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SPRINKLER PIPING SOLUTION





Workson Constraints
Workson

UTP and THL have UL and FM & full CE/PED certification and a track record of engineering excellence ensuring that all **MOGOUS**[®] products will be manufactured to a superior standard.





Robust, Reliable, and Compliant Solutions that enhance the Fire Safety measures of the buildings.

Sizes Roll-Grooved Upto 12" Sch.20

Threading Upto 6"

OUR EXTENDED BRAND FOR FIRE SPRINKLER PIPES

Our sprinkler pipes, available in Spec and grades ASTM A53, ASTM A135, and ASTM A795 Grade A & B, are UL & FM approved for use in sprinkler systems.

ASTM A795 Standard Specification for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Fire Protection Use.

ASTM A53, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.

ASTM A135, Standard Specification for Electric-Resistance-Welded Steel Pipe.

With precise engineering and advanced manufacturing processes, we ensure the pipes meet the necessary industry specifications, ensuring optimal performance and durability. **MOGOUS**[®] brand is synonymous with quality, reliability, and adherence to strict safety regulations.

MOOS[®] is committed to being a trusted partner for construction companies, contractors, and engineers who prioritize the safety and protection of their projects.

MOOUS[®] Ensuring Unmatched Credibility and Reliability in Fire Safety With a strong track record of successful installations and satisfied clients, **MOOUS**[®] is your go-to partner for dependable fire protection solutions that you can trust to keep your environment safe.

BENEFITS

Unmatched Durability and Strength

Exceptional durability, strength, and the ability to withstand high pressures, heat and velocity, making them highly suitable for fire-resistant applications.

Superior Corrosion Resistance

Being corrosion resistant, it can withstand prolonged exposure to water and gas without compromising its structural integrity, suitable for temperature upto +200°C.

Seamless Integration and Compliance

We ensure a seamless integration and flawless functionality across different technologies and architectural designs are guaranteed, all while maintaining full compliance with standards.

We follow best practices and stringent standards to keep the pipe surface smooth and uniform.

Galvanized using LME registered special high grade i Zn at 99.995% purity, ensuring a rust-free, long-lasting finish that is free from bare spots, black spots, rough patches, overcoating, peeling, or any other surface defects.

Improved Durability and Longevity

The zinc coating adds an extra layer of durability to the steel pipes, enabling them to withstand harsh environmental conditions and providing a longer service life compared to uncoated steel.

Cost-Effective Maintenance

Our zinc-coated pipes are designed for durability, providing an extended lifespan that translates into reduced maintenance costs over time.

Fire Resistance Enhancement

The Zn Coating offer additional fire resistance, as it help prevent the pipe's surface from weakening under high temperatures, maintaining its structural integrity during a fire.

Sustainable and Recyclable

Zinc-coated steel pipes are environmentally friendly as they are fully recyclable. The coating process itself can be done with minimal environmental impact, contributing to sustainability goals.

SURFACE CONDITION PRECISION IN EVERY DETAIL

At **moonus**[®], we believe that excellence is found in the details. Our processes ensures that every piece of galvanized steel meets the highest standards of quality and durability. Here's how we make sure your projects stand the test of time:

Thorough Inspection

We perform online NDT (eddy current testing), UT (100% of weld) and visual inspection focusing on surface conditions and welds. Our inspections are conducted with the naked eye at the galvanizing facility, ensuring accuracy before shipment.

Smooth, Uniform, and Continuous Coatings

We adhere to stringent specifications that demand a smooth, uniform, and continuous coating on every part.

Galvanized coating as per standard or customer requirement.

Surface defects are evaluated for their impact on long-term corrosion resistance (depending on the environment) and overall functionality.

Rigorous Post-Inspection Process

Our process ensures that additional galvanizing does not damage the steel, maintaining the mechanical properties of every part.



