WHY CHOOSE THE SEAH STEEL VINA ?
WHAT ARE THE ADVANTAGES OF SEAH PIPE?

SeAH Steel Vina has;

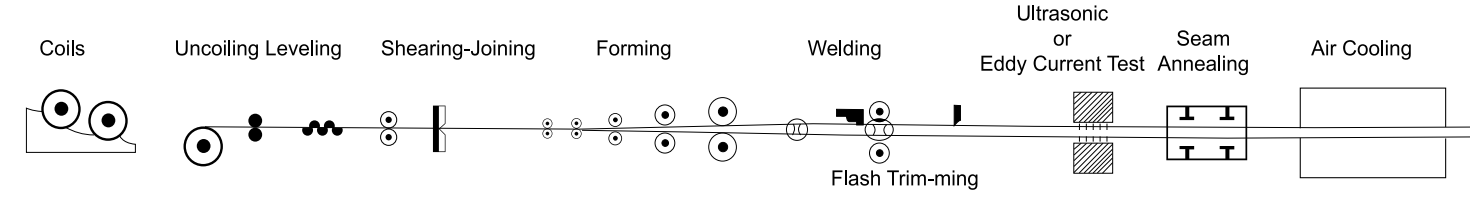
- Over 60 years of accumulated knowledge and technical expertise. Please refer to the website of the group : www.seahsteel.co.kr
- Quality management system for perfect product with high quality
- Experienced and qualified professionals able to understand and fulfill customers needs promptly.
- A commitment to customer satisfaction
- A research and development center that develops API material (with POSCO)
- A strategic alliance with POSCO since 2007.

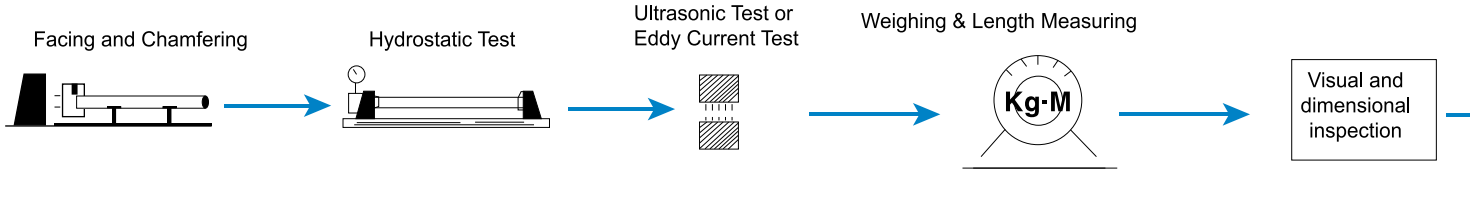
Main Products

- British Standards (BS/EN 10255)
- Korean Industrial Standards (KS)
- American Petroleum Institute Standards (API)
- American Society forTesting & Material Standards (ASTM)
- Japanese Industrial Standards (JIS)

Carbon Steel Pipes for Ordinary Piping	■ Pipes for Water Piping ■ Pipes for General Ordinary Piping	► For City & Industrial Water, Irrigation & Agriculture Water, Oil & Gas Supply, Sprinkler, Fire Hydrant, Ship Piping ect,	KS JIS BS ASTM
Carbon Steel Pipes for Pressure Service	■ Pipes for Pressure Service	► For Pressure Service At The Temperature Not Exceeding 350^0C	KS JIS
Conduit Tubes	■ Electrical Metallic Tubing ■ Thin Wall Conduit Tubes ■ Thick Wall Conduit Tubes	► For Electric wiring	ANSI KS JIS UL
Carbon Steel Tubes for Structural Purpose	■ Tubes for General Structural Purpose ■ Tubes for Mechanical Structural Purpose ■ Automobile Structural Purpose ■ Fence Tubes ■ Pipe Scaffoldings ■ Supports ■ Posts for Green House ■ Steel Pipe Pile ■ Steel Pipe Pole	► For Building, Bridge, Harbor, Machinery, Steel Tower, Automobile, Bicycle, Electric. Light Post. Scaffold, Steel Furniture, Support, Hand Rail and Fence etc.	KS JIS ASTM DIN
API Line Pipe & Oil Country Tubular Goods	■ Line Pipe ■ High Test Line Pipe ■ Casing & Tubing	► For use conveying Gas, Water and Oil, in producing operation in both Oil and Natural Gas Industries	API
Carbon steel pipe for piping system	■ Pipe for heating, ventilation and air conditioning (HVAC)	► For fire fighting system, chiller system	FM

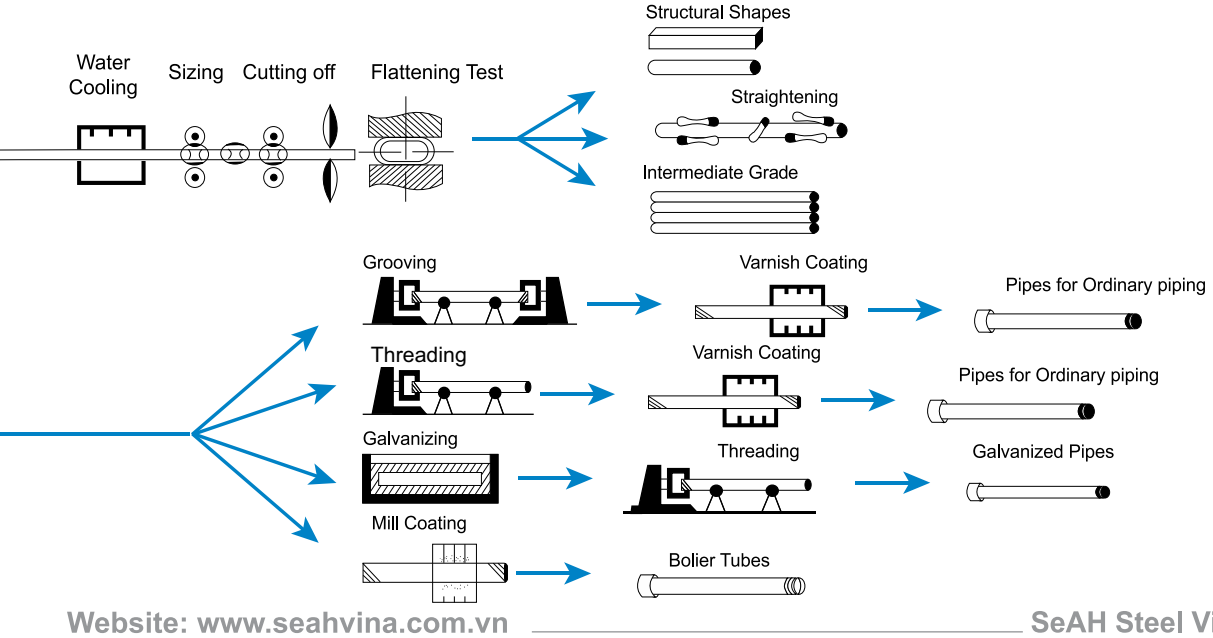
Manufacturing Process





Size Availability (E.R.W)

