

SSAW & HFW | ERW

Spiral Submerged Arc Welded
High Frequency Welded |
Electric Resistance Welded

Water Pipes



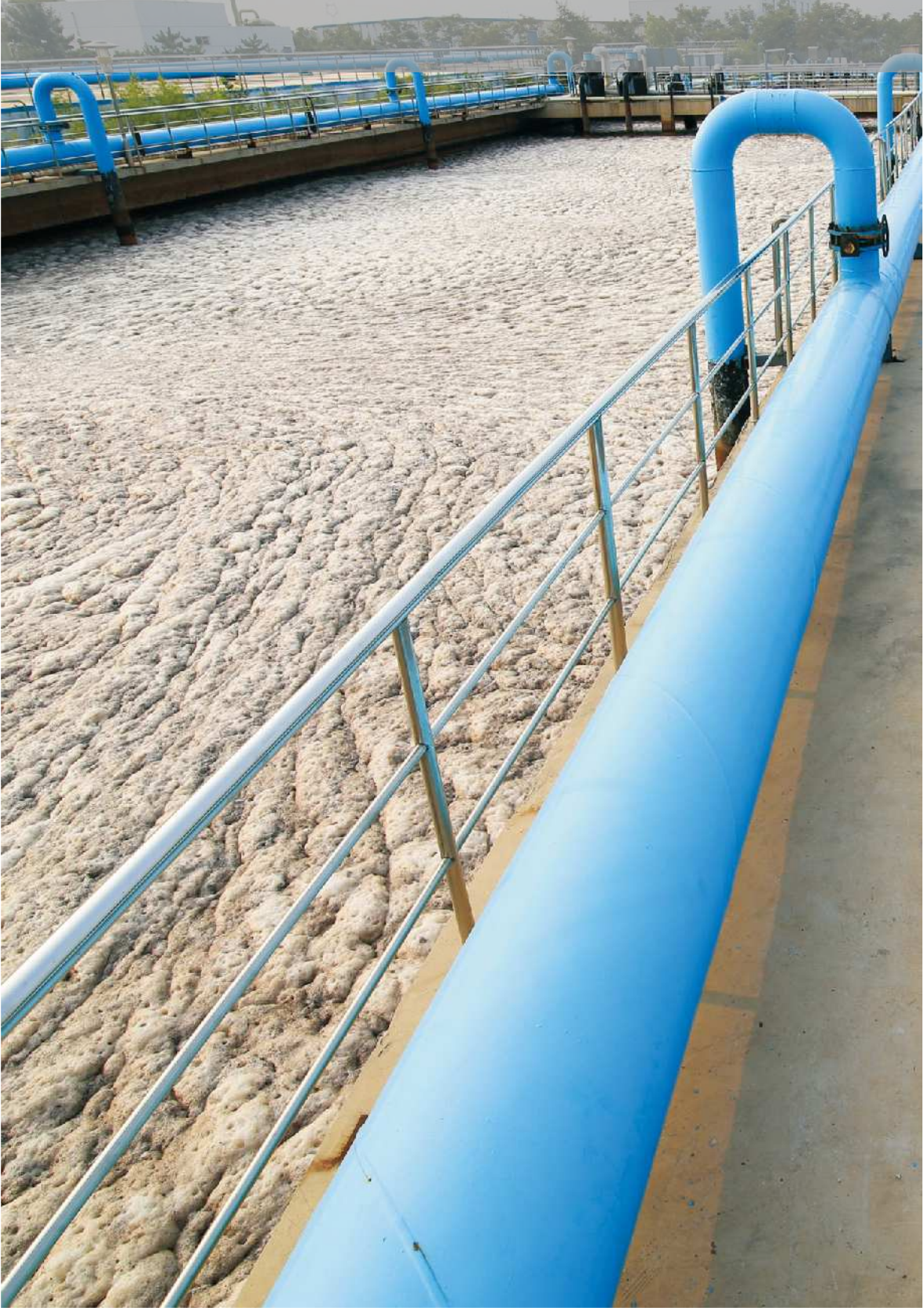
PT Steel Pipe Industry of Indonesia, Tbk.



SPINDO®'s high quality pipe is used in a wide variety of applications including water and sewage transmission. Greater strength in proportion to wall thickness of any competitive product means the pipe performs safely at higher pressures and its strength provides distinct handling and laying advantages in difficult locations.