END FINISHED

Roll Grooved Threaded Swaged Plain (Square-cut or Beveled)





Finish: Hot-dipped Galvanized, Water based Red and Black Painted



APPLICATIONS

Residential Buidings Pre-Engineered Buildings Industrial & Commercial Buildings (Oil & Gas, Construction & other sectors)



TECHNICAL DATA SHEET

ASTM A53 GR-A SCHEDULE- 40

TE	CH	NI	CA	L

						10/	A1.1	Mainha	of Tubo	DDECCUDE	Maisht	of Tubo			
S	IZE	OD (Mir	nimum)	OD (Ma	aximum)		ALL KNESS		of Tube. n End)	PRESSURE GR-A		of Tube. SS)	Pieces Per Bundle		SIZE
INCH	NB(mm)	INCH	MM	INCH	MM	INCH	ММ	ib./Ft.	kg./Mtr.	PSI	ib./Ft.	kg./Mtr.		INCH	NB(mm)
1/2"	15	0.822	20.90	0.854	21.70	0.109	2.77	0.850	1.27	700	0.860	1.27	120	1/2"	15
3/4"	20	1.035	26.30	1.070	27.10	0.113	2.87	1.130	1.69	700	1.140	1.69	84	3/4"	20
1"	25	1.300	33.00	1.330	33.80	0.133	3.38	1.680	2.50	700	1.690	2.50	60	1"	25
1 1/4"	32	1.645	41.80	1.680	42.60	0.140	3.56	2.270	3.39	1200	2.280	3.40	42	1 1/4"	32
1 1/2"	40	1.885	47.90	1.920	48.70	0.145	3.68	2.720	4.05	1200	2.740	4.04	36	1 1/2"	40
2"	50	2.350	59.70	2.400	60.90	0.154	3.91	3.660	5.44	2300	3.680	5.46	26	2"	50
2 1/2"	65	2.850	72.30	2.900	73.70	0.203	5.16	5.800	8.63	2500	5.850	8.67	18	2 1/2"	65
3"	80	3.460	88.00	3.530	89.80	0.216	5.49	7.580	11.29	2220	7.680	11.35	14	3"	80
3 1/2"	90	3.960	100.60	4.040	102.60	0.226	5.74	9.120	13.57	2030	9.270	13.71	12	3 1/2"	90
4"	100	4.450	113.20	4.540	115.40	0.237	6.02	10.800	16.07	1900	10.920	16.23	10	4"	100
5"	125	5.507	139.90	5.620	142.70	0.258	6.55	14.630	21.77	1670	14.900	22.07	7	5"	125
6"	150	6.560	166.60	6.690	169.98	0.280	7.11	18.990	28.26	1520	19.340	28.58	7	6"	150
8"	200	8.562	217.50	8.70	221.00	0.322	8.18	28.58	42.55	1340			4	8"	200
10"	250	10.669	271.00	10.826	275.00	0.365	9.27	40.52	60.29	1220		-	4	10"	250
12"	300	12.637	321.00	12.854	326.50	0.406	10.31	53.57	79.70	1150			2	12"	300
CATEGORY/TYPE	OF PRODUCTS :	M.S. Pipe, Black pai	inted (Enamel and	Water based), Ga	lvanized, Roll Groo	oved & Threaded	pipes.							CATEGORY/TYP	E OF PRODUCTS : M
TOLERANCES		a) On Thickness	: The minimur	m wall thickness at	any point shall be n	ot more than 12.5	% under the sp	ecified wall thick	ness.					TOLERANCES	: a)
		b) On Diameter	: For NPS 11/2	" & under any poin	t shall not vary mor	re than ± 0.4 mm.	For NPS 2" & ab	ove shall not var	y more than ± 19	6 from the standard	d specified				b)
		c) Weight	: The weight o	f the pipe shall not	more than ±10 % o	of the specified we	ight.								c)
ENDS		a) 1 1/2" and below s	size - End finish sha	all be at the option	of manufacturer wi	hich is nominally s	quare cut with t	he axis of tube a	nd free from exc	essive burrs.				ENDS	: a)
		b) 2' and over size - E	Beveled with ends b	peveled to an angle	of 30, + 5 / -0 degre	ee measured from	a line perpendi	cular to the axis	of the pipe with	a root face of 1.6 m	m ± 0.8 mm.				b)
INTERNAL DEBEA		2" and above - Interr												INTERNAL DEB	EADING : 2"
		C - 0.25%, Mn - 0.95%			li - 0 40% Cr - 0 40%	6 Mo - 0 15% & V -	0.08% (Cu+Ni+0	r+Mo+V=1 0% n	nax)					HEAT TREATME	NTS : W
MECHANICAL (M		Yield Strength-205 N							ion try					CHEMICAL COM	MPOSITION (% Max) : C
HRC USED		EN 10025, S2752JR S			1011641011-24-3070									MECHANICAL (Minimum) : Yi
BEND TEST					e and abconved No	Crack at any part	ion in the world							HRC USED	: S2
		Bend test applicable		-										BEND TEST	: Be
FLATTENING TES		Applicable to tubes a		r 50 mm & weld loc	cated 0°790° from III	ne of direction of f	orce and observ	red weld ductility	/.					FLATTENING TE	ST : Ap
LEAKTIGHTNESS		a) On line NDT(Eddy			11111									LEAKTIGHTNES	S TEST : a)
		b) Hydro testing at p				nd.									b)
ZINC COATING	:	Average 550 Gm/m2	but one side shou	ld not be less than 4	490 Gm/m2.									ZINC COATING	: Av
		Free from bare Spot,	, Black spot,rough,c	overcoating, Peel of	f or anyother surfac	ce defect.									Fr
THREADING	:	For 1/2" & 3/4" - 14 T	TPI, 1" to 2" - 11.5 T	Pl and 2 1/2" to 6" -	8TPI and Check wit	h standard ASTM	ring and plug g	auges.						THREADING	: Fc
MARKING		: We can do on line stenciling as per this standard & customer required.							MARKING	: W					
RELEVANT CERTI	FICATION	N : UL Sprinker, ANSI/NSF 61, ANSI/NSF 372, FM Approval							RELEVANT CER	TIFICATION : UI					
APPLICATION /U		Fire Fighting, Sprinkl			Ilture, Fencing tube	s, Lighting poles, S	Submersible/Dee	ep wall water & T	ubular poles.					APPLICATION /	
SPECIAL SIZES		Roll Grooved: 25NB						242						SPECIAL SIZES	: Ro
MILL TEST CERTII									MILL TEST CERTIFICATE :						