ASTM - API		BS		JIS-KS		OD		Độ dày	inch	0.039	0.08	0.118	0.157	0.197	0.236	0.276	0.315	0.354	0.393
NB	OD (in)	NB	OD (in)	A	B	mm			mm	1	2	3	4	5	6	7	8	9	10
							15.9												
		3/8	0.656 - 0.671			16.7	17.1												
3/8	0.675						17.1												
			0.660 - 0.685			16.8	17.3												
				10	3/8		17.4												
							19.1												
							21.0												
1/2	0.840						21.3												
		1/2	0.825 - 0.841			21.0	21.4												
			0.831 - 0.856			21.1	21.7												
				15	1/2		21.7												
							22.2												
							25.4												
							26.5												
3/4	1.050						26.7												
		3/4	1.041 - 1.059			26.4	26.9												
			1.047 - 1.072			26.6	27.2												
				20	3/4		27.2												
							28.6												
							31.8												
							33.3												
1	1.315						33.4												
		1	1.309 - 1.328			33.2	33.8												
				25	1		34.0												
			1.316 - 1.346			33.4	34.2												
							38.1												
							41.9												
1-1/4	1.660						42.2												
		1-1/4	1.650 - 1.670			41.9	42.5												
				32	1-1/4		42.7												
			1.657 - 1.687			42.1	42.9												
							47.8												
1-1/2	1.900						48.3												
		1-1/2	1.882 - 1.903			47.8	48.4												
				40	1-1/2		48.6												
			1.889 - 1.919			48.0	48.8												
							50.8												
							59.6												
		2	2.347 - 2.370			59.6	60.2												
2	2.375						60.3												
				50	2		60.5												
			2.354 - 2.394			59.8	60.8												
							63.5												
2-1/2	2.875						73.0												
		2-1/2	2.960 - 2.991			75.2	76.0												
							76.2												
				65	2-1/2		76.3												
			2.969 - 3.014			75.4	76.6												
				80	3		87.9												
		3	3.460 - 3.491			87.9	88.7												
3	3500						88.9												
							89.1												
			3.469 - 3.524			88.1	89.5												
				100	4		113.4												
		4	4.450 - 4.481			113.0	113.9												
4	4.500						114.3												
			4.459 - 4.524			113.3	114.9												
							127.0												
				125	5		139.8												
		5	5.459 - 5.534			138.7	140.6												
5	5.563						141.3												
							152.4												
				150	6		165.2												
		6	6.459 - 6.539			164.1	166.1												
6	6.625						168.3												
7	7.000			175	7		216.3												
8	8.625			200	8		219.1												



Black and Hot - dipped Zinc - coated Tubes

BS 1387 - 1985 (EN 10255)

Grade	Nominal Size		Outside Diameter				Wall Thickness		Weight				Pcs/Bdl
			Max		Min				Plain Ends		Screwed and Socketed		
	in	A	in	mm	in	mm	in	mm	kg / ft	kg / m	kg / ft	kg / m	
A1	3/8	10	0.673	17.1	0.657	16.7	0.063	1.6	0.184	0.604	0.199	0.652	217
	1/2	15	0.843	21.4	0.827	21.0	0.075	1.9	0.276	0.904	0.281	0.922	217
	3/4	20	1.059	26.9	1.039	26.4	0.083	2.1	0.388	1.274	0.395	1.296	127
	1	25	1.331	33.8	1.307	33.2	0.091	2.3	0.539	1.770	0.550	1.803	91
	1 1/4	32	1.673	42.5	1.650	41.9	0.091	2.3	0.690	2.263	0.701	2.301	61
	1 1/2	40	1.906	48.4	1.882	47.8	0.098	2.5	0.857	2.811	0.870	2.855	61
	2	50	2.370	60.2	2.346	59.6	0.079	2.0	0.871	2.856	-	-	37
	2	50	2.370	60.2	2.346	59.6	0.102	2.6	1.120	3.674	1.136	3.726	37
	2 1/2	65	2.992	76.0	2.961	75.2	0.114	2.9	1.585	5.199	1.608	5.275	37
	3	80	3.492	88.7	3.461	87.9	0.114	2.9	1.861	6.107	1.887	6.191	19
	4	100	4.484	113.9	4.449	113.0	0.098	2.5	2.086	6.843	-	-	19
	4	100	4.484	113.9	4.449	113.0	0.126	3.2	2.653	8.704	2.687	8.815	19
LIGHT(L)	3/8	10	0.673	17.1	0.657	16.7	0.071	1.8	0.204	0.670	0.206	0.676	217
	1/2	15	0.843	21.4	0.827	21.0	0.079	2.0	0.289	0.947	0.291	0.956	217
	3/4	20	1.059	26.9	1.039	26.4	0.091	2.3	0.422	1.384	0.424	1.390	127
	1	25	1.331	33.8	1.307	33.2	0.102	2.6	0.604	1.981	0.610	2.000	91
	1 1/4	32	1.673	42.5	1.650	41.9	0.102	2.6	0.774	2.539	0.783	2.570	61
	1 1/2	40	1.906	48.4	1.882	47.8	0.114	2.9	0.985	3.232	0.997	3.270	61
	2	50	2.370	60.2	2.346	59.6	0.114	2.9	1.242	4.076	1.265	4.150	37
	2 1/2	65	2.992	76.0	2.961	75.2	0.126	3.2	1.741	5.713	1.777	5.830	37
	3	80	3.492	88.7	3.461	87.9	0.126	3.2	2.047	6.715	2.100	6.890	19
	4	100	4.484	113.9	4.449	113.0	0.142	3.6	2.974	9.756	3.048	10.000	19
MEDIUM(M)	3/8	10	0.685	17.4	0.661	16.8	0.091	2.3	0.256	0.839	0.258	0.845	217
	1/2	15	0.854	21.7	0.831	21.1	0.102	2.6	0.367	1.205	0.372	1.220	217
	3/4	20	1.071	27.2	1.047	26.6	0.102	2.6	0.475	1.558	0.479	1.570	127
	1	25	1.346	34.2	1.315	33.4	0.126	3.2	0.736	2.415	0.741	2.430	91
	1 1/4	32	1.689	42.9	1.657	42.1	0.126	3.2	0.945	3.101	0.954	3.130	61
	1 1/2	40	1.921	48.8	1.890	48.0	0.126	3.2	1.087	3.567	1.100	3.610	61
	2	50	2.394	60.8	2.354	59.8	0.142	3.6	1.534	5.034	1.554	5.100	37
	2 1/2	65	3.016	76.6	2.969	75.4	0.142	3.6	1.959	6.427	1.996	6.550	37
	3	80	3.524	89.5	3.469	88.1	0.157	4.0	2.550	8.365	2.603	8.540	19
	4	100	4.524	114.9	4.461	113.3	0.177	4.5	3.707	12.162	3.810	12.500	19
	5	125	5.535	140.6	5.461	138.7	0.197	5.0	5.062	16.609	5.212	17.100	7
	6	150	6.539	166.1	6.461	164.1	0.197	5.0	6.017	19.740	6.187	20.300	7
HEAVY(H)	3/8	10	0.685	17.4	0.661	16.8	0.114	2.9	0.309	1.015	0.314	1.030	217
	1/2	15	0.854	21.7	0.831	21.1	0.126	3.2	0.438	1.436	0.442	1.450	217
	3/4	20	1.071	27.2	1.047	26.6	0.126	3.2	0.570	1.870	0.573	1.880	127
	1	25	1.346	34.2	1.315	33.4	0.157	4.0	0.896	2.939	0.902	2.960	91
	1 1/4	32	1.689	42.9	1.657	42.1	0.157	4.0	1.158	3.798	1.167	3.830	61
	1 1/2	40	1.921	48.8	1.890	48.0	0.157	4.0	1.335	4.380	1.347	4.420	61
	2	50	2.394	60.8	2.354	59.8	0.177	4.5	1.887	6.192	1.908	6.260	37
	2 1/2	65	3.016	76.6	2.969	75.4	0.177	4.5	2.418	7.934	2.454	8.050	37
	3	80	3.524	89.5	3.469	88.1	0.197	5.0	3.149	10.333	3.200	10.500	19
	4	100	4.524	114.9	4.461	113.3	0.213	5.4	4.412	14.475	4.511	14.800	19
	5	125	5.535	140.6	5.461	138.7	0.213	5.4	5.451	17.884	5.608	18.400	7
	6	150	6.539	166.1	6.461	164.1	0.213	5.4	6.482	21.266	6.675	21.900	7

