

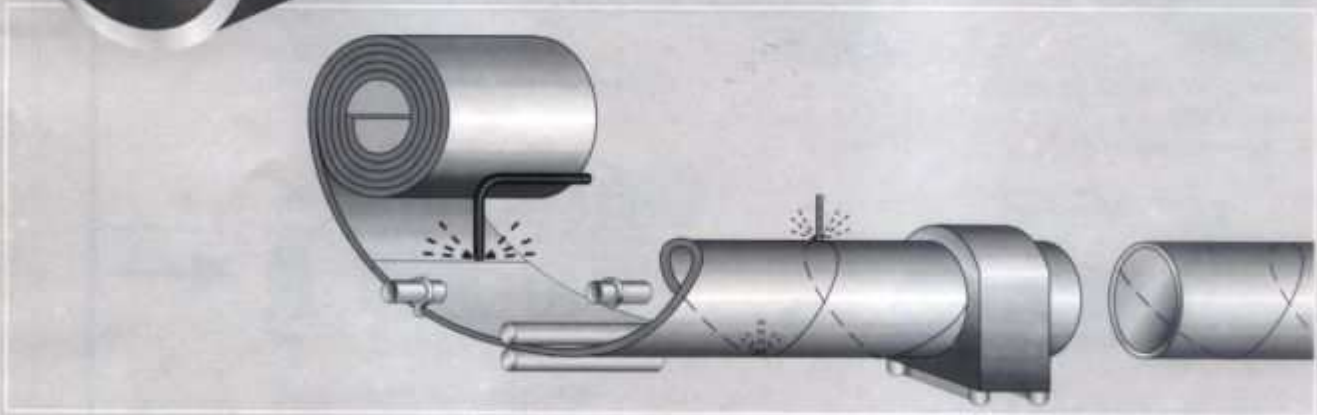


PT. STEEL PIPE INDUSTRY OF INDONESIA

# SPIRAL WELDED STEEL PIPE



SAW Submerged-Arc-Welded



SL-0313



**SIZES AND WEIGHT OF WELDED STEEL PIPE PILES**  
**ASTM A 252**

OUTSIDE DIAMETER		NOMINAL THICKNESS		WEIGHT		MINIMUM THICKNESS		ELONGATION (%) IN 2 in ( min )		
in	mm	in	mm	lb/ft	kg/m	in	mm	GRADE 1	GRADE 2	GRADE 3
8 5/8	219.1	0.164	4.17	14.81	22.08	0.144	3.64	23.00	19.00	15.25
		0.172	4.37	15.52	23.13	0.151	3.82	23.25	19.50	15.50
		0.179	4.55	16.14	24.06	0.157	3.98	23.50	19.75	15.75
		0.188	4.78	16.93	25.24	0.165	4.18	24.00	20.00	16.00
		0.203	5.16	18.25	27.20	0.178	4.51	24.75	20.75	16.50
		0.219	5.56	19.65	29.29	0.192	4.87	25.50	21.25	17.00
		0.230	5.84	20.61	30.72	0.201	5.11	26.00	21.75	17.50
		0.250	6.35	22.35	33.31	0.219	5.56	27.00	22.50	18.00
		0.281	7.14	25.03	37.31	0.246	6.25	28.50	23.75	19.00
		0.312	7.92	27.69	41.27	0.273	6.93	30.00	25.00	20.00
		0.330	8.38	29.23	43.56	0.289	7.33	30.00	25.00	20.00
		0.344	8.74	30.41	45.33	0.301	7.65	30.00	25.00	20.00
		0.375	9.53	33.03	49.23	0.328	8.33	30.00	25.00	20.00
10 3/4	273.1	0.164	4.17	18.54	27.63	0.144	3.64	23.00	19.00	15.25
		0.179	4.55	20.20	30.11	0.157	3.98	23.50	19.50	15.75
		0.188	4.78	21.20	31.60	0.165	4.18	24.00	20.00	16.00
		0.203	5.16	22.86	34.07	0.178	4.51	24.75	20.75	16.50
		0.219	5.56	24.63	36.70	0.192	4.87	25.50	21.25	17.00
		0.250	6.35	28.03	41.77	0.219	5.56	27.00	22.50	18.00
		0.307	7.80	34.23	51.02	0.269	6.82	29.75	25.00	20.00
		0.344	8.74	38.22	56.96	0.301	7.65	30.00	25.00	20.00
		0.385	9.27	40.47	60.32	0.319	8.11	30.00	25.00	20.00
		12 3/4	323.8	0.164	4.17	22.03	32.83	0.144	3.64	23.00
0.172	4.37			23.09	34.41	0.151	3.82	23.25	19.50	15.50
0.179	4.55			24.02	35.79	0.157	3.98	23.50	19.75	15.75
0.188	4.78			25.21	37.57	0.165	4.18	24.00	20.00	16.00
0.203	5.16			27.19	40.52	0.178	4.51	24.75	20.75	16.50
0.219	5.56			29.29	43.65	0.192	4.87	25.50	21.25	17.00
0.230	5.84			30.74	45.81	0.201	5.11	26.00	21.75	17.50
0.250	6.35			33.36	49.71	0.219	5.56	27.00	22.50	18.00
0.281	7.14			37.40	55.74	0.246	6.25	28.50	23.75	19.00
0.312	7.92			41.42	61.73	0.273	6.93	30.00	25.00	20.00
0.330	8.38			43.75	65.20	0.289	7.33	30.00	25.00	20.00
0.344	8.74			45.55	67.89	0.301	7.65	30.00	25.00	20.00
0.375	9.53			49.53	73.82	0.328	8.33	30.00	25.00	20.00
0.438	11.13			57.56	85.78	0.383	9.73	30.00	25.00	20.00
0.500	12.70	65.38	97.43	0.438	11.11	30.00	25.00	20.00		
14	355.6	0.164	4.17	24.22	36.10	0.144	3.64	23.00	19.00	15.25
		0.172	4.37	25.39	37.84	0.151	3.82	23.25	19.50	15.50
		0.179	4.55	26.41	39.36	0.157	3.98	23.50	19.75	15.75
		0.188	4.78	27.72	41.31	0.165	4.18	24.00	20.00	16.00
		0.203	5.16	29.90	44.56	0.178	4.51	24.75	20.75	16.50
		0.219	5.56	32.22	48.02	0.192	4.87	25.50	21.25	17.00
		0.230	5.84	33.81	50.39	0.201	5.11	26.00	21.75	17.50
		0.250	6.35	36.70	54.69	0.219	5.56	27.00	22.50	18.00
		0.281	7.14	41.15	61.33	0.246	6.25	28.50	23.75	19.00
		0.312	7.92	45.59	67.94	0.273	6.93	30.00	25.00	20.00
		0.344	8.74	50.15	74.74	0.301	7.65	30.00	25.00	20.00
		0.375	9.53	54.54	81.29	0.328	8.33	30.00	25.00	20.00
		0.438	11.13	63.41	94.51	0.383	9.73	30.00	25.00	20.00
		0.469	11.91	67.75	100.96	0.410	10.42	30.00	25.00	20.00
		0.500	12.70	72.06	107.39	0.438	11.11	30.00	25.00	20.00

