



Spiral SAW Pipes

Our Network



JCO/SP/MKTG/S/F/05
REV NO: 08, Dated 6th September 2018

JCO Gas Pipe Ltd.

JCO Gas Pipe Ltd.

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19-020/JCO



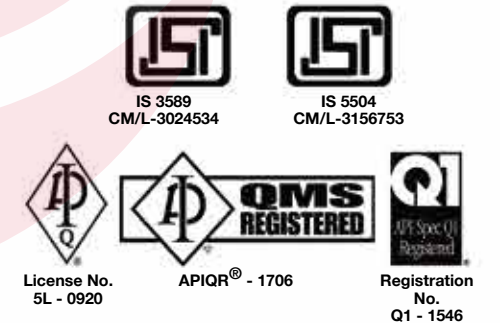


JCO Gas Pipe Ltd. is engaged in manufacturing of MS/CS Spiral SAW Pipes at Distt. Chhindwara, Madhya Pradesh. Our manufacture range is from 16" dia to 118" dia (406mm OD to 3404mm OD) with wall thickness ranging from 5mm to 25mm, with an installed capacity of 1,35,000 MT, as per IS 3589 : 2001, IS 5504, API - 5L X 70 Thermomechanically Rolled and ASTM.

Our pipes conform to all the Indian & International Standards; having facilities for NDT testing, e.g. X-RAY, UT, DPT, Magnetic Partical Testing etc.

These pipes are used for the following applications:

- Water** : Distribution & Transmission lines for Irrigation Systems, Portable Drinking Water requirements, Power Plants etc.
- Structural** : Well Casing, Structural Columns for high rise buildings, Piling & Casing Pipes etc.
- Industrial** : Cooling Water Lines, Drainage Pipes, Smoke Stacks, Mining Pipes, Dredging Pipes, Air Duct Piping etc.
- Oil & Gas** : Off shore & On shore Pipelines, Submarine Pipelines & Structural Pipes for Offshore Drill Rigs, Cross Country Pipeline, Project/ Terminal Piping, Conductors etc.



Applications:



Solar Plant



Oil & Gas Plant



Power Plant



Piling

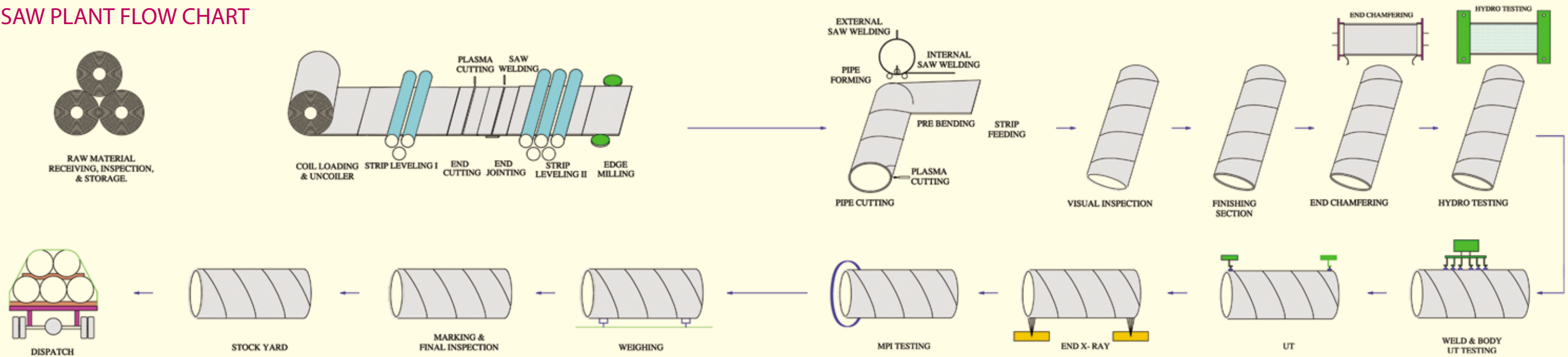


Water Plant



Irrigation

H-SAW PLANT FLOW CHART



Detailed Pipe Process:

The raw material used is H.R. Coil. It is continuously formed to require the specific diameter of the pipe, spirally welded (SAW) at high speed and cut to required length. The following operations are carried out when the material is loaded for making of the pipe.

Entry Line : Here the coils are opened, edge milled to required width and fed to forming stand at uniform speed. This unit also enhances the joining of the tail-end of the out going coil with the leading end of the incoming coil to produce continuous strips. Before initializing new campaign, entry line will be positioned in an angle, called Helical Angle in respect to the normal of formal table center axis.

Forming Stand : The unit performs as the heart of the mill. Here the strip is formed to required size of the pipe & spirally welded.

Exit Line : The main purpose of exit line is to give proper support to the pipe during forming, cut the pipe to required length and eject it outside.

The pipe is then visually inspected thoroughly, both in & out side, for probable weld defects such as under cut, porosity. If any defects found, it will be rectified as per the approved QAP (Quality Assurance Plan). After this the pipe will be sent to Beveling (Chamfering & Facing) machine for better quality pipe joints during laying works at site. Then the pipes are hydrostatically tested to ensure that there is no leakage from weld joint or parent material.