Tolerance of Wall Thickness: - Extra Light & Light: -8%;+ not specified)
- Medium & Heavy: - 10%; + not specified)

Black and Hot-dipped Zinc-coated Pipes

ASTM A 53

Nominal Size	Outside Diameter		Wall Thickness		Nominal Weight						Weight	Sch	Test Pressure (psi)			
					Plain ends			Threads & Couplings					Plain Ends		Threads & Couplings	
in.	in.	mm	in.	mm	lb/ft	kg/ft	kg/m	lb/ft	kg/ft	kg/m			Grade A	Grade B	Grade A	Grade B
1/2	0.840	21.3	0.109	2.77	0.86	0.39	1.27	0.86	0.39	1.27	STD	40	700		700	
			0.147	3.73	1.08	0.49	1.62	1.09	0.49	1.62	XS	80	850		850	
3/4/	1.050	26.7	0.113	2.87	1.14	0.52	1.69	1.14	0.52	1.69	STD	40	700		700	
			0.154	3.91	1.47	0.67	2.20	1.48	0.67	2.21	XS	80	850		850	
1	1.315	33.4	0.133	3.38	1.67	0.76	2.50	1.69	0.77	2.50	STD	40	700	700	700	700
			0.179	4.55	2.18	0.99	3.24	2.19	0.99	3.25	XS	80	850	850	850	850
$1^{1/4}$	1.660	42.2	0.140	3.56	2.27	1.03	3.39	2.28	1.03	3.40	STD	40	1,200	1,300	1,000	1,100
			0.191	4.85	2.99	1.36	4.47	3.02	1.37	4.49	XS	80	1,800	1,900	1,500	1,600
$1^{1/2}$	1.900	48.3	0.145	3.68	2.71	1.23	4.05	2.74	1.24	4.04	STD	40	1,200	1,300	1,000	1,100
			0.200	5.08	3.63	1.65	5.41	3.65	1.66	5.39	XS	80	1,800	1,900	1,500	1,600
2	2.375	60.3	0.154	3.91	3.65	1.66	5.44	3.68	1.67	5.46	STD	40	2,300	2,500	2,300	2,500
			0.218	5.54	5.02	2.28	7.48	5.08	2.30	7.55	XS	80	2,500	2,500	2,500	2,500
$2^{1/2}$	2.875	73.0	0.203	5.16	5.79	2.63	8.63	5.85	2.65	8.67	STD	40	2,500	2,500	2,500	2,500
			0.276	7.01	7.66	3.48	11.41	7.75	3.52	11.52	XS	80	2,500	2,500	2,500	2,500
3	3.500	88.9	0.125	3.18	4.51	2.05	6.72	-	-	-	-	-	1,290	1,500	-	-
			0.156	3.96	5.57	2.53	8.29	-	-	-	-	-	1,600	1,870	-	-
			0.188	4.78	6.64	3.02	9.92	-	-	-	-	-	1,930	2,260	-	-
			0.216	5.49	7.57	3.44	11.29	7.68	3.48	11.35	STD	40	2,220	2,500	2,200	2,500
			0.250	6.35	8.67	3.94	12.93	-	-	-	-	-	2,500	2,500	-	-
			0.281	7.14	9.66	4.39	14.40	-	-	-	-	-	2,500	2,500	-	-
			0.300	7.62	10.26	4.65	15.27	10.35	4.69	15.39	XS	80	2,500	2,500	2,200	2,500
4	4.500	114.3	0.125	3.18	5.81	2.65	8.71	-	-	-	-	-	1000	1170	-	-
			0.156	3.96	7.17	3.29	10.78	-	-	-	-	-	1250	1460	-	-
			0.188	4.78	8.65	3.93	12.91	-	-	-	-	-	1500	1750	-	-
			0.219	5.56	9.99	4.54	14.91	-	-	-	-	-	1750	2040	-	-
			0.237	6.02	10.78	4.90	16.07	-	-	-	-	40	1900	2210	-	-
			0.377	8.56	15.00	6.80	22.32	15.20	6.89	22.60	XS	80	2,700	2,800	2,700	2,800
5	5.563	141.3	0.156	3.96	9.00	4.09	13.41	-	-	-	-	-	1,010	1,180	-	-
			0.188	4.78	10.78	4.90	16.09	-	-	-	-	-	1,220	1,420	-	-
			0.203	5.16	11.62	5.28	17.32	-	-	-	-	-	1,220	1,420	-	-
			0.219	5.56	12.47	5.67	18.61	-	-	-	-	-	1,420	1,650	-	-
			0.258	6.55	14.61	6.64	21.77	14.90	6.76	22.07	STD	40	1,670	1,950	1,700	1,900
			0.281	7.14	15.84	7.20	23.62	-	-	-	-	-	1,820	2,120	-	-
			0.312	7.92	17.47	7.94	26.05	-	-	-	-	-	2,020	2,360	-	-