## SIZES AND WEIGHT OF WELDED STEEL PIPE PILES

ASTM A 252

OUTSIDE DIAMETER		NOMINAL THICKNESS		WEIGHT		MINIMUM THICKNESS		ELONGATION (%) IN 2 in ( min )		
in	mm	in	mm	lb/ft	kg/m	in	mm	GRADE 1	GRADE 2	GRADE 3
16	406.4	0.164	4.17	27.73	41.32	0.144	3.64	23.00	19.00	15.25
		0.172	4.37	29.06	43.31	0.151	3.82	23.25	19.50	15.50
		0.179	4.55	30.23	45.06	0.157	3.98	23.50	19.75	15.75
		0.188	4.76	31.73	47.29	0.165	4.18	24.00	20.00	16.00
		0.203	5.16	34.23	51.02	0.178	4.51	24.75	20.75	16.50
		0.219	5.56	36.89	54.98	0.192	4.87	25.50	21.25	17.00
		0.230	5.84	38.72	57.71	0.201	5.11	26.00	21.75	17.50
		0.250	6.35	42.03	62.64	0.219	5.56	27.00	22.50	18.00
		0.281	7.14	47.15	70.27	0.246	6.25	28.50	23.75	19.00
		0.312	7.92	52.25	77.87	0.273	6.93	30.00	25.00	20.00
		0.344	8.74	57.49	85.68	0.301	7.65	30.00	25.00	20.00
		0.375	9.53	62.55	93.22	0.328	8.33	30.00	25.00	20.00
		0.438	11.13	72.77	108.44	0.383	9.73	30.00	25.00	20.00
		0.469	11.91	77.76	115.89	0.410	10.42	30.00	25.00	20.00
		0.500	12.70	82.73	123.30	0.438	11.11	30.00	25.00	20.00
18	457.2	0.172	4.37	32.74	48.79	0.151	3.82	23.25	19.50	15.50
		0.188	4.76	35.75	53.26	0.165	4.18	24.00	20.00	16.00
		0.219	5.56	41.57	61.95	0.192	4.87	25.50	21.25	17.00
		0.230	5.84	43.63	65.02	0.201	5.11	26.00	21.75	17.50
		0.250	6.35	47.37	70.60	0.219	5.56	27.00	22.50	18.00
		0.281	7.14	53.15	79.21	0.246	6.25	28.50	23.75	19.00
		0.312	7.92	58.91	87.80	0.273	6.93	30.00	25.00	20.00
		0.344	8.74	64.84	96.63	0.301	7.65	30.00	25.00	20.00
		0.375	9.53	70.56	105.15	0.328	8.33	30.00	25.00	20.00
		0.438	11.13	82.12	122.38	0.383	9.73	30.00	25.00	20.00
		0.469	11.91	87.77	130.81	0.410	10.42	30.00	25.00	20.00
0.500	12.70	93.41	139.21	0.438	11.11	30.00	25.00	20.00		
20	508.0	0.172	4.37	36.41	54.26	0.151	3.82	23.25	19.50	15.50
		0.188	4.76	39.76	59.26	0.165	4.18	24.00	20.00	16.00
		0.219	5.56	46.25	68.92	0.192	4.87	25.50	21.25	17.00
		0.250	6.35	52.71	78.55	0.219	5.56	27.00	22.50	18.00
		0.281	7.14	59.15	88.16	0.246	6.25	28.50	23.75	19.00
		0.312	7.92	65.58	97.73	0.273	6.93	30.00	25.00	20.00
		0.344	8.74	72.18	107.58	0.301	7.65	30.00	25.00	20.00
		0.375	9.53	78.56	117.09	0.328	8.33	30.00	25.00	20.00
		0.438	11.13	91.47	136.32	0.383	9.73	30.00	25.00	20.00
		0.469	11.91	97.79	145.73	0.410	10.42	30.00	25.00	20.00
		0.500	12.70	104.08	155.12	0.438	11.11	30.00	25.00	20.00
22	558.8	0.172	4.37	40.08	59.73	0.151	3.82	23.25	19.50	15.50
		0.188	4.76	43.78	65.24	0.165	4.18	24.00	20.00	16.00
		0.219	5.56	50.92	75.89	0.192	4.87	25.50	21.25	17.00
		0.250	6.35	58.05	86.51	0.219	5.56	27.00	22.50	18.00
		0.281	7.14	65.15	97.10	0.246	6.25	28.50	23.75	19.00
		0.312	7.92	72.24	107.66	0.273	6.93	30.00	25.00	20.00
		0.375	9.53	86.57	129.02	0.328	8.33	30.00	25.00	20.00
		0.438	11.13	100.82	150.25	0.383	9.73	30.00	25.00	20.00
		0.469	11.91	107.80	160.66	0.410	10.42	30.00	25.00	20.00
		0.500	12.70	114.76	171.03	0.438	11.11	30.00	25.00	20.00
		24	609.6	0.172	4.37	43.75	65.20	0.151	3.82	23.25
0.188	4.76			47.79	71.22	0.165	4.18	24.00	20.00	16.00
0.219	5.56			55.60	82.86	0.192	4.87	25.50	21.25	17.00
0.250	6.35			63.39	94.46	0.219	5.56	27.00	22.50	18.00
0.281	7.14			71.15	106.04	0.246	6.25	28.50	23.75	19.00
0.312	7.92			78.90	117.58	0.273	6.93	30.00	25.00	20.00
0.375	9.53			94.58	140.95	0.328	8.33	30.00	25.00	20.00
0.438	11.13			110.17	164.19	0.383	9.73	30.00	25.00	20.00
0.469	11.91			117.81	175.58	0.410	10.42	30.00	25.00	20.00
0.500	12.70			125.44	186.94	0.438	11.11	30.00	25.00	20.00

