XXH upon request.

All information contained herein is accurate as known at the time of publication. We reserve the right to change product specifications without notice and without incurring obligations.