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SCT-1139

SUBMITTAL DATA

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ASTM A53 TYPE E GRADE B CARBON STEEL PIPE

SCOPE:

Covers black and hot-dipped galvanized electric-resistance-welded Grade B carbon steel pipe. Pipe intended for mechanical and pressure applications and is acceptable for ordinary uses in steam, water, gas and air lines.

SSV ASTM A53 Gr.B is UL enhance mark, sizes 2" through 8" nominal for SCH80 for Fuel Gas Piping field.

Pipe is suitable for welding, threading, grooving and bending. Pipe is not intended for flanging. Produced to latest revisions of ASTM A53/A 53M, Federal Specification WW-P404 and ASME B36.10M.

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 TESTING

Hydrostatic test pressures for plain-end pipe are indicated below.

NPS	Light Weight- PSI	Standard Weight - PSI	Extra Strong Weight - PSI
1/2"	-	700	850
3/4"	-	700	850
1"	-	700	850
1-1/4"	-	1300	1900
1-1/2"	-	1300	1900
2"	-	2500	2500
2-1/2"	-	2500	2500
3"	-	2500	2500
3-1/2"	-	2370	2800
4"	-	1210	2800
5"	-	1950	2800
6"	-	1780	2740
8"	-	1570	2430

END FINISH

Plain End:

NPS 1-1/2 and smaller: unless otherwise specified on order, end finish shall be at the option of the manufacturer.

NPS 2 and larger: STD and SCH.80 weights: ends beveled to angle of 30⁰,+5⁰, -0⁰ with a root face of 1/16”±1/32” (1.6mm ±0.8mm).

Threaded: To ANSI Standard B 1.20.1

Couplings: To ASTM Standard A 865.

CHEMICAL REQUIREMENTS

Composition, max. %

Carbon	Manganese	Phosphorus	Sulfur	*Copper	*Nickel	*Chromium	*Molybdenum	*Vanadium
.30	1.20	.05	.045	.40	.40	.40	.15	.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 A 53 Table x 4.1, latest revision – ASTM A53/A53M

BENDING TEST (COLD) FOR NPS 2 and UNDER:

Degree of Bend Diameter of mandrel

Standard 90⁰ 12 x outside pipe diameter

Close coiling 90⁰ 12 x outside pipe diameter

FLATTENING TEST – NPS 2-1/2 and GREATER

As a test for quality of the weld, position the weld at 90⁰ from 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.

DIMENSION and WEIGHTS

BLACK PLAIN END											
NPS	OD		Sch. 10			Sch. 40			Sch. 80		
	Inch	mm	Wall		Weight Lb./Ft	Wall		Weight Lb./Ft	Wall		Weight Lb./Ft
			Inch	mm		Inch	mm		Inch	mm	
½”	.840	21.3				.109	2.77	.85	.147	3.73	1.09
¾”	1.050	26.7				.113	2.87	1.13	.154	3.91	1.48
1”	1.315	33.4				.133	3.38	1.68	.179	4.55	2.17
1-1/4”	1.660	42.2				.140	3.56	2.27	.191	4.85	3.00
1-1/2”	1.900	48.3				.145	3.68	2.72	.200	5.08	3.63
2”	2.375	60.3				.154	3.91	3.66	.218	5.54	5.03
2-1/2”	2.875	73.0	-	-	-	.203	5.16	5.80	.276	7.01	7.67
3”	3.500	88.9				.216	5.49	7.58	.300	7.62	10.26
3-1/2”	4.000	101.6				.226	5.74	9.12	.318	8.08	12.52
4”	4.500	114.3				.237	6.02	10.80	.337	8.56	15.00
5”	5.563	141.3				.258	6.55	14.63	.375	9.52	20.80
6”	6.625	168.3				.280	7.11	18.99	.432	10.97	28.60
8”	8.625	219.1				.322	8.18	28.58	.500	12.70	43.43

(*) Not Schedule 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 OUTSIDE DIAMETER

NPS 1-1/2 and under ±0.16” (±0.4mm)

NPS 2 and over ±1%

PERMISSIBLE VARIATIONS IN WEIGHT PER FOOT

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

PRODUCT MARKING

Each length of pipe ½ NPS and larger is continuously stenciled to show the manufacturer, the grade of pipe (ASTM A53 Gr.B), the kind of pipe (ERW for electric-resistance-welded) the size (Sch. 80 for extra strong), and length.

UL enhance mark is printed on a plastic tag and attached on pipe bundles.

SUBMITTAL INFORMATION		
PROJECT:	CONTRACTOR:	DATE:
ENGINEER:	SPECIFICATION REFERENCE:	SYSTEM TYPE:
LOCATIONS:	COMMENTS:	
<input type="checkbox"/> BLACK <input type="checkbox"/> HOT-DIP GALVANIZED		

All information contained herein is accurate as known the time of publication. SSV reserves the right to change product specifications without incurring obligations.