## DIMENSION AND DESIGN PROPERTIES OF SPIRAL STEEL PIPE PILES

OUTSIDE DIAMETER	THICKNESS	CROSS SECTIONAL AREA	UNIT WEIGHT	GEOMETRICAL MOMENT OF INERTIA	MODULUS OF SECTION	RADIUS OF GYRATION OF AREA	AREA OF OUTER SURFACE
OD (mm)	t (mm)	A (cm <sup>2</sup> )	W (kg/m)	I (cm <sup>4</sup> )	Z (cm <sup>3</sup> )	i (cm)	m <sup>2</sup> /m
216.3	4.4	29.94	23.5	168 x 10	155	7.49	0.68
	6.0	39.61	31.1	219 x 10	203	7.44	
	7.0	46.03	36.1	252 x 10	233	7.40	
	8.0	52.35	41.1	284 x 10	263	7.37	
267.4	6.0	49.27	38.7	421 x 10	315	9.24	0.84
	7.0	57.27	45.0	486 x 10	363	9.21	
	8.0	65.19	51.2	549 x 10	441	9.18	
	9.0	73.06	57.4	611 x 10	457	9.14	
318.5	5.0	49.20	38.7	605 x 10	380	11.10	1.00
	6.0	58.91	46.2	719 x 10	452	11.10	
	7.0	68.50	53.8	831 x 10	552	11.00	
	8.0	78.04	61.3	941 x 10	591	11.00	
355.6	9.0	87.51	68.7	105 x 10 <sup>3</sup>	659	10.90	1.12
	6.3	69.13	54.3	105 x 10 <sup>2</sup>	593	12.40	
	8.0	87.36	68.6	132 x 10 <sup>2</sup>	742	12.30	
	9.0	98.00	76.9	147 x 10 <sup>2</sup>	828	12.30	
406.4	12.0	129.50	102.0	191 x 10 <sup>2</sup>	106 x 10	12.20	1.28
	6.0	75.50	59.2	151 x 10 <sup>2</sup>	74 x 10	14.20	
	8.0	100.10	78.5	199 x 10 <sup>2</sup>	97 x 10	14.10	
	9.0	112.40	88.2	222 x 10 <sup>2</sup>	109 x 10	14.00	
457.2	10.0	127.50	98.8	244 x 10 <sup>2</sup>	120 x 10	14.00	1.44
	12.0	148.70	117.0	289 x 10 <sup>2</sup>	143 x 10	14.00	
	16.0	196.20	154.0	374 x 10 <sup>2</sup>	142 x 10	13.80	
	19.0	231.20	182.0	435 x 10 <sup>2</sup>	184 x 10	13.70	
	9.0	126.70	99.5	318 x 10 <sup>2</sup>	140 x 10	15.80	
	12.0	167.80	132.0	416 x 10 <sup>2</sup>	182 x 10	15.70	
500.0	16.0	221.80	174.0	540 x 10 <sup>2</sup>	236 x 10	15.60	1.57
	19.0	261.60	205.0	628 x 10 <sup>2</sup>	257 x 10	15.50	
	9.0	138.80	109.0	418 x 10 <sup>2</sup>	167 x 10	17.40	
508.0	12.0	184.00	144.0	548 x 10 <sup>2</sup>	219 x 10	17.30	1.60
	14.0	213.80	168.0	632 x 10 <sup>2</sup>	253 x 10	17.20	
	8.0	125.70	96.8	393 x 10 <sup>2</sup>	155 x 10	17.70	
558.8	9.0	141.10	111.0	439 x 10 <sup>2</sup>	173 x 10	17.60	1.75
	10.0	156.50	123.0	485 x 10 <sup>2</sup>	191 x 10	17.60	
	12.0	187.00	147.0	575 x 10 <sup>2</sup>	227 x 10	17.50	
	14.0	217.30	171.0	663 x 10 <sup>2</sup>	261 x 10	17.50	
	16.0	247.30	194.0	749 x 10 <sup>2</sup>	295 x 10	17.40	
	19.0	291.90	229.0	874 x 10 <sup>2</sup>	344 x 10	17.30	
600.0	9.0	155.50	122.0	588 x 10 <sup>2</sup>	210 x 10	19.40	1.88
	12.0	206.10	162.0	711 x 10 <sup>2</sup>	276 x 10	19.30	
	16.0	272.80	214.0	101 x 10 <sup>3</sup>	360 x 10	19.20	
	19.0	322.20	253.0	118 x 10 <sup>3</sup>	421 x 10	19.10	
600.0	9.0	167.10	131.0	730 x 10 <sup>2</sup>	243 x 10	20.90	1.88
	12.0	221.70	174.0	958 x 10 <sup>2</sup>	320 x 10	20.80	
	14.0	257.70	202.0	111 x 10 <sup>3</sup>	369 x 10	20.70	
	16.0	293.60	230.0	125 x 10 <sup>3</sup>	418 x 10	20.70	