Industrial Standards

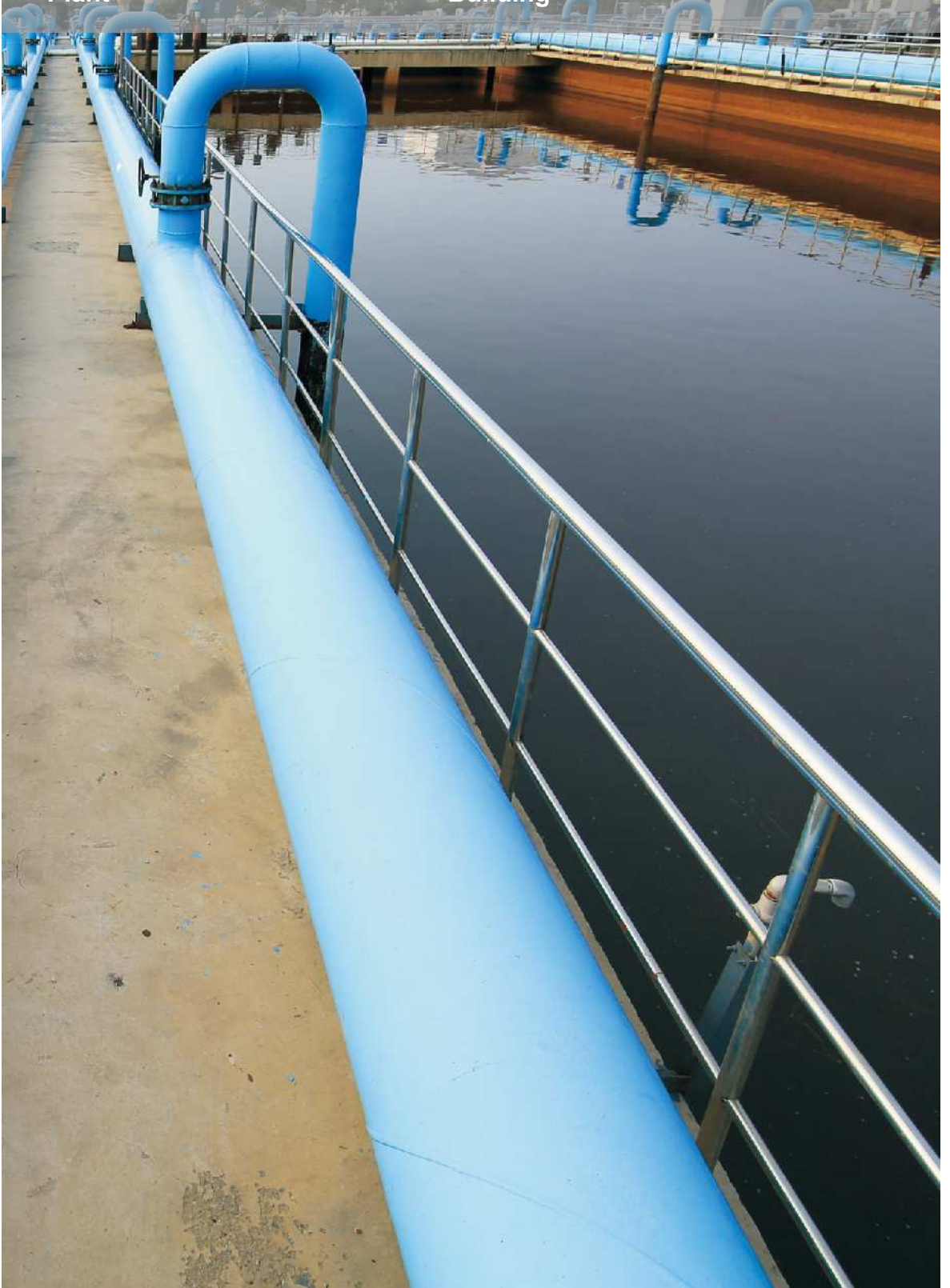
SNI 0039 | ASTM A53 | AWWA C200 | UL 852 | FM APPROVALS (CLASS No : 1630)



Water Treatment
Plant



Water Transmission
Building



HFW | ERW Water Pipes

Range of Diameter	½" - 8"
Range of Wall Thickness	2.00 mm - 10.30 mm
Classification	Light Medium Heavy - SNI 0039 Standard
	Grade A Grade B - ASTM A53 Standard
	UL 852
	FM APPROVALS (CLASS No : 1630)

HFW | ERW Water Pipes

Electric Resistance Welded (ERW) or High Frequency Welding (HFW) steel pipes is based on welding in flat sheet rolled into a tube. Through its proven coating process, SPINDO® steel water pipe fulfill various industrial standard.

These steel pipes are mainly used for water transmission pipelines, water treatment plants, wastewater treatment plants, cogeneration facilities & circulating water systems in the building.

Pengelasan elektrik (ERW) atau pengelasan elektrik frekwensi tinggi (HFW) untuk pipa baja mengacu pada pengelasan pada lembaran yang digulung menjadi bentuk tabung. Melalui proses pelapisan yang telah teruji, pipa baja SPINDO® memenuhi berbagai standar kelayakan penggunaannya sebagai pipa air.

Penggunaan pipa baja ini terutama untuk jaringan pipa air transmisi, pabrik pengolahan air, pabrik pengolahan air limbah, fasilitas penggunaan tenaga air dan sistem sirkulasi air pada bangunan.

SSAW Water Pipes

Range of Diameter	6" - 80"
Range of Wall Thickness	4.10 mm - 25.40 mm
Classification	Light Medium Heavy - SNI 0039 Standard AWWA C200

SSAW Water Pipes

Spiral Submerged Arc Welding (SSAW) steel pipes is a forming tube process of rolled steel sheet with centerline hose reel molding angle (adjustable), side molding edge welding and weld them into a spiral.