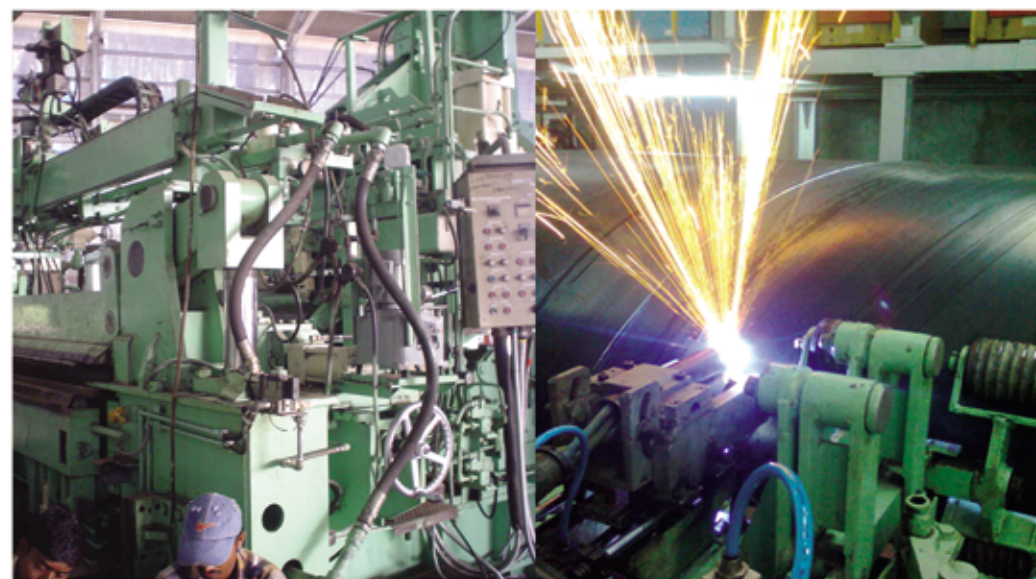
The pipe will be inspected at different stages of production to ensure the quality of the product. The inspection process consists of Physical / Visual Inspection, Destructive & Non-Destructive Testing & final inspection before sending for dispatch.



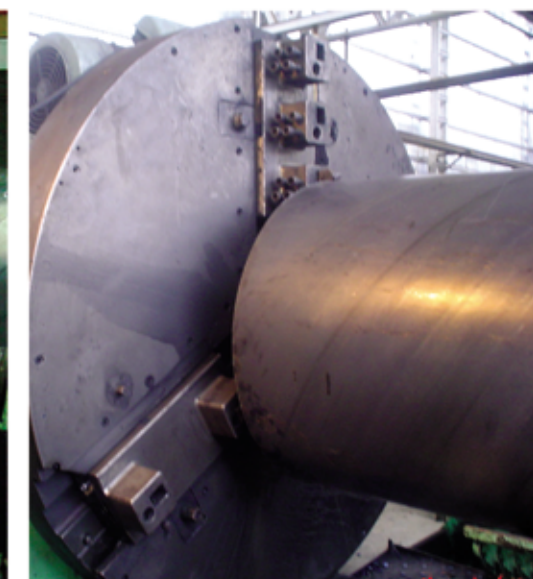
De Coiler



Entry Line



Strip Joining Unit



End Beveling



Hydrotester



Coating Facilities

At JCO, we execute various types of coating for preventing corrosion on pipe's surface both internal as well as external as per IS, ISO and AWWA standards.

Coating protects steel pipes against corrosion and increases pipe's life.

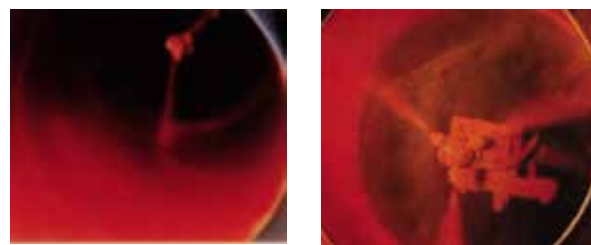
Mostly carbon steel will corrode in the absence of the coating, resulting in the reduction of the service life of the steel. Various anti-corrosion methods and techniques are devised and used that effectively minimize the impact of corrosion.

We are engaged in providing high performance anti-corrosive coatings such as:-

1. Liquid Epoxy / Food Grade Epoxy Coatings

Two part epoxy coatings are applied for heavy duty service on metal substrates. The coat dries quickly providing a tough, protective surface with excellent hardness. Coating is done as per IS-3589, AWWA-C-210 with Airless Spray Techniques.

- * Excellent corrosion resistance
- * Excellent adhesion on mild steels
- * Good resistant to water, alcohol, solvents & chemicals
- * Good mechanical strength & abrasion resistance
- * Excellent flexibility & hardness



Coating application

2. Cement Mortar Lining

Cement-mortar lining is done inside the surface of pipe. These pipes are commonly used for water distribution. Coating is done as per IS-3589, AWWA-C-205 & C-602 or as per custom-specified mix.

Centrifugally applied to straight pipe of 20 inch through 64 inch in diameter and from 6 to 12.2 meter in length using our custom-designed and state-of-the-art equipment.

- * Very compatible to alkaline influences
- * Protects pipes from corrosion and thus increases life of it
- * Abrasion resistance



CML Plant

Coated pipe

3. Guniting (External Cement Coating)

Guniting is also known as external cement coating, mostly used for water and sewage. Coating is done as per IS-3589, AWWA-C-205 or as per custom-specified mix. Additional welded wire mesh reinforcement is applied to ensure the integrity of the coating.

- * Very compatible to alkaline influences
- * Protects pipes from corrosion and thus increases life of it.