## DIMENSION AND DESIGN PROPERTIES OF SPIRAL STEEL PIPE PILES

OUTSIDE DIAMETER	THICKNESS	CROSS SECTIONAL AREA	UNIT WEIGHT	GEOMETRICAL MOMENT OF INERTIA	MODULUS OF SECTION	RADIUS OF GYRATION OF AREA	AREA OF OUTER SURFACE
OD (mm)	t (mm)	A (cm <sup>2</sup> )	W (kg/m)	I (cm <sup>4</sup> )	Z (cm <sup>3</sup> )	i (cm)	m <sup>2</sup> /m
609.6	8.0	151.20	119.0	684 x 10 <sup>2</sup>	224 x 10	21.30	1.91
	9.0	169.80	133.0	766 x 10 <sup>2</sup>	251 x 10	21.20	
	10.0	188.40	148.0	847 x 10 <sup>2</sup>	278 x 10	21.20	
	12.0	225.30	177.0	101 x 10 <sup>3</sup>	330 x 10	21.10	
	14.0	262.00	206.0	116 x 10 <sup>3</sup>	381 x 10	21.10	
	16.0	298.40	234.2	131 x 10 <sup>3</sup>	431 x 10	21.00	
	19.0	352.50	277.0	154 x 10 <sup>3</sup>	505 x 10	20.90	
700.0	9.0	195.40	153.0	127 x 10 <sup>3</sup>	333 x 10	24.20	2.20
	12.0	259.40	204.0	154 x 10 <sup>3</sup>	439 x 10	24.30	
	14.0	301.70	237.0	178 x 10 <sup>3</sup>	507 x 10	24.30	
	16.0	343.80	270.0	201 x 10 <sup>3</sup>	575 x 10	24.20	
711.2	8.0	176.70	138.7	109 x 10 <sup>3</sup>	307 x 10	24.90	2.23
	9.0	198.50	156.0	122 x 10 <sup>3</sup>	344 x 10	24.80	
	10.0	220.30	172.9	135 x 10 <sup>3</sup>	381 x 10	24.80	
	12.0	263.60	206.9	161 x 10 <sup>3</sup>	453 x 10	24.70	
	14.0	306.50	240.7	186 x 10 <sup>3</sup>	524 x 10	24.60	
	16.0	349.40	274.3	211 x 10 <sup>3</sup>	594 x 10	24.60	
	19.0	413.20	324.0	248 x 10 <sup>3</sup>	696 x 10	24.50	
812.8	8.0	202.30	158.8	164 x 10 <sup>3</sup>	403 x 10	28.50	2.55
	9.0	227.30	178.0	184 x 10 <sup>3</sup>	452 x 10	28.40	
	10.0	251.30	198.0	203 x 10 <sup>3</sup>	500 x 10	28.40	
	12.0	301.90	237.0	242 x 10 <sup>3</sup>	596 x 10	28.30	
	14.0	351.30	275.8	280 x 10 <sup>3</sup>	690 x 10	28.20	
	16.0	400.50	314.4	318 x 10 <sup>3</sup>	782 x 10	28.20	
	19.0	473.60	372.0	373 x 10 <sup>3</sup>	919 x 10	28.10	
914.4	8.0	227.80	178.8	234 x 10 <sup>3</sup>	512 x 10	32.00	2.87
	10.0	284.10	223.0	291 x 10 <sup>3</sup>	635 x 10	32.00	
	12.0	340.00	267.0	346 x 10 <sup>3</sup>	758 x 10	31.90	
	14.0	396.00	310.9	400 x 10 <sup>3</sup>	878 x 10	31.80	
	16.0	451.60	354.5	456 x 10 <sup>3</sup>	997 x 10	31.80	
	19.0	534.50	420.0	536 x 10 <sup>3</sup>	117 x 10 <sup>2</sup>	31.70	
1016.0	10.0	316.00	248.1	400 x 10 <sup>3</sup>	787 x 10	35.60	3.19
	12.0	378.50	297.1	477 x 10 <sup>3</sup>	939 x 10	35.50	
	14.0	440.70	345.9	553 x 10 <sup>3</sup>	109 x 10 <sup>2</sup>	35.40	
	16.0	502.70	394.6	628 x 10 <sup>3</sup>	124 x 10 <sup>2</sup>	35.40	
	18.0	564.40	443.0	702 x 10 <sup>3</sup>	138 x 10 <sup>2</sup>	35.30	
	19.0	595.10	467.0	740 x 10 <sup>3</sup>	146 x 10 <sup>2</sup>	35.20	
1117.6	10.0	348.00	273.1	534 x 10 <sup>3</sup>	95 x 10 <sup>2</sup>	39.20	3.51
	12.0	416.80	327.2	637 x 10 <sup>3</sup>	114 x 10 <sup>2</sup>	39.10	
	14.0	485.40	381.0	739 x 10 <sup>3</sup>	132 x 10 <sup>2</sup>	39.00	
	16.0	553.70	434.6	840 x 10 <sup>3</sup>	150 x 10 <sup>2</sup>	39.00	
	18.0	612.80	488.1	940 x 10 <sup>3</sup>	168 x 10 <sup>2</sup>	39.00	
1219.2	10.0	379.90	298.2	694 x 10 <sup>3</sup>	114 x 10 <sup>2</sup>	42.80	3.83
	12.0	455.20	357.2	829 x 10 <sup>3</sup>	136 x 10 <sup>2</sup>	42.70	
	14.0	530.10	416.1	962 x 10 <sup>3</sup>	157 x 10 <sup>2</sup>	42.60	
	16.0	604.80	474.7	109 x 10 <sup>4</sup>	179 x 10 <sup>2</sup>	42.50	
	18.0	679.30	533.2	122 x 10 <sup>4</sup>	201 x 10 <sup>2</sup>	42.50	