			0.344	8.74	19.16	8.71	28.57	-	-	-	-	-	2,230	2,600	-	-
			0.375	9.52	20.75	9.43	30.94	21.04	9.54	31.42	XS	80	2,430	2,800	2,400	2,800
6	6.625	168.3	0.156	3.96	10.76	4.89	16.05	-	-	-	-	-	1,020	1,190	-	-
			0.188	4.78	12.94	5.87	19.27	-	-	-	-	-	1,020	1,190	-	-
			0.203	5.16	13.93	6.33	20.76	-	-	-	-	-	1,020	1,190	-	-
			0.219	5.56	14.96	6.80	22.31	-	-	-	-	-	1,190	1,390	-	-
			0.250	6.35	17.01	7.73	25.36	-	-	-	-	-	1,360	1,580	-	-
			0.280	7.11	18.94	8.61	28.26	19.34	8.77	28.58	STD	40	1,520	1,780	1500	1800
			0.312	7.92	21.01	9.55	31.32	-	-	-	-	-	1,700	1,980	-	-
			0.344	8.74	23.06	10.48	34.39	-	-	-	-	-	1,870	2,180	-	-
			0.375	9.52	24.99	11.36	37.28	-	-	-	-	-	2,040	2,380	-	-
			0.432	10.97	28.53	12.97	42.56	-	-	-	XS	80	2,350	2,740	2,300	2,700
8	8.625	219.1	0.156	3.96	14.08	6.40	21.01	-	-	-	-	-	780	920	-	-
			0.188	4.78	16.94	7.70	25.26	-	-	-	-	-	780	920	-	-
			0.203	5.16	18.26	8.30	27.22	-	-	-	-	-	850	1,000	-	-
			0.219	5.56	19.62	8.92	29.28	-	-	-	-	-	910	1,070	-	-
			0.250	6.35	22.33	10.15	33.31	-	-	-	-	20	1,040	1,220	-	-
			0.277	7.04	24.68	11.22	36.81	25.53	11.58	38.07	-	30	1,160	1,350	1,200	1,300
			0.312	7.92	27.65	12.57	41.24	-	-	-	-	-	1,300	1,520	-	-
			0.322	8.18	28.53	12.97	42.55	29.35	13.31	43.73	STD	40	1,340	1,570	1,300	1,600
			0.344	8.74	30.40	13.82	45.34	-	-	-	-	-	1,440	1,680	-	-
			0.375	9.52	33.00	15.00	49.20	-	-	-	-	-	1,570	1,830	-	-
			0.406	10.31	35.60	16.18	53.08	-	-	-	-	60	1,700	2,000	-	-

Tolerance of Wall Thickness: -12.5%; + not specified

1psi = 0.0704 kg/cm^2

Carbon Steel Pipes for Pressure Service (SPPS;STPG)

KS D 3562
JIS G 3454

Nominal Size		Out-side Dia	Sch 10			Sch 20			Sch 30			Sch 40			Sch 60		
A	B		Wall Thick-ness	Weight	Hydro-static Pressure Test	Wall Thick-ness	Weight	Hydro-static Pressure Test	Wall Thick-ness	Weight	Hydro-static Pressure Test	Wall Thick-ness	Weight	Hydro-static Pressure Test	Wall Thick-ness	Weight	Hydro-static Pressure Test
		mm	mm	kg/m	Kg/cm2	mm	kg/m	Kg/cm2	mm	kg/m	Kg/cm2	mm	kg/m	Kg/cm2	mm	kg/m	Kg/cm2
10	3/8	17.3										2.3	0.851		2.8	1.00	
15	1/2	21.7										2.8	1.31		3.2	1.46	
20	3/4	27.2										2.9	1.74		3.4	2.00	
25	1	34.0										3.4	2.57		3.9	2.89	
32	1¼	42.7										3.6	3.47		4.5	4.24	
40	1½	48.6										3.7	4.10		4.5	4.89	
50	2	60.5				3.2	4.52					3.9	5.44		4.9	6.72	
65	2½	76.3			20	4.5	7.97	35			50	5.2	9.12	60	6.0	10.4	90
80	3	89.1				4.5	9.39					5.5	11.3		6.6	13.4	
90	3½	101.6				4.5	10.8					5.7	13.5		7.0	16.3	
100	4	114.3				4.9	13.2					6.0	16.0		7.1	18.8	
125	5	139.8				5.1	16.9					6.6	21.7		8.1	26.3	
150	6	165.2				5.5	21.7					7.1	27.7		9.3	35.8	
200	8	216.3				6.4	33.1		7.0	36.1		8.2	42.1		10.3	52.3	

* Note: Tolerance 1. Tolerance of Outside Diameter : 25A below ± 0.3 mm, 32A over ± 0.8%
2. Tolerance of Wall Thickness : 3mm below ± 0.3 mm, 3mm over ± 10%