Guniting Application



Finished Pipe

4. Coal Tar Tape Coating

Coal tar tape coating is done as per IS-10221, IS-15337, AWWA-C-203. First the pipe is sand blasted as per ISO-8501, after that a coat of primer and then coal tar tape is wrapped with heating application.

- * Coal tar tape consists of glass fiber tap & coal tar
- * Coal tar withstands with acidity, in better proposition to cement coating
- * Excellent resistance to heat, water and cathodic disbondmen



Sand Blasting



Primer Application



Coal Tar Tape Application



Coal Tar Tape Coated Pipe



Mill 1



Mill 2: First mill in the country to have installed manufacturing capacity for 29 mtr. pipe



5. Epoxy Based Painting (Internal / External)

Epoxy Zinc rich primer provides outstanding performance in highly corrosive environment. Metallic Zinc imparts cathodic protection to the base metal. This can be TOP-COATED with Epoxy Paints, Polyurethane Paints, and Enamel Paints for specific applications with Airless Spray Techniques.

- * Provides excellent adhesion on cleaned steel work
- * Builds high DFT in single coat
- * Excellent corrosion resistance
- * With suitable TOP-COAT, it resists most salts & alkalis
- * Good abrasion resistance

6. Polyurethane Coating

Two part epoxy coatings are applied on steel water pipe, special sections, welded joints, connections or fittings for steel water pipelines installed underground or underwater operating under normal conditions. The coat dries quickly providing a tough, protective surface with excellent hardness. Coating is done as per AWWA-C-222 with Airless Spray Techniques.

- * Excellent corrosion resistance
- * Excellent adhesion on mild steels
- * Good resistant to solvent, chemicals & water.
- * Good mechanical strength & abrasion resistance
- * Excellent flexibility & hardness



Some of the Inspection Agencies where "JCO PIPE" is registered:

- Mecon Limited
- Engineers India limited (EIL)
- SGS India Pvt. Ltd.
- Lloyd's Register Asia

Certification



Some of our Esteemed Clients



Other Applications

- Construction of ports and harbours
- Support piers for off-shore berth
- Bridge foundations
- Retaining walls in land reclamation projects
- Structural members for buildings and roof structures
- Columns for billboard towers and projects vertical structures





