Wheatland Tube
JMC STEEL GROUP

SUBMITTAL DATA
Rev. 11/01/10

ASTM A53 TYPE F GRADE A PIPE

SCOPE

Covers black and hot-dipped galvanized furnace-butt welded (continuous welded) Grade A 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 UL Listed and FM Approved, sizes 1" through 6" nominal, for use in Fire Sprinkler Pipe Applications. Pipe is suitable for welding, threading, grooving and bending. Pipe is not intended for flanging. Produced to ASTM A53/A53M latest revision.

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 TESTING

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

NPS	Standard Weight - PSI	Extra Strong Weight - PSI
1/2 through 1	1500	1500
1-1/4 - 1-1/2	2000	2000
2 through 3	2500	2500
3 ½ - 4	2800	2800

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 30^0, $+5^0$, -0^0 with a root face of 1/16" +/- 1/32".

Threaded: To ANSI Standard B 1.20.1

Couplings: To ASTM Standard A865.

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.	48 000 psi
Yield Strength, min.	30 000 psi.
Elongation in 2"	Refer to A53 Table x 4.1, latest revision – ASTM A53/A53M

BENDING TEST (COLD) FOR NPS 2 and UNDER:

	Degree of Bend	Diameter of Mandrel
Standard	90^0	12 x outside pipe diameter
Close Coiling	90^0	8 x outside pipe diameter

FLATTENING TEST - NPS 2-1/2 and Greater

As a test for quality of the weld, position the weld at 90^0 from the direction of force and flatten until the OD is 3/4 of the original outside diameter. No cracks shall occur along the inside or outside surface of the weld.

DIMENSIONS and WEIGHTS

BLACK PLAIN END

Nominal Size	OD Inches	Sch. 40		Sch. 80	
		Wall Inches	Weight Lb./Ft.	Wall Inches	Weight Lb./Ft.
1/2"	.840	.109	.85	.147	1.09
3/4"	1.050	.113	1.13	.154	1.48
1"	1.315	.133	1.68	.179	2.17
1-1/4"	1.660	.140	2.27	.191	3.00
1-1/2"	1.900	.145	2.72	.200	3.63
2"	2.375	.154	3.66	.218	5.03
2-1/2"	2.875	.203	5.80	.276	7.67
3"	3.500	.216	7.58	.300	10.26
3-1/2"	4.000	.226	9.12	.318	12.52
4"	4.500	.237	10.80	.337	15.00

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	+/- .016"
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 1/2 NPS and larger is continuously stenciled to show the manufacturer, the grade of pipe (ASTM A53), the kind of pipe (F for Continuous Weld, A for Grade A,) the size (Sch 80 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.

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