These steel pipes are used for large diameter of water distribution, such as water tunnel, water treatment plants, wastewater treatment plants, etc

Pengelasan spiral pada pipa baja (SSAW) adalah pembentukan tabung dengan proses menggulung lembaran baja dengan sudut tertentu mengacu pada garis pusat, sisi tepi lembaran dilas mengikuti alur spiral yang telah ditentukan.

Pipa baja ini digunakan untuk distribusi air dengan diameter besar, seperti pada terowongan air, pabrik pengolahan air, pabrik pengolahan air limbah, dan sebagainya.

Internal Coating



Internal Epoxy Coating



Cement Mortar Lining

External Coating



Three Layer Polyethylene (3LPE)



Three Layer Polypropylene (3LPP)



Fusion Bond Epoxy Coating (FBE)



External Epoxy Coating

Galvanized



Application **Underground Water Pipelines**





CARBON STEEL PIPES FOR GENERAL APPLICATIONS

ASTM A53 : 2020 | GRADE A / GRADE B

Chemical Composition (% Max.) :

ASTM A-53	Carbon	Manganese	Phosphorus	Sulfur	Copper	Nickel	Chromium	Molibdenum	Vanadium	Cu+Ni+Cr+Mo+V
Grade A	0.25	0.95	0.05	0.045	0.40	0.40	0.40	0.15	0.08	1.00
Grade B	0.30	1.20	0.05	0.045	0.40	0.40	0.40	0.15	0.08	1.00

Wall Thickness Tolerance

The minimum wall thickness shall be not more than 12.5% under the specified wall thickness.

Tensile Requirements

	Grade A	Grade B
Tensile strength, min, psi [Mpa]	48.000 [330]	60.000 [415]
Yield strength, min, psi [Mpa]	30.000 [205]	35.000 [240]
Elongation in 2 in. or 50 mm	A, B	A, B

Galvanized

Zinc Coating Weight

550 gr/m² (77µm)

Outside Diameter (OD) Tolerance

OD ≤ 1½ inch = ±0.40 mm from the specified OD
 OD ≥ 2 inch = ±1% mm from the specified OD

NOMINAL SIZE	OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT CLASS	SCH NO.	WEIGHT PLAIN END	TEST PRESSURE psi [kPa]	
	inch	mm	inch	mm				Grade A	Grade B
½	0.840	21.3	0.109	2.77	STD	40	1.27	700 [4800]	700 [4800]
			0.147	3.73	XS	80	1.62	850 [5900]	850 [5900]
¾	1.050	26.7	1.113	2.87	STD	40	1.69	700 [4800]	700 [4800]
			1.154	3.91	XS	80	2.20	850 [5900]	850 [5900]
1	1.315	33.4	0.133	3.38	STD	40	2.50	700 [4800]	700 [4800]
			0.179	4.55	XS	80	3.24	850 [5900]	850 [5900]
1¼	1.660	42.2	0.140	3.56	STD	40	3.39	1200 [8300]	1300 [9000]
			0.191	4.85	XS	80	4.47	1800 [12 400]	1900 [13 100]
1½	1.900	48.3	0.145	3.68	STD	40	4.05	1200 [8300]	1300 [9000]
			0.200	5.08	XS	80	5.41	1800 [12 400]	1900 [13 100]
2	2.375	60.3	0.154	3.91	STD	40	5.44	2300 [15 900]	2500 [17 200]
			0.218	5.54	XS	80	7.48	2500 [17 200]	2500 [17 200]
2½	2.875	73.0	0.203	5.16	STD	40	8.63	2500 [17 200]	2500 [17 200]
			0.276	7.01	XS	80	11.41	2500 [17 200]	2500 [17 200]
3	3.500	88.9	0.216	5.49	STD	40	11.29	2220 [15 300]	2500 [17 200]
3½	4.000	101.6	0.226	5.74	STD	40	13.57	2030 [14 000]	2370 [16 300]
4	4.500	114.3	0.237	6.02	STD	40	16.07	1900 [13 100]	2210 [15 200]
5	5.563	141.3	0.258	6.55	STD	40	21.77	1670 [11 500]	1950 [13 400]
6	6.625	168.3	0.280	7.11	STD	40	28.26	1520 [10 500]	1780 [12 300]
8	8.625	219.1	0.250	6.35	***	20	33.31	1040 [7200]	1220 [8400]
			0.277	7.04	***	30	36.31	1160 [7800]	1350 [9300]
			0.322	8.18	STD	40	42.55	1340 [9200]	1570 [10 800]

**PIPA BAJA SALURAN AIR DENGAN /
TANPA LAPISAN SENG | SNI 0039 : 2013**

Hydrostatic Test	: 50 kgf / cm ²
Tolerance on Wall Thickness	: +10% & -8% (TIPIS*) : +15% & -10% (MEDIUM*) : +15% & -12.5% (TEBAL*)
Standard Length	: 6 m / pc or 12 m / pc

*These terms refers to "Standar Nasional Indonesia (SNI)"