Rigid, Thick Steel Conduit Tubes

KS C 8401
JIS C 8305

Nominal Size	Outside Dia	Tolerance of Outside Dia	Nominal Thickness	Nominal Inside Dia.	Weight	Effective Length of Thread (mm)	
	mm	mm	mm	mm	kg/m	Max	Min
G 16	21.0	± 0.3	2.3	16.4	1.06	19	16
G 22	26.5	± 0.3	2.3	21.9	1.37	22	19
G 28	33.3	± 0.3	2.5	28.3	1.90	25	22
G 36	41.9	± 0.3	2.5	36.9	2.43	28	25
G 42	47.8	± 0.3	2.5	42.8	2.7	28	25
G 54	59.6	± 0.3	2.8	54.0	3.92	32	28
G 70	75.2	± 0.3	2.8	69.6	5.00	36	32
G 82	87.9	± 0.3	2.8	82.3	5.88	40	36
G 92	100.7	± 0.4	3.5	93.7	8.39	42	36
G 104	113.4	± 0.4	3.5	106.4	9.48	45	39

Regid Metal Conduit

UL6

Nominal size	Nominal Inside Dia.		Outside Diameter		Nominal Wall Thickness		Length without coupling		Weight	
in.	in.	mm	in.	mm	in.	mm	ft. & in.	m	P.E	T.C
1/2	0.632	16.05	0.840	21.34	0.104	2.64	9-11 ¼	3.03	0.371	0.376
3/4	0.836	21.23	1.050	26.67	0.107	2.72	9-11 ¼	3.03	0.490	0.499
1	1.049	26.64	1.315	33.40	0.126	3.20	9-11	3.02	0.726	0.739
1 ¼	1.380	35.05	1.660	42.16	0.133	3.38	9-11	3.02	0.985	1.000
1 ½	1.610	40.89	1.900	48.26	0.138	3.51	9-11	3.02	1.181	1.200
2	2.067	52.50	2.375	60.33	0.146	3.71	9-11	3.02	1.579	1.610
2 ½	2.469	62.71	2.875	73.03	0.193	4.90	9-10 ½	3.01	2.509	2.590
3	3.068	77.93	3.500	88.90	0.205	5.21	9-10 ½	3.01	3.277	3.370
3 ½	3.548	90.12	4.000	101.6	0.215	5.46	9-10 ¼	3.00	3.945	4.100
4	4.026	102.26	4.500	114.3	0.225	5.72	9-10 ¼	3.00	4.668	4.790
5	5.047	128.19	5.563	141.3	0.245	6.22	9-10	3.00	6.315	6.510
6	6.065	154.05	6.625	168.3	0.266	6.76	9-10	3.00	8.207	8.520

Rigid Steel Conduit, Zinc Coated

ANSI C 80.1

Nominal size	Nominal Inside Dia.		Outside Diameter		Nominal Wall Thickness		Length without coupling		Weight of Ten Unit Coupling attached	
in.	in.	mm	in.	mm	in.	mm	ft. & in.	m	P.E	T.C
⅜	0.493	12.5	0.675	17.1	0.091	2.31	9-11 ½	3.04	51.5	23.36
1/2	0.632	16.1	0.840	21.3	0.104	2.64	9-11 ¼	3.03	79.0	35.83
3/4	0.836	21.2	1.050	26.7	0.107	2.72	9-11 ¼	3.03	105.0	47.63
1	1.063	27.0	1.315	33.4	0.126	3.20	9-11	3.02	153.0	69.40
1 ¼	1.394	35.4	1.660	42.2	0.133	3.38	9-11	3.02	201.0	91.17
1 ½	1.624	41.2	1.900	48.3	0.138	3.51	9-11	3.02	249.0	112.95
2	2.083	52.9	2.375	60.3	0.146	3.71	9-11	3.02	332.0	150.60
2 ½	2.489	63.2	2.875	73.0	0.193	4.90	9-10 ½	3.01	527.0	239.05
3	3.090	78.5	3.500	88.9	0.205	5.21	9-10 ½	3.01	682.6	309.63
3 ½	3.570	90.7	4.000	101.6	0.215	5.46	9-10 ¼	3.00	831.0	376.94
4	4.050	102.9	4.500	114.3	0.225	5.72	9-10 ¼	3.00	972.3	441.04
5	5.073	128.9	5.563	141.3	0.245	6.22	9-10	3.00	1,313.6	595.85
6	6.093	154.8	6.625	168.3	0.266	6.76	9-10	3.00	1,745.3	791.67

Black and Hot-dipped Zinc-coated Tubes and Tubulars for Ordinary Service

AS 1074

Grade	Nominal Size		Outside Diameter (mm)		Wall Thickness (mm)	Weight	
	in	A	Max	Min		Plain Ends	Screwed & socketed
LIGHT (L)	3/8	10	17.1	16.7	1.8	0.670	0.676
	1/2	15	21.4	21.0	2.0	0.947	0.956
	3/4	20	26.9	26.4	2.3	1.38	1.39
	1	25	33.8	33.2	2.6	1.98	2.00
	1 1/4	32	42.5	41.9	2.6	2.54	2.57
	1 1/2	40	48.4	47.8	2.9	3.23	3.27
	2	50	60.2	59.6	2.9	4.08	4.15
	2 1/2	65	76.0	75.2	3.2	5.71	5.83
	3	80	88.7	87.9	3.2	6.72	6.89
	4	100	113.9	113.0	3.6	9.75	10.0
MEDIUM (M)	3/8	10	17.4	16.8	2.3	0.839	0.845
	1/2	15	21.7	21.1	2.6	1.21	1.22
	3/4	20	27.2	26.6	2.6	1.56	1.57
	1	25	34.2	33.4	3.2	2.41	2.43
	1 1/4	32	42.9	42.1	3.2	3.10	3.13
	1 1/2	40	48.8	48.0	3.2	3.57	3.61
	2	50	60.8	59.8	3.6	5.03	5.10
	2 1/2	65	76.6	75.4	3.6	6.43	6.55
	3	80	89.5	88.1	4.0	8.37	8.54
	4	100	114.9	113.3	4.5	12.2	12.5
	5	125	140.6	138.7	5.0	16.6	17.1
	6	150	166.1	164.1	5.0	19.7	20.3
HEAVY (H)	3/8	10	17.4	16.8	2.9	1.02	1.03
	1/2	15	21.7	21.1	3.2	1.44	1.45
	3/4	20	27.2	26.6	3.2	1.87	1.88
	1	25	34.2	33.4	4.0	2.94	2.96
	1 1/4	32	42.9	42.1	4.0	3.80	3.83
	1 1/2	40	48.8	48.0	4.0	4.38	4.42
	2	50	60.8	59.8	4.5	6.19	6.26
	2 1/2	65	76.6	75.4	4.5	7.93	8.05
	3	80	89.5	88.1	5.0	10.3	10.5
	4	100	114.9	113.3	5.4	14.5	14.8
	5	125	140.6	138.7	5.4	17.9	18.4
	6	150	166.1	164.1	5.4	21.3	21.9