DATA SHEET

ASTM A53 GR-B SCHEDULE- 40

OD (Mi	nimum)	OD (Ma	aximum)	WALL Weight of Tube. THICKNESS (Plain End)			PRESSURE GR-B	Weight of Tube. (SS)		Pieces Pei Bundle	
INCH	ММ	INCH	MM	INCH	ММ	ib./Ft.	kg./Mtr.	PSI	ib./Ft.	kg./Mtr.	
0.822	20.90	0.854	21.70	0.109	2.77	0.850	1.27	700	0.860	1.27	120
1.035	26.30	1.070	27.10	0.113	2.87	1.130	1.69	700	1.140	1.69	84
1.300	33.00	1.330	33.80	0.133	3.38	1.680	2.50	700	1.690	2.50	60
1.645	41.80	1.680	42.60	0.140	3.56	2.270	3.39	1300	2.280	3.40	42
1.885	47.90	1.920	48.70	0.145	3.68	2.720	4.05	1300	2.740	4.04	36
2.350	59.70	2.400	60.90	0.154	3.91	3.660	5.44	2500	3.680	5.46	26
2.850	72.30	2.900	73.70	0.203	5.16	5.800	8.63	2500	5.850	8.67	18
3.460	88.00	3.530	89.80	0.216	5.49	7.580	11.29	2500	7.680	11.35	14
3.960	100.60	4.040	102.60	0.226	5.74	9.120	13.57	2370	9.270	13.71	12
4.450	113.20	4.540	115.40	0.237	6.02	10.800	16.07	2210	10.920	16.23	10
5.507	139.90	5.620	142.70	0.258	6.55	14.630	21.77	1950	14.900	22.07	7
6.560	166.60	6.690	169.98	0.280	7.11	18.990	28.26	1780	19.340	28.58	7
8.562	217.50	8.70	221.00	0.322	8.18	28.58	42.55	1570			4
10.669	271.00	10.826	275.00	0.365	9.27	40.52	60.29	1430			4
12.637	321.00	12.854	326.50	0.406	10.31	53.57	79.70	1340			2

DDUCTS : M.S. Pipe, Black painted (Enamel and Water based), Galvanized, Roll Grooved & Threaded pipes.