Foundation for wind wheel



Gigantic water pipes of a power plant



Tin Tunnel project



Boring pile for bridge foundation



Columns for billboard towers and vertical structures



Steel pipe pile foundation for bridge construction



Steel pipe pile foundation for bridge construction



Water pipeline to Hydro-Electric power station



Water pipeline to Hydro-Electric power station

WEIGHT IN KGs. PER RUNNING MTR & ITS CORRESPONDING TEST PRESSURE

OD in Inch(mm)	(406.4) 16"		(457.2) 18"		(508) 20"		(558.8) 22"		(609.6) 24"		(660.4) 26"		(711.2) 28"		(762) 30"		(812.8) 32"		(863.6) 34"		(914.4) 36"		(965.2) 38"		(1016) 40"		(1066.8) 42"		(1117.6) 44"		(1168.4) 46"		(1219.2) 48"		(1270) 50"		(1320.8) 52"		(1371.6) 54"	
WT in mm	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT
5	36	49.50	32	55.76	29	62.02	26	68.29	24	74.55	22	80.82	21	87.08	19	93.34	18	99.61	17	105.87	16	112.14	15	118.40	15	124.66	14	130.93	13	137.19	13	143.46	12	149.72	12	155.98	11	162.25	11	168.51
5.5	39	54.38	35	61.27	32	68.16	29	75.05	26	81.94	24	88.83	23	95.72	21	102.61	20	109.50	19	116.39	18	123.28	17	130.17	16	137.06	15	143.95	15	150.84	14	157.73	13	164.62	13	171.51	12	178.40	12	185.30
6	43	59.25	38	66.76	34	74.28	31	81.80	29	89.31	27	96.83	25	104.35	23	111.86	22	119.38	20	126.90	19	134.42	18	141.93	17	149.45	17	156.97	16	164.48	15	172.00	15	179.52	14	187.03	14	194.55	13	202.07
6.5	46	64.10	41	72.25	37	80.39	34	88.53	31	96.68	29	104.82	27	112.96	25	121.11	23	129.25	22	137.39	21	145.54	20	153.68	19	161.82	18	169.97	17	178.11	16	186.25	16	194.40	15	202.54	15	210.68	14	218.83
7	50	68.95	45	77.72	40	86.49	37	95.26	34	104.03	31	112.80	29	121.57	27	130.34	25	139.11	24	147.88	23	156.64	21	165.41	20	174.18	19	182.95	19	191.72	18	200.49	17	209.26	16	218.03	16	226.80	15	235.57
7.5	51	73.78	48	83.18	43	92.57	39	101.97	36	111.37	33	120.76	31	130.16	29	139.55	27	148.95	25	158.35	24	167.74	23	177.14	22	186.53	21	195.93	20	205.33	19	214.72	18	224.12	17	233.51	17	242.91	16	252.31
8	51	78.60	51	88.62	46	98.65	42	108.67	38	118.69	35	128.71	33	138.74	31	148.76	29	158.78	27	168.80	26	178.83	24	188.85	23	198.87	22	208.89	21	218.92	20	228.94	19	238.96	19	248.98	18	259.00	17	269.03
8.5	51	83.41	51	94.06	49	104.71	44	115.36	41	126.00	38	136.65	35	147.30	33	157.95	31	168.60	29	179.25	27	189.90	26	200.55	25	211.19	23	221.84	22	232.49	21	243.14	21	253.79	20	264.44	19	275.09	18	285.74
9	51	88.20	51	99.48	51	110.75	47	122.03	43	133.31	40	144.58	37	155.86	34	167.13	32	178.41	30	189.68	29	200.96	27	212.23	26	223.51	25	234.78	24	246.06	23	257.33	22	268.61	21	279.88	20	291.16	19	302.43
9.5	51	92.99	51	104.89	51	116.79	49	128.69	45	140.59	42	152.50	39	164.40	36	176.30	34	188.20	32	200.10	30	212.00	29	223.91	27	235.81	26	247.71	25	259.61	24	271.51	23	283.41	22	295.32	21	307.22	20	319.12
10	51	97.76	51	110.29	51	122.81	51	135.34	48	147.87	44	160.40	41	172.93	38	185.45	36	197.98	34	210.51	32	223.04	30	235.57	29	248.09	27	260.62	26	273.15	25	285.68	24	298.21	23	310.73	22	323.26	21	335.79
10.5	51	102.52	51	115.67	51	128.83	51	141.98	50	155.13	46	168.29	43	181.44	40	194.60	38	207.75	35	220.91	34	234.06	32	247.22	30	260.37	29	273.52	28	286.68	26	299.83	25	312.99	24	326.14	23	339.30	23	352.45
11	51	107.26	51	121.04	51	134.82	51	148.61	51	162.39	48	176.17	45	189.95	42	203.73	39	217.51	37	231.29	35	245.07	33	258.85	32	272.63	30	286.41	29	300.19	28	313.98	26	327.76	25	341.54	24	355.32	24	369.10