**STEEL PIPE FOR USE IN WATER SYSTEM FACILITIES**

**DIMENSION, WEIGHT & TEST PRESSURE OF PIPE**

AWWA C 200 - 91

SII 2527 - 90

OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT (PLAIN END)		HYDROSTATIC TEST PRESSURE	
in	mm	in	mm	lb/ft	kg/m	kgf/cm <sup>2</sup> *	lb/in <sup>2</sup> *
12½	323.9	0.160	4.1	21.5	32.1	40	565
14	355.6	0.176	4.5	26.0	38.7	40	566
16	406.4	0.176	4.5	29.7	44.3	35	495
18	457.2	0.192	4.9	36.5	54.4	34	480
20	508.0	0.192	4.9	40.6	60.5	30	432
22	558.8	0.212	5.4	49.3	73.5	30	434
24	609.6	0.212	5.4	53.8	80.2	28	398
26	660.4	0.250	6.4	68.7	102.4	30	433
28	711.2	0.250	6.4	74.1	110.4	28	402
30	762.0	0.250	6.4	79.4	118.3	26	375
32	812.8	0.250	6.4	84.7	126.3	25	352
34	863.6	0.250	6.4	90.1	134.2	23	331
36	914.4	0.312	7.9	118.9	177.1	27	390
40	1016.0	0.312	7.9	132.2	197.0	25	351
42	1066.8	0.375	9.5	166.6	248.3	28	402
44	1117.6	0.375	9.5	174.6	260.3	27	384
48	1219.2	0.375	9.5	190.7	284.1	25	352
52	1320.8	0.500	12.7	274.9	409.7	30	433
56	1422.4	0.500	12.7	296.2	441.5	28	402
60	1524.0	0.500	12.7	317.6	473.3	26	375
64	1625.6	0.500	12.7	338.9	505.1	25	352
68	1727.2	0.625	15.9	449.5	669.9	29	414
72	1828.8	0.625	15.9	476.2	709.7	27	391
76	1930.4	0.625	15.9	502.9	749.5	26	370
80	2032.0	0.625	15.9	529.6	789.3	25	352

\* S.M.Y.S = 30,000 Psi

Other Diameter and Wall Thickness can be supplied on customer request / specification

Minimum Wall Thickness : 4 mm  
 Maximum Wall Thickness : 25.4 mm  
 Minimum Diameter : 219.1 mm  
 Maximum Diameter : 3,000 mm ( ASTM )  
 : 2,032 mm ( API & STAND )

# SIZE AND WEIGHT OF WELDED STEEL PIPE

API 5 L

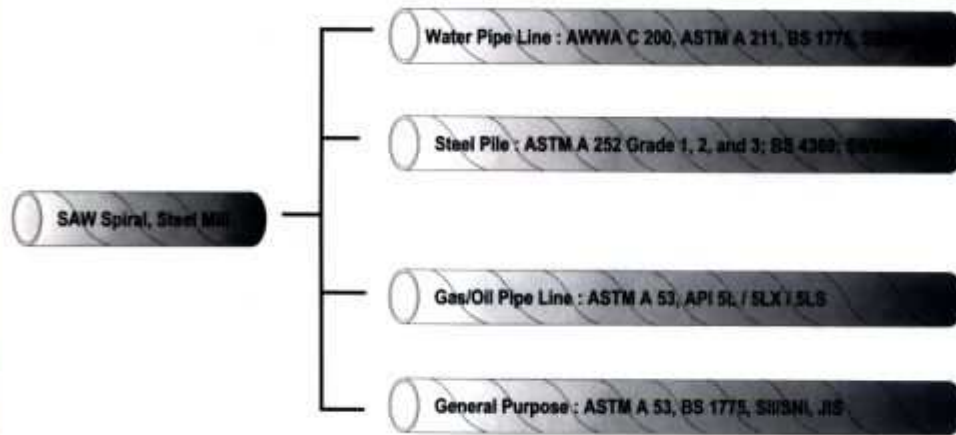
OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT		INSIDE DIAMETER		TEST PRESSURE, k Pa x 100									
in	mm	in	mm	lb/ft	kg/m	in	mm	GRADE A		GRADE B		GRADE					
								STD	ALT	STD	ALT	X 42	X 46	X 52	X 56	X 60	X 65
8 5/8	219.1	0.250	6.35	22.35	33.31	8.1	206.4	72	90	84	105	126	138	156	167	180	195
		0.375	9.53	33.03	49.23	7.9	200.1	108	135	126	157	189	207	207	207	207	207
10%	273	0.250	6.35	28.02	41.75	10.2	260.3	58	72	6	8	114	125	142	152	163	177
		0.365	9.27	40.46	60.29	10.0	254.5	84	105	99	123	17	183	207	207	207	207
12%	323.8	0.250	6.35	33.36	49.71	12.2	311.1	49	61	56	71	96	105	119	129	138	150
		0.375	9.53	49.53	73.82	12.0	304.8	73	91	85	106	145	158	179	193	207	207
14	355.6	0.250	6.35	36.70	54.69	13.5	342.9	44	55	52	65	88	96	109	117	125	136
		0.375	9.53	54.54	81.29	13.3	336.6	66	83	77	97	12	144	163	176	188	204
		0.438	11.13	63.41	94.51	13.1	333.3	78	97	90	113	154	169	191	205	207	207
16	406.4	0.250	6.35	42.03	62.64	15.5	393.7	39	48	45	56	77	84	95	103	110	119
		0.375	9.53	62.55	93.22	15.3	387.4	58	72	68	85	115	126	143	154	165	178
		0.500	12.70	82.73	123.30	15.0	381.0	77	97	90	113	154	168	190	205	207	207
18	457.2	0.250	6.35	47.37	70.60	17.5	444.5	34	43	40	50	68	75	85	91	98	105
		0.375	9.53	70.56	105.15	17.3	438.2	52	65	61	75	103	112	127	136	146	158