: a) On Thickness

: The minimum wall thickness at any point shall be not more than 12.5% under the specified wall thickness.

b) On Diameter

: For NPS 11/2" and under, any point shall not vary more than +0.4mm, - 0.8mm. For NPS 2" and above shall not vary more than ±1% from the standard specified. c) Weight : The weight of the pipe shall not more than ±5 % of the specified weight.

: a) 1 1/2" and below size - End finish shall be at the option of manufacturer which is nominally square cut with the axis of tube and free from excessive burrs.

b) 2' and over size - Beveled with ends beveled to an angle of 30, + 5 / -0 degree measured from a line perpendicular to the axis of the pipe with a root face of 1.6 mm ± 0.8 mm.

: 2" and above - Internal beads to be removed completely.

: Weld Seam of the ERW Pipe in Grade B shall be heat treated after welding to a minimum temperature of 540° C, so that no untempered martensite remains

N (% Max): C - 0.30%, Mn - 1.20%, S - 0.045%, P - 0.050%, Cu - 0.40%, Ni - 0.40%, Cr - 0.40%, Mo - 0.15% & V - 0.08% (Cu+Ni+Cr+Mo+V=1.0% max.)

: Yield Strength-240 N/mm2, Tensile Strength-415 N/mm2, Elongation-19-30%

: S275JR/ST-44-2 (Grade:B/Relevant coil used)

: Bend test applicable up to and including below size: 50 mm and observed No Crack at any portion in the weld.

: Applicable to tubes greater than sizes of 50 mm & weld located 0°/90° from line of direction of force and observed weld ductility.

: a) On line NDT(Eddy Current)

b) Hydro testing at pressure as per above Table and holding time Min. 5 second.

: Average 550 Gm/m2 but one side should not be less than 490 Gm/m2.

Free from bare Spot, Black spot, rough, overcoating, Peel off or any other surface defect.

: For 1/2" & 3/4" - 14 TPI, 1" to 2" - 11.5 TPI and 2 1/2" to 6" - 8TPI and Check with standard ASTM ring and plug gauges.

: We can do on line stenciling as per this standard & customer required.

: UL Sprinker, ANSI/NSF 61, ANSI/NSF 372, FM Approval

: Fire Fighting, Sprinkler Systems, Child water system, Agriculture, Fencing tubes, Lighting poles, Submersible/Deep wall water & Tubular poles.