11.5	51	112.00	51	126.40	51	140.81	51	155.22	51	169.63	51	184.03	47	198.44	44	212.85	41	227.25	39	241.66	37	256.07	35	270.48	33	284.88	31	299.29	30	313.70	29	328.11	28	342.51	27	356.92	26	371.33	25	385.73
12	51	116.72	51	131.75	51	146.79	51	161.82	51	176.85	51	191.89	49	206.92	46	221.95	43	236.99	40	252.02	38	267.05	36	282.09	34	297.12	33	312.16	31	327.19	30	342.22	29	357.26	28	372.29	27	387.32	26	402.36
12.5	51	121.43	51	137.09	51	152.75	51	168.41	51	184.07	51	199.73	51	215.39	48	231.05	45	246.71	42	262.37	40	278.03	38	293.69	36	309.35	34	325.01	33	340.67	31	356.33	30	371.99	29	387.65	28	403.31	27	418.97
13	51	126.12	51	142.41	51	158.70	51	174.98	51	191.27	51	207.56	51	223.84	50	240.13	46	256.42	44	272.70	41	288.99	39	305.27	37	321.56	36	337.85	34	354.13	32	370.42	31	386.71	30	402.99	29	419.28	28	435.57
13.5	51	130.81	51	147.72	51	164.63	51	181.55	51	198.46	51	215.37	51	232.29	51	249.20	48	266.11	45	283.02	43	299.94	41	316.85	39	333.76	37	350.68	35	367.59	34	384.50	32	401.41	31	418.33	30	435.24	29	452.15
14	51	135.48	51	153.02	51	170.56	51	188.10	51	205.64	51	223.18	51	240.72	51	258.26	50	275.79	47	293.33	45	310.87	42	328.41	40	345.95	38	363.49	37	381.03	35	398.57	34	416.11	32	433.65	31	451.19	30	468.73
14.5	51	140.14	51	158.31	51	176.47	51	194.64	51	212.80	51	230.97	51	249.13	51	267.30	51	285.47	49	303.63	46	321.80	44	339.96	42	358.13	40	376.29	38	394.46	36	412.63	35	430.79	33	448.96	32	467.12	31	485.29
15	51	144.79	51	163.58	51	182.37	51	201.16	51	219.96	51	238.75	51	257.54	51	276.33	51	295.12	50	313.92	48	332.71	45	351.50	43	370.29	41	389.08	39	407.88	37	426.67	36	445.46	34	464.25	33	483.04	32	501.84
15.5	51	149.42	51	168.84	51	188.26	51	207.68	51	227.10	51	246.52	51	265.93	51	285.35	51	304.77	51	324.19	49	343.61	47	363.03	44	382.44	42	401.86	40	421.28	39	440.70	37	460.12	36	479.54	34	498.96	33	518.37
16	51	154.05	51	174.09	51	194.14	51	214.18	51	234.23	51	254.27	51	274.31	51	294.36	51	314.40	51	334.45	51	354.49	48	374.54	46	394.58	44	414.63	42	434.67	40	454.72	38	474.76	37	494.81	35	514.85	34	534.90
16.5	51	158.66	51	179.33	51	200.00	51	220.67	51	241.34	51	262.01	51	282.68	51	303.35	51	324.03	51	344.70	51	365.37	50	386.04	47	406.71	45	427.38	43	448.05	41	468.73	39	489.40	38	510.07	36	530.74	35	551.41
17	51	163.25	51	184.55	51	205.85	51	227.15	51	248.44	51	269.74	51	291.04	51	312.34	51	333.64	51	354.93	51	376.23	51	397.53	49	418.83	46	440.12	44	461.42	42	482.72	41	504.02	39	525.31	38	546.61	36	567.91
17.5	51	167.84	51	189.76	51	211.69	51	233.61	51	255.54	51	277.46	51	299.38	51	321.31	51	343.23	51	365.16	51	387.08	51	409.00	50	430.93	48	452.85	46	474.78	44	496.70	42	518.63	40	540.55	39	562.47	37	584.40
18	51	172.41	51	194.96	51	217.51	51	240.06	51	262.62	51	285.17	51	307.72	51	330.27	51	352.82	51	375.37	51	397.92	51	420.47	51	443.02	49	465.57	47	488.12	45	510.67	43	533.22	41	555.77	40	578.32	38	600.87
18.5	51	176.97	51	200.15	51	223.33	51	246.51	51	269.68	51	292.86	51	316.04	51	339.21	51	362.39	51	385.57	51	408.74	51	431.92	51	455.10	50	478.27	48	501.45	46	524.63	44	547.80	42	570.98	41	594.16	39	617.34
19	51	181.52	51	205.33	51	229.13	51	252.93	51	276.74	51	300.54	51	324.34	51	348.15	51	371.95	51	395.75	51	419.56	51	443.36	51	467.16	51	490.97	49	514.77	47	538.57	45	562.38	44	586.18	42	609.98	40	633.79
19.5	51	186.06	51	210.49	51	234.92	51	259.35	51	283.78	51	308.21	51	332.64	51	357.07	51	381.50	51	405.93	51	430.36	51	454.79	51	479.22	51	503.65	51	528.08	48	552.51	46	576.93	45	601.36	43	625.79	41	650.22
20	51	190.58	51	215.64	51																																			