CLASS	NOMINAL DIAMETER		OUTSIDE DIAMETER	WALL THICKNESS	NOMINAL WEIGHT PLAIN END
	mm	inch	mm	mm	kg/m
TIPIS* (LIGHT)	15	½	21.4	2.0	0.947
	20	¾	26.8	2.3	1.38
	25	1	33.6	2.6	1.98
	32	1¼	42.3	2.6	2.54
	40	1½	48.2	2.9	3.23
	50	2	60.2	2.9	4.08
	65	2½	76.0	3.2	5.71
	80	3	88.8	3.2	6.72
	100	4	114.1	3.6	9.75
	125	5	139.7	3.6	12.08
	150	6	165.1	3.6	14.34
	200	8	219.1	5.0	26.40

CARBON STEEL PIPES FOR PRESSURE SERVICES | JIS G 3454 : 2012 (STPG)

SYMBOL OF GRADE	TENSILE STRENGTH kgf/mm ² (N/mm ²)	YIELD STRENGTH kgf/mm ² (N/mm ²)
STPG 38	38 Min (373 Min)	22 Min (216 Min)
STPG 42	42 Min (412 Min)	25 Min (245 Min)

NOMINAL DIAMETER		OUTSIDE DIAMETER	SCHEDULE 20		SCHEDULE 40	
			WALL THICKNESS	UNIT MASS	WALL THICKNESS	UNIT MASS
mm	inch	mm	mm	kg/m	mm	kg/m
15	½	21.7	-	-	2.8	1.31
20	¾	27.2	-	-	2.9	1.74
25	1	34.0	-	-	3.4	2.57
32	1¼	42.7	-	-	3.6	3.47
40	1½	48.6	-	-	3.7	4.10
50	2	60.5	3.2	4.52	3.9	5.44
65	2½	76.3	4.5	7.97	5.2	9.12
80	3	89.1	4.5	9.39	5.5	11.3
90	3½	101.6	4.5	10.8	5.7	13.5
100	4	114.3	4.9	13.2	6.0	16.0
125	5	139.8	5.1	16.9	6.6	21.7
150	6	165.2	5.5	21.7	7.1	27.7
200	8	216.3	6.4	33.1	8.2	42.1
250	10	267.4	6.4	41.2	9.3	59.2
300	12	318.5	6.4	49.3	10.3	78.3

MEDIUM*	15	½	21.3	2.6	1.21
	20	¾	26.9	2.6	1.56
	25	1	33.7	3.2	2.41
	32	1¼	42.4	3.2	3.10
	40	1½	48.3	3.2	3.56
	50	2	60.3	3.6	5.03
	65	2½	76.1	3.6	6.42
	80	3	88.9	4.0	8.36
	100	4	114.3	4.5	12.2
	125	5	139.7	5.0	16.6
	150	6	165.1	5.0	19.8
	200	8	219.1	6.4	33.32
TEBAL* (HEAVY)	15	½	21.3	3.2	1.44
	20	¾	26.8	3.2	1.87
	25	1	33.8	4.0	2.94
	32	1¼	42.5	4.0	3.80
	40	1½	48.4	4.0	4.38
	50	2	60.3	4.5	6.19
	65	2½	76.0	4.5	7.93
	80	3	88.8	5.0	10.30
	100	4	114.1	6.0	15.99
	125	5	139.7	6.6	21.92
	150	6	168.3	7.1	28.22
	200	8	219.1	8.2	42.65

STANDARD FOR SAFETY (UL 852)

METALLIC SPRINKLER PIPE FOR FIRE PROTECTION SERVICE

STANDARD SPECIFICATION	SCHEDULE NO	NOMINAL SIZE	OUTSIDE DIAMETER	OUTSIDE DIAMETER TOLERANCE	WALL THICKNESS	MINIMUM WALL THICKNESS
		<i>inch</i>	<i>inch</i>	<i>inch</i>	<i>inch</i>	<i>inch</i>
ASTM A795	10	1 ¼	1.660	± 1/64	0.109	0.095
	10	1	1.900	± 1/64	0.109	0.095
	10	2	2.375	± 1/64	0.109	0.095
	10	2 ½	2.875	± 1/64	0.120	0.105
	10	3	3.500	± 1%	0.120	0.105
	10	4	4.500	± 1%	0.120	0.105
	10	6	6.625	± 1%	0.134	0.116
	10	8	8.625	± 1%	0.188	0.164
ASTM A795 ASTM A53	40	½	0.840	± 1/64	0.109	0.095
	40	¾	1.050	± 1/64	0.113	0.099
	40	1	1.315	± 1/64	0.133	0.166
	40	1 ¼	1.660	± 1/64	0.140	0.122
	40	1 ½	1.900	± 1/64	0.145	0.127
	40	2	2.375	± 1%	0.154	0.135
	40	2 ½	2.875	± 1%	0.203	0.178
	40	3	3.500	± 1%	0.216	0.189
	40	4	4.500	± 1%	0.237	0.207
	40	5	5.563	± 1%	0.258	0.226
	40	6	6.625	± 1%	0.280	0.245
	40	8	8.625	± 1%	0.322	0.282

FM APPROVALS (CLASS NUMBER : 1630)