		0.500	12.70	93.41	139.21	17.0	431.8	69	86	81	101	136	150	169	182	195	207
20	508	0.250	6.35	52.71	78.55	19.5	495.3	31	39	36	45	65	72	81	87	93	101
		0.375	9.53	78.56	117.09	19.3	489.0	47	58	54	68	98	107	121	130	139	151
		0.500	12.70	104.08	155.12	19.0	482.6	62	77	72	90	130	143	161	174	186	202
22	558.8	0.250	6.35	58.05	86.51	21.5	546.1	28	35	33	41	59	65	73	79	85	92
		0.375	9.53	86.57	129.02	21.3	539.8	42	53	5	61	89	97	110	119	127	137
		0.500	12.70	114.76	171.03	21.0	533.4	56	70	65	82	119	130	147	158	169	172
24	609.6	0.250	6.35	63.39	94.46	23.5	596.9	26	32	30	38	54	59	68	72	77	84
		0.375	9.53	94.58	140.95	23.3	590.6	39	48	45	56	81	89	101	109	116	126
		0.500	12.70	125.44	186.94	23.0	584.2	52	65	61	75	109	119	134	145	155	158
26	660.4	0.250	6.35	68.72	102.42	25.5	647.7	24	30	28	34	50	55	62	67	72	77
		0.375	9.53	102.58	152.88	25.3	641.4	36	45	42	52	75	82	93	100	107	116
		0.500	12.70	136.11	202.85	25.0	635.0	48	60	56	70	100	110	124	134	138	138
28	711.2	0.250	6.35	74.06	110.37	27.5	698.5	22	28	25	32	47	51	58	62	66	72
		0.375	9.53	110.59	164.81	27.3	692.2	33	41	39	48	70	76	86	93	100	108
		0.500	12.70	146.79	218.76	27.0	685.8	44	55	52	65	93	102	115	124	133	144
30	762	0.250	6.35	79.40	118.33	29.5	749.3	21	25	24	30	43	48	54	58	62	68
		0.375	9.53	118.60	176.75	29.3	743.0	31	39	36	45	65	72	81	87	93	101
		0.500	12.70	157.46	234.67	29.0	736.6	41	52	48	61	87	95	107	116	124	134
		0.625	15.88	195.99	292.09	28.8	730.3	52	65	61	75	109	119	134	145	155	168
32	812.8	0.250	6.35	84.74	126.28	31.5	800.1	19	24	23	28	41	45	50	54	58	63
		0.375	9.53	126.60	188.68	31.3	793.8	29	37	34	43	61	67	76	81	88	94
		0.500	12.70	168.14	250.58	31.0	787.4	39	48	45	56	81	89	101	109	116	126
		0.625	15.88	209.34	311.98	30.8	781.1	48	61	56	71	102	112	126	136	145	158
34	863.6	0.250	6.35	90.07	134.24	33.5	850.9	18	23	21	27	39	42	48	51	54	59
		0.375	9.53	134.61	200.61	33.3	844.6	28	34	32	40	57	63	71	76	82	89
		0.500	12.70	178.81	266.49	33.0	838.2	37	45	42	53	76	84	95	102	110	119
		0.625	15.88	222.68	331.87	32.8	831.9	45	57	53	67	96	105	119	127	137	148
36	914.4	0.250	6.35	95.41	142.19	35.5	901.7	17	21	2	25	36	40	45	48	52	56
		0.375	9.53	142.62	212.54	35.3	895.4	26	32	30	38	54	59	68	72	77	84
		0.500	12.70	189.49	282.40	35.0	889.0	34	42	40	50	72	79	90	9	103	112
		0.625	15.88	236.03	351.75	34.8	882.7	43	54	50	63	90	99	112	121	130	140
38	965.2	0.375	9.53	150.62	224.48	37.3	946.2	25	30	28	36	52	56	63	68	74	79
		0.500	12.70	200.16	298.31	37.0	939.8	32	41	38	48	68	75	85	92	98	106
		0.625	15.88	249.37	371.64	36.8	933.5	41	51	48	59	85	94	105	107	123	132
40	1016	0.375	9.53	158.63	236.41	39.3	997.0	23	29	27	34	49	54	61	65	70	76
		0.500	12.70	210.84	314.22	39.0	990.6	31	39	36	45	65	72	81	87	93	101
		0.625	15.88	262.71	391.53	38.8	984.3	39	48	45	56	81	89	101	109	116	136
		0.688	17.48	288.73	430.30	38.6	981.0	43	53	50	62	90	98	111	119	128	138
		0.750	19.05	314.22	468.28	38.5	977.9	47	58	54	68	98	107	121	130	139	151