: Roll Grooved: 25NB to 300NB & Threading: 15NB to 150NB

: We can issue a MTC as per EN 10204 Type:3.1

TECHNICAL DATA SHEET

ASTM A53 GR-A & GR-B SCHEDULE- 80

2	SIZE		TSIDER METER	WA THICK				PRESSURE GR-A	PRESSURE GR-B	Weight of Tube. (SS)		Pieces Per Bundle
INCH	NB(mm)	INCH	ММ	INCH	ММ	ib./Ft.	Ft. kg./Mtr. PSI		PSI	ib./Ft.	t. kg./Mtr.	
1/2"	15	0.840	21.3	0.147	3.73	1.09	1.62	850	850	1.09	1.62	120
3/4"	20	1.050	26.7	0.154	3.91	1.48	2.20	850	850	1.48	2.21	84
1"	25	1.315	33.4	0.179	4.55	2.17	3.24	850	850	2.19	3.25	60
1 1/4"	32	1.660	42.2	0.191	4.85	3.00	4.47	1800	1900	3.03	4.49	42
1 1/2"	40	1.900	48.3	0.200	5.08	3.63	5.41	1800	1900	3.65	5.39	36
2"	50	2.375	60.3	0.218	5.54	5.03	7.48	2500	2500	5.08	7.55	26
2 1/2"	65	2.875	73.0	0.276	7.01	7.67	11.41	2500	2500	7.75	11.52	18
3"	80	3.500	88.9	0.300	7.62	10.26	15.27	2500	2500	10.35	15.39	14
				Tŀ	IL TUBE 8	PIPE INDU	ISTRIES L	LC				
3"	80	3.500 88	3.9 0.300	7.62	-	10.26	15.27	2500	2500	10.35	15.39	14
4"	100	4.500 11	4.3 0.337	8.56	-	15.00	22.32	2700	2800	15.20	22.60	10
5"	125	5.563 14	1.3 0.375	9.52	-	20.80	30.94	2430	2800	21.04	31.42	7
6"	150	6.625 16	8.3 0.432	10.97	-	28.60	42.56	2350	2740	28.88	43.05	7
8"	200	8.625 21	9.1 0.500	12.70	-	43.43	64.64	2100	2430	44.00	65.41	4
ATEGORY/TYPE DLERANCES NDS	E OF PRODUCTS	 : a) On Thickness b) On Diameter c) Weight : a) 1 1/2" and below 	: For NPS 11/2" : The weight of v size - End finish shal	wall thickness at a & under any point the pipe shall not l be at the option o	any point shall be i shall not vary mo more than ±10 % o of manufacturer w	not more than 12.5% ore than ± 0.4 mm. For of the specified weigh which is nominally squa	under the specifie ⁻ NPS 2" & above s t. are cut with the ay	ed wall thickness. shall not vary more tha xis of tube and free fro to the axis of the pipe	m excessive burrs.			
TERNAL DEBE	ADING		ernal beads to be rem									
	NTS				d after welding to	a minimum tempera	ture of 540° C, so	that no untempered m	nartensite remains			
IEMICAL COMF	POSITION (% Max		-0.95%, S-0.045%, P-0. -1.20%, S-0.045%, P-0.									
ECHANICAL (M	linimum)	0	h-205 N/mm2, Tensile h-240 N/mm2, Tensile	0	. 0							
RC USED		: For Gr.A : S235JR/	ST.37-2 & For Gr.B: S2	75JR/ST-44-2 and F	Relevant Grade co	il used						
ND TEST		: Bend test applicab	le up to and including	below size: 50 mn	n and observed No	o Crack at any portion	in the weld.					
ATTENING TES		: Applicable to tube : a) On line NDT(Edd	s greater than sizes of dy Current)	50 mm & weld loca	ated 0°/90° from li	ine of direction of ford	ce and observed w	veld ductility.				
				Table and balance	A Start A Start F							

: Fire Fighting, Child water system, Agriculture, Fencing tubes, Lighting poles, Submersible/Deep wall water, Tubular poles, Gas & Water tubes, Mechanical & General Engineering

SIZE NB(mm) INCH 20 3/4" 1" 25 32 1 1/4" 1 1/2" 40

2" 2 1/2"

3"

3 1/2"

5"

50

65 80

90

125

4" 100

6" 150

6"	150
CATEGORY/TYPE TOLERANCES	OF PRODUCTS :
ENDS	
INTERNAL DEBE HEAT TREATMEN CHEMICAL COMI	
MECHANICAL (M	linimum) :
HRC USED	:
BEND TEST	:
FLATTENING TES	т:
LEAKTIGHTNESS	TEST :
ZINC COATING	:
THREADING	:

	C
RELEVANT CERTIFICATION	: U
APPLICATION /USED	: F
SPECIAL SIZES	: R
MILL TEST CERTIFICATE	: V

: Threading: 15NB to 80NB MILL TEST CERTIFICATE : We can issue a MTC as per EN 10204 Type:3.1

ZINC COATING

THREADING

MARKING

RELEVANT CERTIFICATION

APPLICATION /USED

SPECIAL SIZES

b) Hydro testing at pressure as per above Table and holding time Min. 5 second.

Free from bare Spot, Black spot, rough, overcoating, Peel off or anyother surface defect.

: For 1/2" & 3/4" - 14 TPI, 1" to 2" - 11.5 TPI and 2 1/2" to 6" - 8TPI and Check with standard ASTM ring and plug gauges.

: Average 550 Gm/m2 but one side should not be less than 490 Gm/m2.

: We can do on line stenciling as per this standard & customer required.