APPROVAL STANDARD FOR STEEL PIPE FOR AUTOMATIC FIRE SPRINKLER SYSTEM

STANDARD SPECIFICATION	OUTSIDE DIAMETER	SCHEDULE No
	<i>inch</i>	
ASTM A 795	¾	SCH-10 SCH-40
	1	SCH-10 SCH-40
	1 ¼	SCH-10 SCH-40
	1 ½	SCH-10 SCH-40
	2	SCH-10 SCH-40
	2 ½	SCH-10 SCH-40
	3	SCH-10 SCH-40
	3 ½	SCH-10 SCH-40
	4	SCH-10 SCH-40
	5	SCH-10 SCH-40
	6	SCH-10 SCH-40
	8	SCH-10 SCH-30
ASTM A 53	¾	SCH-40
	1	SCH-40
	1 ¼	SCH-40
	1 ½	SCH-40
	2	SCH-40
	2 ½	SCH-40
	3	SCH-40
	3 ½	SCH-40
	4	SCH-40
	5	SCH-40
	6	SCH-40
	8	SCH-20 SCH-40

STANDARD SPECIFICATION	OUTSIDE DIAMETER		CLASS
	<i>inch</i>	DN	
EN10255	½	15	L2 (Light) M (Medium) H (Heavy)
	¾	20	L2 (Light) M (Medium) H (Heavy)
	1	25	L2 (Light) M (Medium) H (Heavy)
	1 ¼	43	L2 (Light) M (Medium) H (Heavy)
	1 ½	40	L2 (Light) M (Medium) H (Heavy)
	2	50	L2 (Light) M (Medium) H (Heavy)
	2 ½	65	L2 (Light) M (Medium) H (Heavy)
	3	80	L2 (Light) M (Medium) H (Heavy)
	4	100	L2 (Light) M (Medium) H (Heavy)
	5	125	M (Medium) H (Heavy)
	6	150	M (Medium) H (Heavy)





**STANDAR
NASIONAL
INDONESIA**

**PIPA BAJA SALURAN AIR DENGAN /
TANPA LAPISAN SENG | SNI 0039 : 2013**

SPINDO® SSAW - WATER PIPES

Hydrostatic Test	: 50 kgf / cm ²
Tolerance on Wall Thickness:	-8% & +10% (TIPIS*)
	: -10% & +15% (MEDIUM*)
	: -12.5% & +15% (TEBAL*)
Standard Length	: 6 m / pc or 12 m / pc (with tolerance -0 mm & +100 mm)

CLASS	NOMINAL DIAMETER		OUTSIDE DIAMETER			WALL THICKNESS	NOMINAL WEIGHT PLAIN END
	mm	inch	Nominal	Max	Min	mm	kg/m
TIPIS* (LIGHT)	200	8	219.1	221.3	216.9	5.0	26.40
	250	10	273.0	275.7	270.3	5.0	33.04
	300	12	323.8	327.0	320.6	5.0	39.31
	350	14	355.6	359.2	352.0	5.6	48.33
	400	16	406.4	410.5	402.3	5.6	55.35
	450	18	457.0	461.6	452.4	6.4	71.12
	500	20	508.0	513.1	502.9	6.4	79.16
	600	24	610.0	616.1	603.9	6.4	95.26
MEDIUM*	200	8	219.1	221.3	216.9	6.4	33.32
	250	10	273.0	275.7	270.3	6.4	41.75
	300	12	323.8	327.0	320.6	6.4	49.71
	350	14	355.6	359.2	352.0	6.4	54.69
	400	16	406.4	410.5	402.3	6.4	62.64
	450	18	457.0	461.6	452.4	9.5	105.10
	500	20	508.0	513.1	502.9	9.5	117.02
	600	24	610.0	616.1	603.9	9.5	140.88
	650	26	660.0	666.6	653.4	9.5	152.80
	700	28	711.0	718.1	703.9	9.5	164.34
	800	32	813.0	821.1	804.9	9.5	188.23
	900	36	914.0	923.1	904.9	9.5	211.90
	1000	40	1016.0	1026.2	1005.8	12.7	314.22
	1050	42	1067.0	1077.7	1056.3	12.7	330.19
1150	46	1168.0	1179.7	1156.3	12.7	361.82	
1200	48	1219.0	1231.2	1206.8	12.7	377.79	
TEBAL* (HEAVY)	200	8	219.1	221.3	216.9	8.2	42.65
	250	10	273.0	275.7	270.3	9.3	60.48
	300	12	323.8	327.0	320.6	10.3	79.63
	350	14	355.6	359.2	352.0	11.1	94.30
	400	16	406.4	410.5	402.3	12.7	123.30
	450	18	457.0	461.6	452.4	12.7	139.15
	500	20	508.0	513.1	502.9	12.7	155.12
	600	24	610.0	616.1	603.9	12.7	187.06
	650	26	660.0	666.6	653.4	12.7	202.72
	700	28	711.0	718.1	703.9	12.7	218.69
	800	32	813.0	812.1	804.9	12.7	250.64
	900	36	914.0	923.1	904.9	12.7	282.27
	1000	40	1016.0	1026.2	1005.8	14.3	353.24
	1050	42	1067.0	1077.7	1056.3	14.3	371.22
1150	46	1168.0	1179.7	1156.3	14.3	406.84	
1200	48	1219.0	1231.2	1206.8	14.3	424.82	

*These terms refers to "Standar Nasional Indonesia (SNI)"

KOMPOSISI KIMIA				SIFAT MEKANIS PIPA		
C (%) Max	Mn (%) Max	P (%) Max	S (%) Max	YIELD STRENGTH (MPa)	TENSILE STRENGTH (MPa)	ELONGATION (%) Min
0.2	1.4	0.035	0.03	195 min.	320 - 460	20

Thread specification of water pipes are fabricated in exact as per requirement. Please contact us more further details.