# SIZE AND WEIGHT OF WELDED STEEL PIPE API 5 L

OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT		INSIDE DIAMETER		TEST PRESSURE, k Pa x 100									
								GRADE A		GRADE B		GRADE					
in	mm	in	mm	lb/ft	kg/m	in	mm	STD	ALT	STD	ALT	X 42	X 46	X 52	X 56	X 60	X 65
42	1066.8	0.375	9.53	166.64	248.34	41.3	1047.8	22	28	26	32	47	51	58	62	66	72
		0.500	12.70	221.51	330.13	41.0	1041.4	30	37	34	43	62	68	76	83	89	96
		0.625	15.88	276.06	411.41	40.8	1035.1	37	46	43	54	77	85	96	103	111	120
		0.688	17.48	303.42	452.19	40.6	1031.8	41	51	48	59	85	94	105	114	122	132
		0.750	19.05	330.27	492.20	40.5	1028.7	44	55	52	65	93	102	115	124	133	144
44	1117.6	0.375	9.53	174.64	260.27	43.3	1098.6	21	26	25	31	44	49	55	59	63	69
		0.500	12.70	232.19	346.03	43.0	1092.2	28	35	33	41	59	65	73	79	85	92
		0.625	15.88	289.40	431.30	42.8	1085.9	35	44	41	52	74	81	92	99	105	114
		0.688	17.48	318.11	474.09	42.6	1082.6	39	48	45	56	81	89	101	109	116	126
		0.750	19.05	346.28	516.07	42.5	1079.5	42	53	50	61	89	97	110	119	127	137
46	1168.4	0.375	9.53	182.65	272.20	45.3	1149.4	20	25	23	30	43	47	52	56	61	65
		0.500	12.70	242.86	361.94	45.0	1143.0	27	34	32	39	56	62	70	76	81	88
		0.625	15.88	302.75	451.19	44.8	1136.7	34	42	39	49	71	77	88	94	101	101
		0.688	17.48	332.80	495.98	44.6	1133.4	37	46	43	54	78	85	96	104	112	121
		0.750	19.05	362.30	539.93	44.5	1130.3	41	50	47	59	85	93	105	113	121	132
48	1219.2	0.375	9.53	190.66	284.14	47.3	1200.2	19	24	23	28	41	45	50	54	58	63
		0.500	12.70	253.54	377.85	47.0	1193.8	26	32	30	38	54	59	68	72	77	84
		0.625	15.88	316.09	471.07	46.8	1187.5	32	41	38	47	68	74	84	90	97	105
		0.688	17.48	347.49	517.87	46.6	1184.2	36	44	41	52	74	82	92	99	107	116
		0.750	19.05	378.31	563.80	46.5	1181.1	39	48	45	56	81	89	101	109	116	126
52	1320.8	0.375	9.53	206.67	308.00	51.3	1301.8	18	22	21	26	38	41	47	50	54	58
		0.500	12.70	274.89	409.67	51.0	1295.4	24	30	28	34	50	55	62	67	72	78
		0.625	15.88	342.78	510.85	50.8	1289.1	30	37	34	43	63	69	78	83	90	97
		0.688	17.48	376.87	561.65	50.6	1285.8	33	41	39	48	69	76	85	92	99	107
		0.750	19.05	410.33	611.53	50.5	1282.7	36	45	42	52	75	82	93	100	107	116
56	1422.4	0.375	9.53	222.68	331.87	55.3	1403.4	17	21	19	24	35	38	43	46	50	54
		0.500	12.70	296.24	441.49	55.0	1397.0	22	28	26	32	47	51	58	62	66	72
		0.625	15.88	369.47	550.62	54.8	1390.7	28	34	32	41	58	63	72	77	83	90
		0.688	17.48	406.25	605.44	54.6	1387.4	30	38	36	45	64	70	79	85	92	99
		0.750	19.05	442.36	659.26	54.5	1384.3	33	41	39	48	70	76	86	93	100	108
60	1524.0	0.375	9.53	238.69	355.73	59.3	1505.0	16	19	18	23	32	36	41	43	47	50
		0.500	12.70	317.59	473.31	59.0	1498.6	21	26	24	30	43	48	54	58	62	68
		0.625	15.88	396.16	590.40	58.8	1492.3	26	32	30	38	54	59	68	72	78	84
		0.688	17.48	435.63	649.22	58.6	1489.0	28	36	33	41	60	65	74	80	85	92
		0.750	19.05	474.39	706.98	58.5	1485.9	31	39	37	45	65	71	81	87	93	101
64	1625.6	0.375	9.53	254.71	379.59	63.3	1606.6	14	18	17	21	30	34	38	41	43	48
		0.500	12.70	338.94	505.13	63.0	1600.2	19	2	23	28	41	45	50	54	58	63
		0.625	15.88	422.84	630.17	62.8	1593.9	24	30	28	35	51	56	63	68	72	79
		0.688	17.48	465.00	693.00	62.6	1590.6	27	33	31	39	56	61	70	74	80	87
		0.750	19.05	506.41	754.71	62.5	1587.5	29	37	34	43	61	67	76	81	88	94
68	1727.2	0.500	12.70	360.29	536.95	67.0	1701.8	18	23	21	27	39	42	48	51	54	59
		0.625	15.88	449.53	669.95	66.8	1695.5	23	28	27	33	48	52	59	64	68	74
		0.688	17.48	494.38	736.79	66.6	1692.2	25	32	29	37	52	58	65	70	75	81
		0.750	19.05	538.44	802.44	66.5	1689.1	28	34	32	40	47	63	71	76	82	89
		0.500	12.70	381.64	568.77	71.0	1803.4	17	21	20	25	37	39	45	48	52	56
72	1828.8	0.625	15.88	476.22	709.72	70.8	1797.1	21	27	25	32	45	50	56	60	65	70
		0.688	17.48	523.76	780.57	70.6	1793.8	23	30	28	34	50	54	61	66	71	77
		0.500	12.70	403.00	600.59	75.0	1905.0	17	21	19	24	34	37	43	45	49	53
		0.625	15.88	502.91	749.49	74.8	1898.7	21	25	24	30	43	47	53	57	61	66
		0.688	17.48	553.14	824.35	74.6	1895.4	23	28	26	33	47	52	59	63	68	73
80	2032.0	0.750	19.05	602.49	897.90	74.5	1892.3	25	30	28	36	52	56	63	68	74	79
		0.625	15.88	529.60	789.27	78.8	2000.3	19	24	23	28	41	45	50	54	58	63
		0.688	17.48	582.52	868.14	78.6	1997.0	21	27	25	31	45	49	55	60	64	70
		0.750	19.05	634.52	945.63	78.5	1993.9	23	29	27	34	49	54	61	65	70	76



# PRODUCT SPECIFICATION :



## PIPE COATING PROCESS

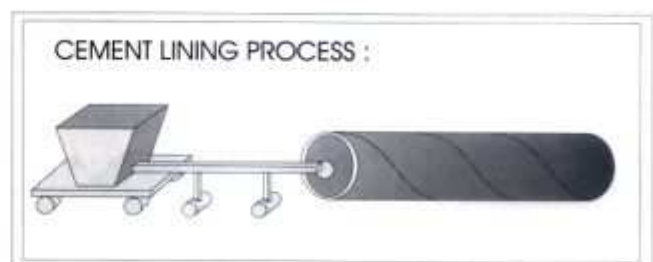
Before the coating process is started, we must do Surface Preparation to the steel pipe. PT SPINDO uses the Shot Blasting machine from CRC Evans - USA to achieve a clear surface (NACE 2-1/2 as described in NACE TM 01-70 or TM 01-75). Unless the preparation is done carefully, the result of coating process is useless, because corrosion comes from inside the steel pipe.

### 1. EXTERNAL COATING

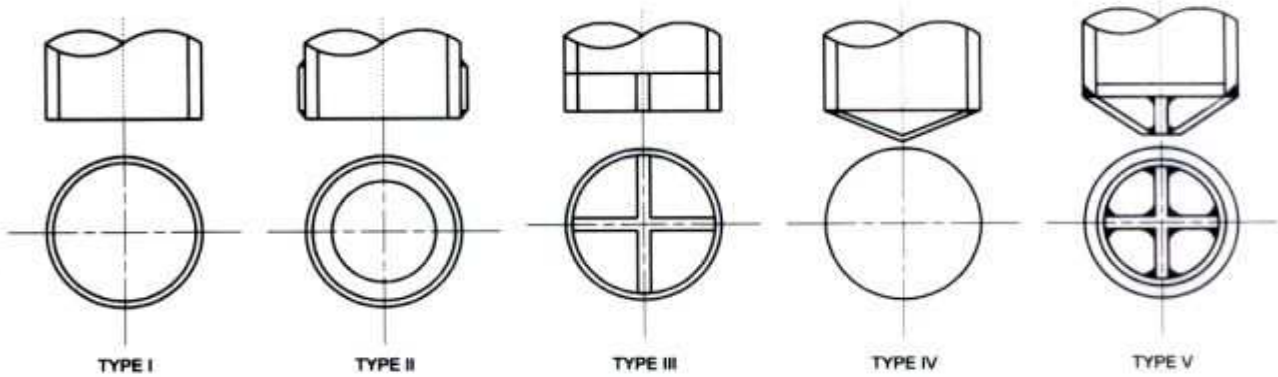
- Polyethylene or Polyvinyl Tape Coating, AWWA C 214
- Coal Tar Enamel & Asbestos Felt Wrap, AWWA C 203
- Coal Tar Enamel & Fibrous Glass Mat Wrap, AWWA C 203
- Asphalt Coating, Dipping or Painting
- Epoxy Coating, AWWA C 210