Carbon Steel Pipes for Ordinary Piping (SPP)

KS D 3507

Nominal Size		Outside Dia.	Tolerance of Outside Dia		Wall Thickness	Tolerance of Wall Thickness	Unit Weight of Plain Ends
mm	in.	mm	Taper Threaded	Plain Ends	mm		kg/m
10	3/8	17.3	± 0.5 mm		2.35		0.866
15	1/2	21.7	± 0.5 mm		2.65		1.25
20	3/4	27.2	± 0.5 mm		2.65		1.60
25	1	34.0	± 0.5 mm		3.25		2.45
32	1¼	42.7	± 0.5 mm		3.25		3.16
40	1½	48.6	± 0.5 mm		3.25		3.63
50	2	60.5	± 0.5 mm	± 1%	3.65	+ not specified - 12.5%	5.12
65	2½	76.3	± 0.7 mm	± 1%	3.65		6.34
80	3	89.1	± 0.8 mm	± 1%	4.05		8.49
90	3½	101.6	± 0.8 mm	± 1%	4.05		9.74
100	4	114.3	± 0.8 mm	± 1%	4.50		12.2
125	5	139.8	± 0.8 mm	± 1%	4.85		16.1
150	6	165.2	± 0.8 mm	± 1%	4.85		19.2
175	7	190.7	± 0.9 mm	± 1%	5.30		24.2
200	8	216.3	± 1.0 mm	± 1%	5.85		30.4

Carbon Steel Pipes for Ordinary Piping (SGP)

JIS G 3452

Nominal Size		Outside Dia.	Tolerance of Outside Dia		Wall Thickness	Tolerance of Wall Thickness	Unit Weight of Plain Ends
mm	in.	mm	Taper	Plain Ends	mm		kg/m
10	3/8	17.3	± 0.5 mm		2.3		0.851
15	1/2	21.7	± 0.5 mm		2.8		1.31
20	3/4	27.2	± 0.5 mm		2.8		1.68
25	1	34.0	± 0.5 mm		3.2		2.43
32	1¼	42.7	± 0.5 mm		3.5		3.38
40	1½	48.6	± 0.5 mm		3.5		3.89
50	2	60.5	± 0.5 mm	± 1%	3.8	+ not specified - 12.5%	5.31
65	2½	76.3	± 0.7 mm	± 1%	4.2		7.47
80	3	89.1	± 0.8 mm	± 1%	4.2		8.79
90	3½	101.6	± 0.8 mm	± 1%	4.2		10.10
100	4	114.3	± 0.8 mm	± 1%	4.5		12.20
125	5	139.8	± 0.8 mm	± 1%	4.5		15.0
150	6	165.2	± 0.8 mm	± 1.6mm	5.0		19.8
175	7	190.7	± 0.9 mm	± 1.6mm	5.3		24.2
200	8	216.3	± 1.0 mm	± 0.8%	5.8		30.1

Rectangular Pipe for General Structural Purposes

KS D3568 (SPSR)
JIS G 3466 (STKR)
ASTM A 500

Nominal Size (mm)	Wall Thickness (mm)	Weight (Kg/m)
12 x 32	1.0 1.2 1.4 1.6 2.0 2.4 2.6	0.51 0.60 0.69 0.78 0.95 1.10 1.17
25 x 20	1.0 1.2 1.4 1.6 2.0 2.4 2.6	0.67 0.79 0.91 1.03 1.26 1.48 1.58
30 x 20	1.2 1.4 1.6 2.0 2.4 2.6 2.8	0.89 1.02 1.16 1.42 1.66 1.78 1.90
40 x 20	1.2 1.4 1.6 2.0 2.4 2.8 3.0	1.08 1.24 1.41 1.73 2.04 2.34 2.48
50 x 25	1.2 1.4 1.6 2.0 2.4 2.8 3.2	1.36 1.57 1.79 2.20 2.61 3.00 3.38

Nominal Size (mm)	Wall Thickness (mm)	Weight (Kg/m)
50 x 30	1.2 1.4 1.6 2.0 2.4 2.8 3.2	1.45 1.68 1.91 2.36 2.79 3.22 3.63
60 x 30	1.2 1.4 1.6 1.8 2.0	1.64 1.90 2.16 2.42 2.67
80 x 40	1.6 1.8 2.3 2.8 3.2 3.6 4.0	2.92 3.27 4.13 4.98 5.64 6.29 6.93
100 x 50	1.8 2.3 2.8 3.2 3.6 4.0	4.12 5.21 6.29 7.15 7.98 8.81
101.6 x 50.8	1.8 2.3 2.8 3.2 3.6 4.0	4.18 5.3 6.4 7.27 8.12 8.96

Carbon Steel Square Pipe for General Structural Purposes

KS D3568 (SPSR)
JIS G 3466 (STKR)
ASTM A 500

Nominal Size (mm)	Wall Thickness (mm)	Weight (Kg/m)
14 x 14	1.0 1.2 1.6 2.2	0.40 0.47 0.61 0.78
15.9 x 15.9	1.0 1.2 1.6 2.3	0.46 0.54 0.70 0.95
16 x 16	1.0 1.2 1.6 2.3	0.46 0.55 0.71 0.95
19 x 19	1.0 1.2	0.56 0.66
20 x 20	1.0 1.2 1.6 2.0 2.3 2.6	0.59 0.70 0.91 1.10 1.24 1.37
25 x 25	1.0 1.2 1.6 2.0 2.3 2.8	0.75 0.89 1.16 1.42 1.60 1.90
25.4 x 25.4	1.0 1.2 1.6 2.0	0.76 0.90 1.18 1.44
30 x 30	1.0 1.2 1.6 2.0 2.3 2.6 3.0	0.90 1.08 1.41 1.73 1.96 2.19 2.48
31.8 x 31.8	1.4 1.8 2.4 3.2	1.32 1.67 2.18 2.80