WEIGHT IN KGs. PER RUNNING MTR & ITS CORRESPONDING TEST PRESSURE

OD in Inch(mm)	(1422.4) 56"		(1473.2) 58"		(1524) 60"		(1574.8) 62"		(1625.6) 64"		(1676.4) 66"		(1727.2) 68"		(1778) 70"		(1828.8) 72"		(1879.6) 74"		(1930.4) 76"		(1981.2) 78"		(2032) 80"		(2082.8) 82"		(2133.6) 84"		(2184.4) 86"		(2235.2) 88"		(2286) 90"		(2336.8) 92"		(2387.6) 94"	
WT in mm	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT
5	11	174.78	10	181.04	10	187.30	10	193.57	9	199.83	9	206.10	9	212.36	9	218.62	8	224.89	8	231.15	8	237.42	8	243.68	8	249.94	7	256.21	7	262.47	7	268.74	7	275.00	7	281.26	7	287.53	7	293.79
5.5	12	192.19	11	199.08	11	205.97	11	212.86	10	219.75	10	226.64	10	233.53	9	240.42	9	247.31	9	254.20	9	261.09	8	267.98	8	274.87	8	281.76	8	288.65	8	295.54	8	302.43	7	309.32	7	316.21	7	323.10
6	13	209.58	12	217.10	12	224.62	11	232.13	11	239.65	11	247.17	10	254.68	10	262.20	10	269.72	10	277.23	9	284.75	9	292.27	9	299.79	9	307.30	9	314.82	8	322.34	8	329.85	8	337.37	8	344.89	8	352.40
6.5	14	226.97	13	235.11	13	243.25	12	251.40	12	259.54	12	267.68	11	275.83	11	283.97	11	292.11	10	300.26	10	308.40	10	316.54	10	324.69	9	332.83	9	340.97	9	349.12	9	357.26	9	365.40	8	373.55	8	381.69
7	15	244.34	14	253.11	14	261.88	13	270.65	13	279.42	13	288.19	12	296.96	12	305.73	12	314.50	11	323.27	11	332.04	11	340.81	10	349.58	10	358.35	10	367.12	10	375.89	10	384.66	9	393.42	9	402.19	9	410.96
7.5	16	261.70	15	271.10	15	280.49	14	289.89	14	299.29	13	308.68	13	318.08	13	327.47	12	336.87	12	346.27	12	355.66	11	365.06	11	374.45	11	383.85	11	393.25	10	402.64	10	412.04	10	421.43	10	430.83	10	440.23
8	17	279.05	16	289.07	16	299.09	15	309.12	15	319.14	14	329.16	14	339.18	13	349.21	13	359.23	13	369.25	12	379.27	12	389.30	12	399.32	12	409.34	11	419.36	11	429.39	11	439.41	11	449.43	10	459.45	10	469.48
8.5	18	296.39	17	307.03	17	317.68	16	328.33	16	338.98	15	349.63	15	360.28	14	370.93	14	381.58	14	392.23	13	402.87	13	413.52	13	424.17	12	434.82	12	445.47	12	456.12	11	466.77	11	477.42	11	488.06	11	498.71
9	19	313.71	18	324.98	17	336.26	17	347.53	16	358.81	16	370.09	15	381.36	15	392.64	15	403.91	14	415.19	14	426.46	14	437.74	13	449.01	13	460.29	13	471.56	12	482.84	12	494.11	12	505.39	12	516.66	11	527.94
9.5	20	331.02	19	342.92	18	354.82	18	366.73	17	378.63	17	390.53	16	402.43	16	414.33	15	426.23	15	438.13	15	450.04	14	461.94	14	473.84	14	485.74	13	497.64	13	509.54	13	521.45	12	533.35	12	545.25	12	557.15
10	21	348.32	20	360.85	19	373.38	19	385.90	18	398.43	18	410.96	17	423.49	17	436.02	16	448.54	16	461.07	15	473.60	15	486.13	15	498.66	14	511.18	14	523.71	14	536.24	13	548.77	13	561.30	13	573.82	13	586.35
10.5	22	365.61	21	378.76	20	391.91	20	405.07	19	418.22	19	431.38	18	444.53	17	457.69	17	470.84	17	484.00	16	497.15	16	510.30	15	523.46	15	536.61	15	549.77	14	562.92	14	576.08	14	589.23	13	602.39	13	615.54
11	23	382.88	22	396.66	21	410.44	21	424.22	20	438.00	19	451.78	19	465.56	18	479.35	18	493.13	17	506.91	17	520.69	16	534.47	16	548.25	16	562.03	15	575.81	15	589.59	15	603.37	14	617.15	14	630.93	14	644.72
11.5	24	400.14	23	414.55	22	428.96	21	443.36	21	457.77	20	472.18	20	486.58	19	500.99	19	515.40	18	529.81	18	544.21	17	558.62	17	573.03	16	587.44	16	601.84	16	616.25	15	630.66	15	645.06	15	659.47	14	673.88
12	25	417.39	24	432.42	23	447.46	22	462.49	22	477.53	21	492.56	20	507.59	20	522.63	19	537.66	19	552.69	18	567.73	18	582.76	17	597.79	17	612.83	17	627.86	16	642.90	16	657.93	16	672.96	15	688.00	15	703.03
12.5	26	434.63	25	450.29	24	465.95	23	481.61	23	497.27	22	512.93	21	528.59	21	544.25	20	559.91	20	575.57	19	591.23	19	606.89	18	622.55	18	638.21	17	653.87	17	669.53	17	685.19	16	700.85	16	716.51	16	732.17
13	27	451.85	26	468.14	25	484.43	24	500.71	23	517.00	23	533.29	22	549.57	22	565.86	21	582.14	20	598.43	20	614.72	19	631.00	19	647.29	18	663.58	18	679.86	18	696.15	17	712.44	17	728.72	16	745.01	16	761.30
13.5	28	469.07	27	485.98	26	502.89	25	519.80	24	536.72	24	553.63	23	570.54	22	587.46	22	604.37	21	621.28	21	638.19	20	655.11	20	672.02	19	688.93	19	705.85	18	722.76	18	739.67	17	756.58	17	773.50	17	790.41
14	29	486.27	28	503.80	27	521.34	26	538.88	25	556.42	25	573.96	24	591.50	23	609.04	23	626.58	22	644.12	21	661.66	21	679.20	20	696.74	20	714.28	19	731.82	19	749.35	19	766.89	18	784.43	18	801.97	17	819.51
14.5	30	503.45	29	521.62	28	539.78	27	557.95	26	576.12	25	594.28	25	612.45	24	630.61	23	648.78	23	666.94	22	685.11	22	703.28	21	721.44	21	739.61	20	757.77	20	775.94	19	794.10	19	812.27	18	830.44	18	848.60
15	31	520.63	30	539.42	29	558.21	28	577.01	27	595.80	26	614.59	25	633.38	25	652.17	24	670.97	23	689.76	23	708.55	22	727.34	22	746.13	21	764.93	21	783.72	20	802.51	20	821.30	19	840.09	19	858.89	19	877.68
15.5	32	537.79	31	557.21	30	576.63	29	596.05	28	615.47	27	634.88	26	654.30	26	673.72	25	693.14	24	712.56	24	731.98	23	751.40	22	770.81	22	790.23	21	809.65	21	829.07	20	848.49	20	867.91	20	887.32	19	906.74
16	33	554.94	32	574.99	31	595.03	30	615.08	29	635.12	28	655.17	27	675.21	26	695.26	26	715.30	25	735.35	24	755.39	24	775.44	23	795.48	23	815.53	22	835.57	22	855.62	21	875.66	21	895.71	20	915.75	20	935.80
16.5	34	572.08	33	592.75	32	613.42	31	634.10	30	654.77	29	675.44	28	696.11	27	716.78	26	737.45	26	758.12	25	778.79	24	799.47	24	820.14	23	840.81	23	861.48	22	882.15	22	902.82	21	923.49	21	944.16	20	964.84
17	35	589.21	34	610.51	33	631.80	32	653.10	31	674.40	30	695.70	29	716.99	28	738.29	27	759.59	27	780.89	26	802.18	25	823.48	25	844.78	24	866.08	23	887.38	23	908.67	22	929.97	22	951.27	21	972.57	21	993.86
17.5	36	606.32	35	628.25	34	650.17	32	672.09	31	694.02	31	715.94	30	737.87	29	759.79	28	781.71	27	803.64	27	825.56	26	847.49	25	869.41	25	891.33	24	913.26	24	935.18	23	957.11	23	979.03	22	1000.95	22	1022.88
18	37	623.42	36	645.97	34	668.52	33	691.07	32	713.62	31	736.18	30	758.73	30	781.28	29	803.83	28	826.38	27	848.93	27	871.48	26	894.03	25	916.58	25	939.13	24	961.68	24	984.23	23	1006.78	23	1029.33	22	1051.88
18.5	38	640.51	37	663.69	35	686.87	34	710.04	33	733.22	32	756.40	31	779.57	30	802.75	30	825.93	29	849.10	28	872.28	27	895.46	27	918.63	26	941.81	25	964.99	25	988.17	24	1011.34	24	1034.52	23	1057.70	23	1080.87
19	39	657.59	38	681.39	36	705.20	35	729.00	34	752.80	33	776.61	32	800.41	31	824.21	30	848.02	30	871.82	29	895.62	28	919.43	27	943.23	27	967.03	26	990.83	26	1014.64	25	1038.44	24	1062.24	24	1086.05	23	1109.85
19.5	40	674.65	39	699.08	37	723.51	36	747.94	35	772.37	34	796.80	33	821.23	32	845.66	31	870.09	30	894.52	30	918.95	29	943.38	28	967.81	27	992.24	27	1016.67	26	1041.10	26	1065.53	25	1089.96	24	1114.39	24	1138.82
20	41	691.71																																						