STEEL WATER PIPE 6 in. (150 mm) AND LARGER
AWWA C 200 - 2017

OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT		HYDROSTATIC TEST PRESSURE *	
<i>inch</i>	<i>mm</i>	<i>inch</i>	<i>mm</i>	<i>lb/ft</i>	<i>kg/m</i>	<i>lb/inch²</i>	<i>kg/cm²</i>
6.625	168.3	0.250	6.35	17.04	25.36	2011	141
		0.280	7.11	18.99	28.26	2252	158
		0.312	7.92	21.06	31.32	2508	176
		0.344	8.74	23.10	34.39	2768	195
		0.375	9.52	25.05	37.28	3015	212
8.625	219.1	0.250	6.35	22.38	33.31	1545	109
		0.277	7.04	24.72	36.31	1713	120
		0.312	7.92	27.73	41.24	1927	135
		0.322	8.18	28.58	42.55	1990	140
		0.344	8.74	30.45	45.34	2126	149
		0.375	9.52	33.07	49.20	2316	163
10.750	273.0	0.250	6.35	28.06	41.75	1240	87
		0.279	7.09	31.23	46.49	1384	97
		0.307	7.80	34.27	51.01	1523	107
		0.344	8.74	38.27	56.96	1706	120
		0.365	9.27	40.52	60.29	1810	127
		0.438	11.13	48.28	71.87	2173	153
12.750	323.8	0.250	6.35	33.41	49.71	1045	73
		0.281	7.14	37.46	55.75	1175	83
		0.312	7.92	41.48	61.69	1304	92
		0.330	8.38	43.81	65.18	1379	97
		0.344	8.74	45.62	67.90	1439	101
		0.375	9.52	49.61	73.78	1567	110
		0.406	10.31	53.57	79.70	1697	119
		0.438	11.13	57.65	85.82	1832	129
		0.469	11.91	63.50	94.55	1668	117
14.000	355.6	0.250	6.35	36.75	54.69	952	67
		0.281	7.14	41.21	61.35	1070	75
		0.312	7.92	45.65	67.90	1187	83
		0.344	8.74	50.22	74.76	1310	92
		0.375	9.52	54.62	81.25	1427	100
		0.438	11.13	63.50	94.55	1668	117
		0.469	11.91	67.84	100.94	1785	126
16.000	406.4	0.250	6.35	42.09	62.64	833	59
		0.281	7.14	47.22	70.30	936	66
		0.312	7.92	52.32	77.83	1039	73
		0.344	8.74	57.57	85.71	1146	81
		0.375	9.52	62.64	93.17	1249	88
		0.438	11.13	72.86	108.49	1460	103
		0.469	11.91	77.87	115.86	1562	110
18.000	457.0	0.250	6.35	47.44	70.60	741	52
		0.281	7.14	53.23	79.24	833	59
		0.312	7.92	58.99	87.75	924	65
		0.344	8.74	64.93	96.66	1019	72
		0.375	9.52	70.65	105.10	1110	78
		0.406	10.31	76.36	113.62	1202	85
		0.438	11.13	82.23	122.43	1298	91
		0.469	11.91	87.89	130.78	1389	98
0.500	12.70	93.54	139.20	1481	104		

