

Carbon Steel Boiler and Heat Exchanger Tubes

ASTM A 53-2001

Nominal Size	Outside Diameter		Wall Thickness		Nominal Weight		Weight Class	Sch. No.	Test Pressure (psi)	
	in.	mm	in.	mm	lb/ft	kg/m			Grade A	Grade B
14	14.000	355.6	0.210	5.33	30.96	14.04	46.04	-	540	630
			0.219	5.56	32.26	14.63	47.99	-	560	660
			0.250	6.35	36.75	16.67	54.69	-	640	750
			0.281	7.14	41.21	18.69	61.35	-	720	840
			0.312	7.92	45.65	20.71	67.90	-	800	940
			0.344	8.74	50.22	22.78	74.76	-	880	1,030
			0.375	9.52	54.62	24.78	81.25	STD	960	1,120
			0.438	11.13	63.50	28.80	94.55	-	1,130	1,310
			0.469	11.91	67.84	30.77	100.94	-	1,210	1,410
			0.500	12.70	72.16	32.73	107.39	XS	1,290	1,500
16	16.000	406.4	0.219	5.56	36.95	16.76	54.96	-	490	570
			0.250	6.35	42.09	19.09	62.64	-	560	660
			0.281	7.14	47.22	21.42	70.30	-	630	740
			0.312	7.92	52.32	23.73	77.83	-	700	820
			0.344	8.74	57.57	26.11	85.71	-	770	900
			0.375	9.52	62.64	28.41	93.17	STD	840	980
			0.438	11.13	72.86	33.05	108.49	-	990	1,150
			0.469	11.91	77.87	35.32	115.86	-	1,060	1,230
			0.500	12.70	82.85	37.58	123.30	XS	1,120	1,310
			18	18.000	457.2	0.250	6.35	47.44	21.52	70.60
0.281	7.14	53.23				24.14	79.24	-	560	660
0.312	7.92	58.99				26.76	87.75	-	620	730
0.344	8.74	64.93				29.45	96.66	-	690	800
0.375	9.52	70.65				32.05	105.10	STD	750	880
0.406	10.31	76.36				34.64	113.62	-	810	950
0.438	11.13	82.23				37.30	122.43	-	880	1,020
0.469	11.91	87.89				39.87	130.78	-	940	1,090
0.500	12.70	93.54				42.43	139.20	XS	1,000	1,170
0.562	14.27	104.76				47.52	155.87	-	1,120	1,310
20	20.000	508.0	0.250	6.35	52.78	23.94	78.55	-	450	520
			0.281	7.14	59.23	26.87	88.19	-	510	590
			0.312	7.92	65.66	29.78	97.67	-	560	660
			0.344	8.74	72.28	32.79	107.60	-	620	720
			0.375	9.52	78.67	35.68	117.02	STD	680	790
			0.406	10.31	84.04	38.12	126.53	-	730	850
			0.438	11.13	91.59	41.54	136.37	-	790	920
			0.469	11.91	97.92	44.42	145.70	-	850	950
			0.500	12.70	104.23	47.28	155.12	XS	900	1,050
			0.562	14.27	115.87	52.43	173.94	-	990	1,150
24	24.000	609.6	0.250	6.35	63.47	28.79	94.46	-	380	440
			0.281	7.14	71.25	32.32	106.08	-	420	490
			0.312	7.92	79.01	35.84	117.51	-	470	550
			0.344	8.74	86.99	39.46	129.50	-	520	600
			0.375	9.52	94.71	42.96	140.88	STD	560	660
			0.406	10.31	102.40	46.45	152.37	-	610	710
			0.438	11.13	110.32	50.04	164.26	-	660	770
			0.469	11.91	117.98	53.51	175.54	-	700	820
			0.500	12.70	125.61	56.98	186.94	XS	750	880
			0.562	14.27	140.81	63.87	209.50	-	840	980

ASTM A 178-1995, KS D 3563-2001
ASTM A 214-1996, JIS G 3461-1988
(Unit : kg/m)

Wall thickness (mm)	12	16	20	23	26	29	32	35	40	45	50	55	60	65	70	80	95	110	125
15.9	0.435	0.564	0.686	0.771	0.853	0.930													
19.0	0.527	0.687	0.838	0.947	1.05	1.15													
21.7	0.607	0.793	0.972	1.10	1.22	1.34	1.46												
25.4	0.716	0.939	1.15	1.31	1.46	1.61	1.75	1.89											
27.2	0.769	1.01	1.24	1.41	1.58	1.74	1.89	2.05	2.29										
31.8	0.906	1.19	1.47	1.67	1.87	2.07	2.26	2.44	2.74	3.03									
34.0		1.28	1.58	1.80	2.01	2.22	2.43	2.63	2.96	3.27	3.58								
38.1		1.44	1.78	2.03	2.28	2.52	2.75	2.99	3.36	3.73	4.08	4.42							
42.7			2.01	2.29	2.57	2.85	3.12	3.38	3.82	4.24	4.65	5.05	5.43						
45.0			2.12	2.42	2.72	3.01	3.30	3.58	4.04	4.49	4.93	5.36	5.77	6.17					
48.6			2.30	2.63	2.95	3.27	3.58	3.89	4.40	4.89	5.38	5.85	6.30	6.75	7.18				
50.8			2.41	2.75	3.09	3.43	3.76	4.08	4.62	5.14	5.65	6.14	6.63	7.10	7.56	8.44	9.68	10.8	11.8
54.0			2.56	2.93	3.30	3.65	4.01	4.36	4.93	5.49	6.04	6.58	7.10	7.61	8.11	9.07	10.4	11.7	12.8
57.1			2.72	3.11	3.49	3.88	4.25	4.63	5.24	5.84	6.42	7.00	7.56	8.11	8.65	9.69	11.2	12.5	13.7
60.3			2.88	3.29	3.70	4.10	4.51	4.90	5.55	6.19	6.82	7.43	8.03	8.62	9.20	10.3	11.9	13.4	14.7
63.5				3.47	3.90	4.33	4.76	5.18	5.87	6.55	7.21	7.87	8.51	9.14	9.75	10.9	12.7	14.2	15.7
65.0				3.56	4.00	4.44	4.88	5.31	6.02	6.71	7.40	8.07	8.73	9.38	10.0	11.2	13.0	14.6	16.2
70.0				3.84	4.32	4.80	5.27	5.74	6.51	7.27	8.01	8.75	9.47	10.2	10.9	12.2	14.2	16.0	17.7
76.2				4.19	4.72	5.24	5.76	6.27	7.12	7.96	8.78	9.59	10.4	11.2	11.9	13.5	15.6	17.7	19.6
82.6							6.27	6.83	7.75	8.67	9.57	10.5	11.3	12.2	13.1	14.7	17.1	19.4	21.6
88.9							6.76	7.37	8.37	9.37	10.3	11.3	12.3	13.2	14.1	16.0	18.6	21.1	23.6
101.6								8.47	9.63	10.8	11.9	13.0	14.1	15.2	16.3	18.5	21.6	24.6	27.5
114.3									10.9	12.2	13.5	14.8	16.0	17.3	18.5	21.0	24.6	28.0	31.4
127.0									12.1	13.6	15.0	16.5	17.9	19.3	20.7	23.5	27.5	31.5	35.3
139.8										18.2	19.8	21.4	22.9	24.4	26.0	30.5	34.9	39.2	43.2