WEIGHT IN KGs. PER RUNNING MTR & ITS CORRESPONDING TEST PRESSURE

OD in Inch(mm)	(2438.4) 96"		(2489.2) 98"		(2540) 100"		(2590.8) 102"		(2641.6) 104"		(2692.4) 106"		(2743.2) 108"		(2794) 110"		(2844.8) 112"		(2895.6) 114"		((2946.4) 116"		(2997.2) 118"		(3048) 120"		(3098.8) 122"		(3098.8) 124"		(3200.4) 126"		(3251.2) 128"		(3302) 130"		(3352.8) 132"		(3403.6) 134"			
WT in mm	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT	TP in Kg/cm ²	Weight in Kg/RMT		
5	6	300.06	6	306.32	6	312.58	6	318.85	6	325.11	6	331.38	6	337.64	6	343.90	6	350.17	5	356.43			5	362.70	5	368.96	5	375.22	5	381.49	5	387.75	5	394.02	5	400.28	5	406.54	5	412.81	5	419.07
5.5	7	329.99	7	336.88	7	343.78	7	350.67	6	357.56	6	364.45	6	371.34	6	378.23	6	385.12	6	392.01			6	398.90	6	405.79	6	412.68	6	419.57	6	426.46	5	433.35	5	440.24	5	447.13	5	454.02	5	460.91
6	8	359.92	7	367.44	7	374.95	7	382.47	7	389.99	7	397.50	7	405.02	7	412.54	7	420.05	6	427.57			6	435.09	6	442.60	6	450.12	6	457.64	6	465.16	6	472.67	6	480.19	6	487.71	6	495.22	6	502.74
6.5	8	389.83	8	397.98	8	406.12	8	414.26	8	422.41	7	430.55	7	438.69	7	446.84	7	454.98	7	463.12			7	471.27	7	479.41	7	487.55	7	495.69	6	503.84	6	511.98	6	520.12	6	528.27	6	536.41	6	544.55
7	9	419.73	9	428.50	8	437.27	8	446.04	8	454.81	8	463.58	8	472.35	8	481.12	8	489.89	7	498.66			7	507.43	7	516.20	7	524.97	7	533.74	7	542.51	7	551.28	7	560.05	7	568.82	7	577.59	6	586.36
7.5	9	449.62	9	459.02	9	468.41	9	477.81	9	487.21	9	496.60	8	506.00	8	515.39	8	524.79	8	534.19			8	543.58	8	552.98	8	562.37	7	571.77	7	581.17	7	590.56	7	599.96	7	609.35	7	618.75	7	628.15
8	10	479.50	10	489.52	10	499.54	9	509.57	9	519.59	9	529.61	9	539.63	9	549.66	9	559.68	8	569.70			8	579.72	8	589.75	8	599.77	8	609.79	8	619.81	8	629.83	8	639.86	7	649.88	7	659.90	7	669.92
8.5	11	509.36	10	520.01	10	530.66	10	541.31	10	551.96	10	562.61	9	573.26	9	583.90	9	594.55	9	605.20			9	615.85	9	626.50	9	637.15	8	647.80	8	658.45	8	669.09	8	679.74	8	690.39	8	701.04	8	711.69
9	11	539.21	11	550.49	11	561.76	10	573.04	10	584.31	10	595.59	10	606.87	10	618.14	10	629.42	9	640.69			9	651.97	9	663.24	9	674.52	9	685.79	9	697.07	9	708.34	8	719.62	8	730.89	8	742.17	8	753.44
9.5	12	569.05	11	580.95	11	592.86	11	604.76	11	616.66	11	628.56	10	640.46	10	652.36	10	664.27	10	676.17			10	688.07	10	699.97	9	711.87	9	723.77	9	735.68	9	747.58	9	759.48	9	771.38	9	783.28	9	795.18
10	12	598.88	12	611.41	12	623.94	12	636.46	11	648.99	11	661.52	11	674.05	11	686.58	11	699.10	10	711.63			10	724.16	10	736.69	10	749.22	10	761.74	10	774.27	9	786.80	9	799.33	9	811.86	9	824.38	9	836.91
10.5	13	628.69	13	641.85	12	655.00	12	668.16	12	681.31	12	694.47	12	707.62	11	720.78	11	733.93	11	747.08			11	760.24	11	773.39	10	786.55	10	799.70	10	812.86	10	826.01	10	839.17	10	852.32	10	865.47	9	878.63
11	13	658.50	13	672.28	13	686.06	13	699.84	12	713.62	12	727.40	12	741.18	12	754.96	12	768.74	11	782.52			11	796.31	11	810.09	11	823.87	11	837.65	11	851.43	10	865.21	10	878.99	10	892.77	10	906.55	10	920.33
11.5	14	688.29	14	702.69	14	717.10	13	731.51	13	745.92	13	760.32	13	774.73	12	789.14	12	803.54	12	817.95			12	832.36	12	846.77	11	861.17	11	875.58	11	889.99	11	904.40	11	918.80	11	933.21	10	947.62	10	962.02
12	15	718.06	14	733.10	14	748.13	14	763.16	14	778.20	13	793.23	13	808.27	13	823.30	13	838.33	12	853.37			12	868.40	12	883.43	12	898.47	12	913.50	11	928.54	11	943.57	11	958.60	11	973.64	11	988.67	11	1003.70