STEEL WATER PIPE 6 in. (150 mm) AND LARGER
AWWA C 200 - 2017

OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT		HYDROSTATIC TEST PRESSURE *	
<i>inch</i>	<i>mm</i>	<i>inch</i>	<i>mm</i>	<i>lb/ft</i>	<i>kg/m</i>	<i>lbf/inch²</i>	<i>kgf/cm²</i>
20.000	508.0	0.312	7.92	65.66	97.67	831	58
		0.344	8.74	72.28	107.60	917	64
		0.375	9.52	78.67	117.02	999	70
		0.406	10.31	84.04	126.53	1082	76
		0.438	11.13	91.59	136.37	1168	82
		0.469	11.91	97.92	145.70	1250	88
		0.500	12.70	104.23	155.12	1333	94
24.000	610.0	0.562	14.27	116.70	173.80	1498	105
		0.375	9.52	94.71	140.88	832	58
		0.406	10.31	102.40	152.37	901	63
		0.438	11.13	110.32	164.26	973	68
		0.465	11.91	117.98	175.54	1041	73
		0.500	12.70	125.61	186.94	1110	78
26.000	660.0	0.562	14.27	140.50	209.13	1247	88
		0.375	9.52	102.72	152.80	769	54
		0.406	10.31	111.08	165.28	833	59
		0.438	11.13	119.69	178.20	899	63
		0.469	11.91	128.00	190.46	962	68
28.000	711.2	0.500	12.70	136.30	202.85	1026	72
		0.562	14.27	152.83	227.37	1152	81
		0.375	9.53	110.75	164.81	714	50
		0.406	10.31	119.77	178.24	773	54
		0.438	11.13	129.06	132.06	834	59
		0.469	11.91	138.04	205.43	893	63
30.000	762.0	0.500	12.70	147.00	218.76	952	67
		0.562	14.27	164.85	245.33	1070	75
		0.625	15.88	182.91	272.20	1190	84
		0.375	9.53	118.77	176.75	666	47
		0.406	10.31	128.45	191.16	721	51
		0.438	11.31	138.43	206.00	778	55
		0.469	11.91	148.07	220.35	833	59
32.000	812.8	0.500	12.70	157.69	234.67	888	62
		0.562	14.27	176.87	263.21	999	70
		0.625	15.88	196.28	292.09	1110	78
		0.406	10.31	137.13	204.08	676	48
		0.438	11.13	147.79	219.94	730	51
		0.469	11.91	158.10	235.27	781	55
		0.500	12.70	168.38	250.58	833	59
		0.562	14.27	188.89	281.09	936	66
34.000	863.6	0.625	15.88	209.64	311.98	1041	73
		0.688	17.48	230.31	342.74	1146	81
		0.750	19.05	250.57	372.88	1249	88
		0.812	20.62	270.74	402.91	1353	95
		0.406	10.31	145.81	216.99	636	45
		0.438	11.13	157.16	233.87	687	48
		0.469	11.91	168.12	250.20	735	52
34.000	863.6	0.500	12.70	179.07	266.49	784	55
		0.562	14.27	200.90	298.98	881	62
		0.625	15.88	223.00	331.87	980	69

STEEL WATER PIPE 6 in. (150 mm) AND LARGER
AWWA C 200 - 2017



OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT		HYDROSTATIC TEST PRESSURE *	
<i>inch</i>	<i>mm</i>	<i>inch</i>	<i>mm</i>	<i>lb/ft</i>	<i>kg/m</i>	<i>lbf/inch²</i>	<i>kgf/cm²</i>
34.000	863.6	0.688	17.48	245.02	364.63	1079	76
		0.750	19.05	266.60	396.75	1176	83
		0.812	20.62	288.10	428.74	1273	89
36.000	914.4	0.438	11.13	166.52	247.81	649	46
		0.469	11.91	178.15	265.12	694	49
		0.500	12.70	189.76	282.40	740	52
		0.562	14.27	212.92	316.86	832	59
		0.625	15.88	236.37	351.75	925	65
		0.688	17.48	259.73	386.52	1019	72
		0.750	19.05	282.64	420.61	1110	78
		0.812	20.62	305.46	454.58	1202	85
38.000	965.2	0.875	22.23	328.57	488.97	1296	91
		0.438	11.13	175.89	261.75	614	43
		0.469	11.91	188.18	280.04	658	46
		0.500	12.70	200.45	298.31	701	49
		0.562	14.27	224.94	334.74	788	55
		0.625	15.88	249.73	371.64	877	62
		0.688	17.48	274.44	408.41	965	68
		0.750	19.05	298.67	444.48	1052	74
40.000	1016.0	0.812	20.62	322.83	480.42	1139	80
		0.875	22.23	347.28	516.81	1227	86
		0.438	11.13	185.25	275.68	584	41
		0.469	11.91	198.21	294.97	625	44
		0.500	12.70	211.14	314.22	666	47
		0.562	14.27	236.95	352.62	749	53
		0.625	15.88	263.09	391.53	833	59
		0.688	17.48	289.15	430.30	917	64
42.000	1066.8	0.750	19.05	314.71	468.34	999	70
		0.812	20.62	340.19	506.26	1082	76
		0.875	22.23	365.99	544.66	1166	82
		0.438	11.13	194.62	289.62	556	39
		0.469	11.91	208.24	309.89	595	42
		0.500	12.70	221.83	330.13	635	45
		0.562	14.27	248.97	370.51	712	50
		0.625	15.88	276.46	411.41	793	56
44.000	1117.6	0.688	17.48	303.86	452.19	873	61
		0.750	19.05	330.75	492.20	952	67
		0.812	20.62	357.55	532.09	1030	72
		0.875	22.23	384.70	572.50	1110	78
		0.438	11.13	203.98	303.56	531	37
		0.469	11.91	218.26	324.81	568	40
		0.500	12.70	232.52	346.03	606	43
		0.562	14.27	260.99	388.39	681	48
44.000	1117.6	0.625	15.88	289.82	431.30	757	53
		0.688	17.48	318.57	474.09	833	59
		0.750	19.05	346.78	516.07	909	64
		0.812	20.62	374.91	557.93	984	69
		0.875	22.23	403.41	600.34	1060	75