: UL Water Quality Logo, ANSI/NSF 61, ANSI/NSF 372

TECHNICAL DATA SHEET

ASTM A135 GR-A & Gr-B SCHEDULE- 10

OD (Mir	nimum)	OD (Maximum)		n) WALL THICKNESS			Weight of Tube. (Plain End)		PRESSURE GR-B	Pieces Per Bundle
INCH	ММ	INCH	ММ	INCH	ММ	ib./Ft.	kg./Mtr.	PSI	PSI	
1.040	26.43	1.061	26.97	0.083	2.11	0.860	1.28	2500	2500	120
1.300	33.07	1.33	33.73	0.109	2.77	1.410	2.09	2500	2500	84
1.645	41.78	1.68	42.62	0.109	2.77	1.810	2.69	2400	2500	61
1.883	47.82	1.92	48.70	0.109	2.77	2.090	3.11	2100	2400	42
2.350	59.70	2.40	60.90	0.109	2.77	2.640	3.93	1700	1900	37
2.850	72.30	2.90	73.70	0.120	3.05	3.530	5.26	1500	1700	29
3.460	88.00	3.53	89.80	0.120	3.05	4.340	6.46	1200	1400	19
3.960	100.60	4.04	102.60	0.120	3.05	4.980	7.41	1000	1200	19
4.450	113.20	4.54	115.40	0.120	3.05	5.620	8.37	900	1100	14
5.507	139.90	5.62	142.70	0.134	3.40	7.780	11.58	850	1000	7
6.560	166.60	6.69	169.98	0.134	3.40	9.300	13.83	728	848	7

M.S. Pipe, Black painted (Enamel and Water based), Galvanized, Roll Grooved & Threaded pipes.

- a) On Thickness : The minimum wall thickness at any point shall be not more than 12.5% under the specified wall thickness.
- b) On Diameter : The outside diameter shall not vary more than ±1% from the nominal size specified

c) Weight : The weight of the pipe shall not more than ±10 % of the specified weight.

a) 1 1/2" and below size - End finish shall be at the option of manufacturer which is nominally square cut with the axis of tube and free from excessive burrs.

b) 2' and over size - Beveled with ends beveled to an angle of 30, + 5 / -0 degree measured from a line perpendicular to the axis of the pipe with a root face of 1.6 mm ± 0.8 mm.

2" and above - Internal beads to be removed completely

Weld Seam of the ERW Pipe in Grade B shall be heat treated after welding to a minimum temperature of 540° C, so that no untempered martensite remains

GR.A: % MAX -C - 0.25%, Mn - 0.95%, S - 0.035%, P - 0.035%

GR.B: % MAX -C - 0.30%, Mn - 1.20%, S - 0.035%, P - 0.035%

GR.A: Yield Strength-205 N/mm2, Tensile Strength-330 N/mm2, Elongation-35% Min.

GR.B: YYield Strength-240 N/mm2, Tensile Strength-415 N/mm2, Elongation-30% Min.

For Gr.A : S235JR/ST.37-2 & For Gr.B: S275JR/ST-44-2 and Relevant Grade coil used

Bend test applicable up to and including below size: 50 mm and observed No Crack at any portion in the weld.

Applicable to tubes greater than sizes of 50 mm & weld located 0°/90° from line of direction of force and observed weld ductility

a) On line NDT(Eddy Current)

b) Hydro testing at pressure as per above Table and holding time Min. 5 second.

The Average 460 Gm/m2 but one side should not be less than 400Gm/m2 Or Specified by customer

Free from bare Spot, Black spot, rough, ove rcoating, Peel off or anyother surface defect.

: For 1/2" & 3/4" - 14 TPI, 1" to 2" - 11.5 TPI and 2 1/2" to 6" - 8TPI.

Check with standard ASTM ring and plug gauges.

UL Sprinker, ANSI/NSF 61, ANSI/NSF 372 & FM Approval

Fire Fighting, Sprinkler Systems, Child water system, Agriculture, Fencing tubes, Lighting poles, Submersible/Deep wall water, Tubular poles, Gas & Water tubes, Mechanical & General Engineering