12.5	15	747.83	15	763.49	15	779.15	14	794.81	14	810.47	14	826.13	14	841.79	13	857.45	13	873.11	13	888.77			13	904.43	12	920.09	12	935.75	12	951.41	12	967.07	12	982.73	12	998.39	11	1014.05	11	1029.71	11	1045.37
13	16	777.58	16	793.87	15	810.15	15	826.44	15	842.73	14	859.01	14	875.30	14	891.59	14	907.87	13	924.16			13	940.45	13	956.73	13	973.02	13	989.31	12	1005.59	12	1021.88	12	1038.17	12	1054.45	12	1070.74	11	1087.02
13.5	16	807.32	16	824.24	16	841.15	15	858.06	15	874.97	15	891.89	15	908.80	14	925.71	14	942.63	14	959.54			14	976.45	13	993.36	13	1010.28	13	1027.19	13	1044.10	13	1061.02	12	1077.93	12	1094.84	12	1111.75	12	1128.67
14	17	837.05	17	854.59	16	872.13	16	889.67	16	907.21	15	924.75	15	942.29	15	959.83	15	977.36	14	994.90			14	1012.44	14	1029.98	14	1047.52	13	1065.06	13	1082.60	13	1100.14	13	1117.68	13	1135.22	13	1152.76	12	1170.30
14.5	18	866.77	17	884.93	17	903.10	17	921.26	16	939.43	16	957.59	16	975.76	15	993.93	15	1012.09	15	1030.26			15	1048.42	14	1066.59	14	1084.75	14	1102.92	14	1121.09	14	1139.25	13	1157.42	13	1175.58	13	1193.75	13	1211.91
15	18	896.47	18	915.26	17	934.05	17	952.85	17	971.64	17	990.43	16	1009.22	16	1028.01	16	1046.81	15	1065.60			15	1084.39	15	1103.18	15	1121.97	14	1140.77	14	1159.56	14	1178.35	14	1197.14	14	1215.94	13	1234.73	13	1253.52
15.5	19	926.16	18	945.58	18	965.00	18	984.42	17	1003.84	17	1023.25	17	1042.67	16	1062.09	16	1081.51	16	1100.93			16	1120.35	15	1139.76	15	1159.18	15	1178.60	15	1198.02	14	1217.44	14	1236.86	14	1256.28	14	1275.69	14	1295.11
16	19	955.84	19	975.89	19	995.93	18	1015.97	18	1036.02	18	1056.06	17	1076.11	17	1096.15	17	1116.20	16	1136.24			16	1156.29	16	1176.33	16	1196.38	15	1216.42	15	1236.47	15	1256.51	15	1276.56	14	1296.60	14	1316.65	14	1336.69
16.5	20	985.51	20	1006.18	19	1026.85	19	1047.52	18	1068.19	18	1088.86	18	1109.53	17	1130.21	17	1150.88	17	1171.55			17	1192.22	16	1212.89	16	1233.56	16	1254.23	16	1274.90	15	1295.58	15	1316.25	15	1336.92	15	1357.59	14	1378.26
17	21	1015.16	20	1036.46	20	1057.76	19	1079.05	19	1100.35	19	1121.65	18	1142.95	18	1164.24	18	1185.54	17	1206.84			17	1228.14	17	1249.44	17	1270.73	16	1292.03	16	1313.33	16	1334.63	16	1355.92	15	1377.22	15	1398.52	15	1419.82
17.5	21	1044.80	21	1066.73	20	1088.65	20	1110.58	20	1132.50	19	1154.42	19	1176.35	19	1198.27	18	1220.20	18	1242.12			18	1264.04	17	1285.97	17	1307.89	17	1329.82	16	1351.74	16	1373.66	16	1395.59	16	1417.51	16	1439.44	15	1461.36
18	22	1074.43	21	1096.98	21	1119.53	20	1142.08	20	1164.63	20	1187.18	19	1209.74	19	1232.29	19	1254.84	18	1277.39			18	1299.94	18	1322.49	17	1345.04	17	1367.59	17	1390.14	17	1412.69	16	1435.24	16	1457.79	16	1480.34	16	1502.89
18.5	22	1104.05	22	1127.23	21	1150.40	21	1173.58	21	1196.76	20	1219.93	20	1243.11	20	1266.29	19	1289.46	19	1312.64			19	1335.82	18	1359.00	18	1382.17	18	1405.35	17	1428.53	17	1451.70	17	1474.88	17	1498.06	16	1521.23	16	1544.41
19	23	1133.65	22	1157.46	22	1181.26	22	1205.06	21	1228.87	21	1252.67	20	1276.47	20	1300.28	20	1324.08	19	1347.88			19	1371.69	19	1395.49	18	1419.29	18	1443.10	18	1466.90	18	1490.70	17	1514.51	17	1538.31	17	1562.11	17	1585.92
19.5	23	1163.25	23	1187.68	23	1212.11	22	1236.54	22	1260.97	21	1285.40	21																													