STEEL WATER PIPE 6 in. (150 mm) AND LARGER
AWWA C 200 - 2017

OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT		HYDROSTATIC TEST PRESSURE *	
<i>inch</i>	<i>mm</i>	<i>inch</i>	<i>mm</i>	<i>lb/ft</i>	<i>kg/m</i>	<i>lb/inch²</i>	<i>kg/cm²</i>
46.000	1168.4	0.438	11.13	213.35	317.50	508	36
		0.469	11.91	228.29	339.74	543	38
		0.500	12.70	243.22	361.94	579	41
		0.562	14.27	273.00	406.27	651	46
		0.625	15.88	303.18	451.19	724	51
		0.688	17.48	333.28	495.98	797	56
		0.750	19.05	362.82	539.93	869	61
		0.812	20.62	392.27	583.77	941	66
		0.875	22.23	422.12	628.18	1014	71
48.000	1219.2	0.438	11.13	222.71	331.43	486	34
		0.469	11.91	238.32	354.66	521	37
		0.500	12.70	253.91	377.85	555	39
		0.562	14.27	285.02	424.15	624	44
		0.625	15.88	316.55	471.07	694	49
		0.688	17.48	347.99	517.87	764	54
		0.750	19.05	378.85	563.80	833	59
		0.812	20.62	409.64	609.60	902	63
		0.875	22.23	440.83	656.02	972	68
52.000	1320.8	0.438	11.13	241.44	359.31	449	32
		0.469	11.91	258.38	384.50	481	34
		0.500	12.70	275.29	409.67	513	36
		0.562	14.27	309.05	459.92	576	41
		0.625	15.88	343.27	510.85	641	45
		0.688	17.48	377.41	561.65	705	50
		0.750	19.05	410.93	611.53	769	54
		0.812	20.62	444.36	661.28	832	59
		0.875	22.23	478.25	711.71	897	63
56.000	1422.4	0.438	11.13	260.17	387.18	417	29
		0.469	11.91	278.43	414.35	446	31
		0.500	12.70	296.67	441.49	476	33
		0.562	14.27	333.08	495.68	535	38
		0.625	15.88	370.00	550.62	595	42
		0.688	17.48	406.83	605.44	655	46
		0.750	19.05	443.00	659.26	714	50
		0.812	20.62	479.08	712.95	773	54
		0.875	22.23	515.66	767.39	833	59
60.000	1524.0	0.438	11.13	278.90	415.05	389	27
		0.469	11.91	298.49	444.20	417	29
		0.500	12.70	318.05	473.31	444	31
		0.562	14.27	357.12	531.45	499	35
		0.625	15.88	396.73	590.40	555	39
		0.688	17.48	436.26	649.22	611	43
		0.750	19.05	475.07	706.98	666	47
		0.812	20.62	513.81	764.63	721	51
		0.875	22.23	553.08	823.08	777	55
		0.938	23.83	592.27	881.40	833	59

STEEL WATER PIPE 6 in. (150 mm) AND LARGER
AWWA C 200 - 2017



OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT		HYDROSTATIC TEST PRESSURE *	
<i>inch</i>	<i>mm</i>	<i>inch</i>	<i>mm</i>	<i>lb/ft</i>	<i>kg/m</i>	<i>lbf/inch²</i>	<i>kgf/cm²</i>
64.000	1625.6	0.438	11.13	297.63	442.93	365	26
		0.469	11.91	318.54	474.04	391	27
		0.500	12.70	339.43	505.13	416	29
		0.562	14.27	381.15	567.21	468	33
		0.625	15.88	423.46	630.17	521	37
		0.688	17.48	465.68	693.00	573	40
		0.750	19.05	507.14	754.71	625	44
		0.812	20.62	548.53	816.30	676	48
		0.875	22.23	590.50	878.76	729	51
		0.938	23.83	632.38	941.09	781	55
68.000	1727.2	0.469	11.91	338.60	503.89	368	26
		0.500	12.70	360.81	536.95	392	28
		0.562	14.27	405.18	602.98	441	31
		0.625	15.88	450.18	669.95	490	34
		0.688	17.48	495.10	736.79	539	38
		0.750	19.05	539.22	802.44	588	41
		0.812	20.62	583.25	867.98	636	45
		0.875	22.23	627.92	934.44	686	48
		0.938	23.83	672.50	1000.78	735	52
72.000	1828.8	0.500	12.70	382.20	568.77	370	26
		0.562	14.27	429.22	638.74	416	29
		0.625	15.88	476.91	709.72	463	33
		0.688	17.48	524.52	780.57	509	36
		0.750	19.05	571.29	850.17	555	39
		0.812	20.62	617.98	919.65	601	42
		0.875	22.23	665.33	990.13	648	46
		0.938	23.83	712.61	1060.48	694	49
76.000	1930.4	0.500	12.70	403.58	600.59	351	25
		0.562	14.27	453.25	674.51	394	28
		0.625	15.88	503.64	749.49	438	31
		0.688	17.48	553.94	824.35	483	34
		0.750	19.05	603.36	897.90	526	37
		0.812	20.62	625.70	971.33	569	40
		0.875	22.23	702.75	1045.81	614	43
		0.938	23.83	752.72	1120.17	658	46
80.000	2032.0	0.562	14.27	477.28	710.27	374	26
		0.625	15.88	530.36	789.27	416	29
		0.688	17.48	583.36	868.14	458	32
		0.750	19.05	635.43	945.63	500	35
		0.812	20.62	687.42	1023.00	541	38
		0.875	22.23	740.17	1101.49	583	41
0.938	23.83	792.83	1179.86	625	44		