Roll Grooved: 25NB to 300NB

We can issue a MTC as per EN 10204 Type:3.1

TECHNICAL DATA SHEET

ASTM A795 GR-A SCHEDULE- 10

S	IZE	OD (Mi	nimum)	OD (Maximum) WALL Weight of Tube. THICKNESS (Plain End)		PRESSURE GR-A	Pieces Per bundle				
INCH	NB(mm)	INCH	ММ	INCH	ММ	INCH	ММ	ib./Ft.	kg./Mtr.	PSI	
3/4"	20	1.035	26.30	1.070	27.10	0.083	2.11	0.860	1.28	700	120
1"	25	1.300	33.00	1.330	33.80	0.109	2.77	1.410	2.09	700	84
1 1/4"	32	1.645	41.80	1.680	42.60	0.109	2.77	1.810	2.69	1000	61
1 1/2"	40	1.885	47.90	1.920	48.70	0.109	2.77	2.090	3.11	1000	42
2"	50	2.350	59.70	2.400	60.90	0.109	2.77	2.640	3.93	1000	37
2 1/2"	65	2.850	72.30	2.900	73.70	0.120	3.05	3.530	5.26	1000	29
3"	80	3.460	88.00	3.530	89.80	0.120	3.05	4.340	6.46	1000	19
3 1/2"	90	3.960	100.60	4.040	102.60	0.120	3.05	4.980	7.41	1200	19
4"	100	4.450	113.20	4.540	115.40	0.120	3.05	5.620	8.37	1200	14
5"	125	5.507	139.90	5.620	142.70	0.134	3.40	7.780	11.58	1200	7
6"	150	6.560	166.60	6.690	169.98	0.134	3.40	9.300	13.85	1000	7
8"	200	8.540	216.91	8.712	221.29	0.188	4.78C	16.960	25.26	800	4
10"	250	10.644	270.37	10.859	275.83	0.188	4.78C	21.230	31.62	700	2

CATEGORY/TYPE OF PRODUCTS : M.S. Pipe, Black painted (Enamel), Galvanized, Roll Grooved & Threaded pipes.

TOLERANCES	: a) On Thickness : The minimum wall thickness at any point shall be not more than 12.5% under the specified wall thickness.
	b) On Diameter : For NPS 1½" and under, any point shall not vary more than +0.4mm, - 0.8mm. For NPS 2" and above shall not vary more than ±1% from the standard specified.
	c) Weight : The weight of the pipe shall not more than ±5 % of the specified weight.
ENDS	: a) 1 1/2" and below size - End finish shall be at the option of manufacturer which is nominally square cut with the axis of tube and free from excessive burrs.
	b) 2' and over size - Beveled with ends beveled to an angle of 30, + 5 / -0 degree measured from a line perpendicular to the axis of the pipe with a root face of 1.6 mm ± 0.8 mm.
INTERNAL DEBEADING	: 2" and above - Internal beads to be removed completely.
CHEMICAL COMPOSITION (% M	ax): % MAX -C - 0.25%, Mn - 0.95%, S - 0.035%, P - 0.035%
MECHANICAL (Minimum)	: Yield Strength-205 N/mm2,Tensile Strength-330 N/mm2,Elongation-25-30%
HRC USED	: For Gr.A : S235JR/ST.37-2 and Relevant Grade coil used
BEND TEST	: Bend test applicable up to and including below size: 50 mm and observed No Crack at any portion in the weld.
FLATTENING TEST	: Applicable to tubes greater than sizes of 50 mm & weld located 0°/90° from line of direction of force and observed weld ductility.
LEAKTIGHTNESS TEST	: a) On line NDT(Eddy Current)
	b) Hydro testing at pressure as per above Table and holding time Min. 5 second.
ZINC COATING	: The Average 460 Gm/m2 but one side should not be less than 400Gm/m2 or Specified by customer
	Free from bare Spot, Black spot, Rough, overcoating, Peel off or any other surface defect.
THREADING	: For 1/2" & 3/4" - 14 TPI, 1" to 2" - 11.5 TPI and 2 1/2" to 6" - 8TPI.
	Check with standard ASTM ring and plug gauges.
MARKING	: We can do on line stenciling as per this standard & customer required.
RELEVANT CERTIFICATION	: UL Sprinker, ANSI/NSF 61, ANSI/NSF 372
APPLICATION /USED	: Fire Fighting, Sprinkler Systems, Child water system, Agriculture, Fencing tubes, Lighting poles, Submersible/Deep wall water, Tubular poles, Gas & Water tubes, Mechanical & General Engineering
SPECIAL SIZES	: Roll Grooved: 25NB to 300NB & Threading: 15NB to 150NB
MILL TEST CERTIFICATE	: We can issue a MTC as per EN 10204 Type:3.1

ACCREDITATIONS

As an ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 and other relevant product certified company, we adhere to the most stringent quality standards from sourcing of raw material to manufacture and supply of finished products.











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