Nominal Size (mm)	Wall Thickness (mm)	Weight (Kg/m)
38.1 x 38.1	1.4 1.8 2.4 3.2	1.60 2.03 2.65 3.44
40 x 40	1.4 1.6 1.8 2.4 2.8 3.2	1.68 1.91 2.14 2.79 3.22 3.63
50 x 50	1.6 1.8 2.4 2.8 3.2 4.0	2.41 2.70 3.55 4.10 4.63 5.67
50.8 x 50.8	1.6 1.8 2.4 2.8 3.2 4.0	2.45 2.75 3.61 4.17 4.71 5.77
76.2 x 76.2	2.0 2.4 2.8 3.2 4.0	4.63 5.52 6.40 7.27 8.96
89.9 x 89.9	2.0 2.4 2.8 3.2 4.0	5.49 6.56 7.61 8.64 10.68
90 x 90	2.0 2.4 2.8 3.2 4.0	5.50 6.56 7.61 8.65 10.69

API 5CT Oil Country Tubular Goods

Casing

API 5CT

Size				Nominal Weight						Test Pressure (psi)				Type of Thread		
Outside Diameter		Wall Thickness		Plain Ends			Threads and Couplings			H-40		J-55&K-55				
in.	mm	in.	mm	lb/ft	kg/ft	kg/m	lb/ft	kg/ft	kg/m	Std.	Alt.	Std.	Alt.	Short	Long	Buttress
4½	114.3	0.205	5.21	9.41	4.26	13.99	9.50	4.31	14.14	2,900	-	3,000	4,000	x		
		0.224	5.69	10.24	4.64	15.22	10.50	4.76	15.63			3,000	4,400	x		x
		0.250	6.35	11.36	5.15	16.89	11.60	5.26	17.26			3,000	4,900	x	x	x
5	127.0	0.220	5.59	11.24	5.09	16.71	11.50	5.22	17.11			3,000	3,900	x		
		0.253	6.43	12.84	5.82	19.09	13.00	5.90	19.35			3,000	4,500	x	x	x
		0.296	7.52	14.88	6.74	22.13	15.00	6.80	22.32			3,000	5,200	x	x	x
5½	139.7	0.244	6.20	13.71	6.21	20.39	14.00	6.35	20.83	2,800	-	3,000	3,900	x		
		0.275	6.98	15.36	6.96	22.84	15.50	7.03	23.07			3,000	4,400	x	x	x
		0.304	7.72	16.89	7.65	25.11	17.00	7.71	25.30			3,000	4,900	x	x	x
6⅝	168.3	0.288	7.32	19.51	8.84	29.01	20.00	9.07	29.76	2,800	-	-	-	x		
		0.288	7.32	19.51	8.84	29.01	20.00	9.07	29.76			3,000	3,800	x	x	x
		0.352	8.94	23.60	10.70	35.09	24.00	10.89	35.72			3,000	4,700	x	x	x
7	177.8	0.231	5.87	16.72	7,57	24.85	17.00	7.71	25.30	2,100	-	-	-	x		
		0.272	6.91	19.56	8,86	29.08	20.00	9.07	29.76	2,500	-	3,000	3,400	x		
		0.317	8.05	22.65	10,26	33.68	23.00	10.43	34.23			3,000	4,000	x	x	x
		0.362	9.19	25.69	11,64	38.19	26.00	11.79	38.69			3,000	4,600	x	x	x
7⅝	193.7	0.300	7.62	23.49	10,65	34.95	24.00	10.89	35.72	2,500	-	-	-	x		
		0.328	8.33	25.59	11,59	38.04	26.40	11.97	39.29			3,000	3,800	x	x	x
8⅝	219.1	0.264	6.71	23.60	10.69	35.08	24.00	10.89	35.72			2,700	-	x		
		0.304	7.72	27.04	12.26	40.21	28.00	12.70	41.67	2,300	-	-	-	x		
		0.352	8.94	31.13	14.11	46.28	32.00	14.51	47.62	2,600				x		
		0.352	8.94	31.13	14.11	46.28	32.00	14.51	47.62			3,000	3,600	x	x	x
		0.400	10.16	35.17	15.94	52.30	36.00	16.33	53.58			3,000	4,100	x	x	x

Tubing

API 5CT

Size				Nominal Weight						Test Pressure (psi)				Type of Ends
Outside Diameter		Wall Thickness		Plain Ends			Threads and Couplings			H-40		J-55&K-55		
in.	mm	in.	mm	lb/ft	kg/ft	kg/m	lb/ft	kg/ft	kg/m	Std.	Alt.	Std.	Alt.	
1.315	33.4	0.133	33.8	1.68	0.76	2.50	1.70	0.77	2.53	3.000	6.500	3.000	8.900	Non - Upset
		0.133	33.8	1.68	0.76	2.50	1.72	0.78	2.56	3.000	6.500	3.000	8.900	Intergral Joint
		0.133	33.8	1.68	0.76	2.50	1.80	0.82	2.68	3.000	6.500	3.000	8.900	Ext. Upset
1.660	42.2	0.125	3.18	2.05	0.93	3.05	2.10	0.95	3.13	3.000	4.800	3.000	6.600	Intergral Joint
		0.140	3.56	2.27	1.03	3.38	2.03	1.04	3.42	3.000	5.400	3.000	7.400	Non - Upset
		0.140	3.56	2.27	1.03	3.38	2.33	1.06	3.47	3.000	5.400	3.000	7.400	Intergral Joint
		0.140	3.56	2.27	1.03	3.38	2.40	1.09	3.57	3.000	5.400	3.000	7.400	Ext. Upset
1.900	48.3	0.125	3.18	2.37	1.08	3.53	2.40	1.09	3.57	3.000	4.200	3.000	5.800	Intergral Joint
		0.145	3.68	2.72	1.23	4.05	2.75	1.25	4.09	3.000	4.900	3.000	6.700	Non - Upset
		0.145	3.68	2.72	1.23	4.05	2.76	1.25	4.11	3.000	4.900	3.000	6.700	Intergral Joint
		0.145	3.68	2.72	1.23	4.05	2.90	1.32	4.32	3.000	4.900	3.000	6.700	Ext. Upset
2.063	52.4	0.156	3.96	3.18	1.44	4.73	3.25	1.47	4.84	3.000	4.800	3.000	6.700	Intergral Joint
2 3/8	60.3	0.167	4.24	3.94	1.79	5.86	4.00	1.81	5.95	3.000	4.500	3.000	6.200	Non - Upset
		0.190	4.83	4.44	2.01	6.59	4.60	2.09	6.85	3.000	5.100	3.000	7.000	Non - Upset
		0.190	4.83	4.44	2.01	6.59	4.70	2.13	6.99	3.000	5.100	3.000	7.000	Ext. Upset
2 7/8	73.0	0.217	5.51	6.17	2.79	9.17	6.40	2.9	9.52	3.000	4.800	3.000	6.600	Non - Upset
		0.217	5.51	6.17	2.79	9.17	6.50	2.95	9.67	3.000	4.800	3.000	6.600	Ex. Upset

Tubing (Cont.)