### 2. INTERNAL COATING

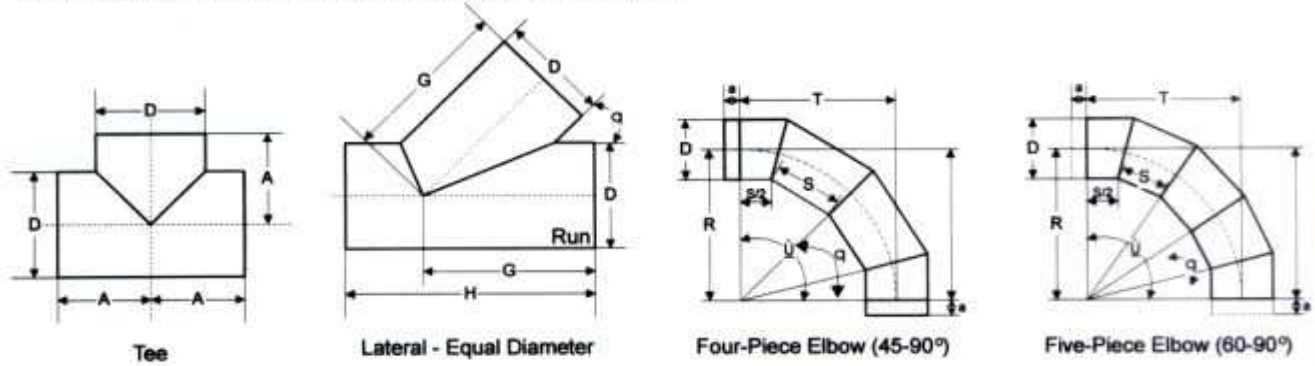
- Centrifugally Spun Cement Mortar Lining (AWWA C205 or BSS 534)
- On Site Cement Mortar Lining (AWWA C 205 or BS 534)
- Epoxy Painting (AWWA C 210)



## TYPICAL OF PILE SHOES :

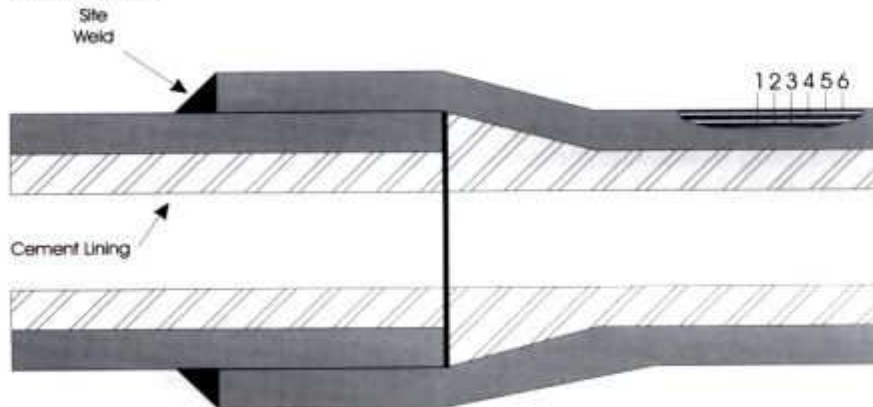


## WATER PIPE FITTINGS & ELBOW :

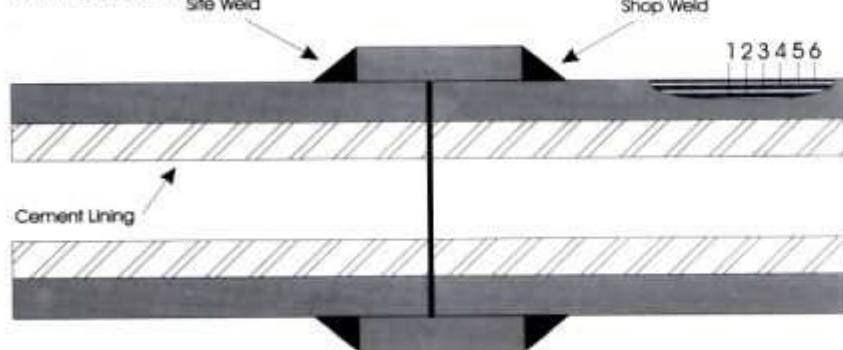


## TYPICAL OF PIPE JOINTINGS :

### EXPANDED :



### WITH SLEEVE :



1. Clean Pipe (Shot Blasted)
2. Primer
3. Coal Tar Enamel
4. Inner Wrap
5. Coal Tar Enamel
6. Outer Wrap

ORIGINAL


LICENSE NO. 5L-0313

# American Petroleum Institute


## Certificate of Authority to Use Official Monogram

THE AMERICAN PETROLEUM INSTITUTE hereby grants to  
**PT. STEEL PIPE INDUSTRY OF INDONESIA**

**Jawa Timur , Indonesia**

the right to use the Official Monogram  on manufactured products under the conditions specified in the official publications of the American Petroleum Institute entitled API Spec Q1 and Specification 5L

and in accordance with the provisions of the License Agreement.

In all cases where the Official Monogram  is applied, the Monogram should be used in conjunction with this certificate number 5L-0313.

The American Petroleum Institute reserves the right to revoke this authorization to use the Official Monogram, for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

Effective Date Nov 4 1999  
Expiration Date NOVEMBER 4, 2002



AMERICAN PETROLEUM INSTITUTE,

*A. William Frisk*

Secretary