API 5CT

Size				Nominal Weight						Test Pressure (psi)				Type of Ends
Outside Diameter		Wall Thickness		Plain Ends			Threads and Couplings			H-40		J-55&K-55		
in.	mm	in.	mm	lb/ft	kg/ft	kg/m	lb/ft	kg/ft	kg/m	Std.	Alt.	Std.	Alt.	
										3000	3900	3000	5400	Non-Upset
3½	88.9	0.216	5.49	7.58	3.44	11.28	7.7	3.49	11.46	3000	4600	3000	6400	Ext.Upset
		0.254	6.45	8.81	4	13.11	9.2	4.17	13.69	3000	4600	3000	6400	Ext.Upset
		0.254	6.45	8.81	4	13.11	9.3	4.22	13.84	3000	5300	3000	7300	Non-Upset
		0.289	7.34	9.92	4.5	14.75	10.2	4.63	15.18					
										3000	3600	3000	5000	Non-Upset
4	101.6	0.226	5.74	9.12	4.13	13.56	9.5	4.31	14.14	3000	4200	3000	5800	Ext.Upset
		0.262	6.65	10.47	4.74	15.57	11	4.99	16.37					
										3000	3900	3000	5300	Non-Upset
4½	114.3	0.271	6.88	12.25	5.55	18.22	12.6	5.72	18.75	3000	3900	3000	5300	Ext.Upset
		0.271	6.88	12.25	5.55	18.22	12.75	5.78	18.97					

API Line Pipe

API 5L

Line Pipe

Size						Weight			Hydrostatic Test Pressure (Kpa x 100)									
Outside Diameter			Wall Thickness			lb/ft	kg/ft	kg/m	A		B		X42		X46		X52	
KTDN	in.	mm	Sch No.	in.	mm				Std.	Alt.	Std.	Alt.	Std.	Alt.	Std.	Alt.	Std.	Alt.
1	1.315	33.4	40 (Std)	0.133	3.4	1.68	0.76	2.52	48	-	48	-	-	-	-	-	-	-
			80 (XS)	0.179	4.5	2.17	0.98	3.21	59	-	59	-	-	-	-	-	-	-
1 ¼"	1.660	42.2	40 (Std)	0.140	3.6	2.27	1.03	3.43	83	-	90	-	-	-	-	-	-	-
			80 (XS)	0.191	4.9	3.00	1.36	4.51	124	-	131	-	-	-	-	-	-	-
1 ½"	1900	48.3	40 (Std)	0.145	3.7	2.72	1.23	4.07	83	-	90	-	-	-	-	-	-	-
			80 (XS)	0.200	5.1	3.63	1.65	5.43	124	-	131	-	-	-	-	-	-	-
2	2 ⅜	60.3		0.083	2.1	2.03	0.92	3.01	87	108	101	126	121	151	132	166	150	188
				0.109	2.8	2.64	1.20	3.97	115	144	134	168	162	202	177	221	200	250
				0.125	3.2	3.01	1.37	4.51	132	165	153	172	185	231	202	252	207	286
				0.141	3.6	3.37	1.53	5.03	148	172	172	172	207	260	207	284	207	321
			40 (Std)	0.154	3.9	3.66	1.66	5.42	161	172	172	172	207	281	207	308	207	348
				0.172	4.4	4.05	1.84	6.07	172	172	172	172	207	317	207	347	207	393
				0.188	4.8	4.40	2.00	6.57	172	172	172	172	207	346	207	379	207	429
			80 (XS)	0.218	5.5	5.03	2.28	7.43	172	172	172	172	207	397	207	434	207	491
				0.250	6.4	5.68	2.58	8.51	172	172	172	172	207	462	207	500	207	500
				0.281	7.1	6.29	2.85	9.31	172	172	172	172	207	500	207	500	207	500
				0.436	11.1	9.04	4.1	13.47	172	172	172	172	207	500	207	500	207	500
2 ½"	2 ⅞	73.0		0.083	2.10	2.48	1.12	3.67	71	89	83	104	100	125	109	137	124	155
				0.109	2.80	3.22	1.46	4.85	95	119	111	139	133	167	146	182	165	207
				0.125	3.20	3.67	1.66	5.51	109	136	127	158	153	191	167	208	189	236
				0.141	3.60	4.12	1.87	6.16	122	153	143	172	172	215	188	234	207	266
				0.156	4.00	4.53	2.05	6.81	136	170	158	172	191	238	207	261	207	295
				0.172	4.40	4.97	2.25	7.44	150	172	172	172	207	262	207	287	207	325
				0.188	4.80	5.4	2.45	8.07	163	172	172	172	207	286	207	313	207	354
			40 (Std)	0.203	5.20	5.8	2.63	8.69	172	172	172	172	207	310	207	339	207	384
				0.216	5.50	6.14	2.79	9.16	172	172	172	172	207	328	207	358	207	406
				0.250	6.40	7.02	3.18	10.51	172	172	172	172	207	381	207	417	207	472
			80 (XS)	0.276	7.00	7.67	3.48	11.39	172	172	172	172	207	417	207	456	207	500

Line Pipe (Cont.)

API 5L

Size						Weight			Hydrostatic Test Pressure (Kpa x 100)									
Outside Diameter			Wall Thickness			lb/ft	kg/ft	kg/m	A		B		X42		X46		X52	
Nominal Size	in.	mm	Sch No.	in.	mm				Std.	Alt.	Std.	Alt.	Std.	Alt.	Std.	Alt.	Std.	Alt.
3	3½	88.9		0.083	2.1	3.03	1.37	4.50	59	73	68	85	82	103	90	112	102	127
				0.109	2.8	3.95	1.79	5.95	78	98	91	114	110	137	120	150	136	170
				0.125	3.2	4.51	2.05	6.76	89	112	104	130	125	157	137	171	155	194
				0.141	3.6	5.06	2.30	7.57	101	126	117	146	141	176	154	193	174	218
				0.156	4.0	5.58	2.53		112	140	130	163	157	196	171	214	194	242
				0.172	4.4	6.12	2.78	9.17	123	154	143	172	172	215	188	235	207	267
				0.188	4.8	6.66	3.02	9.95	134	168	156	172	188	235	205	257	207	291
			40 (Std)	0.216	5.5	7.58	3.44	11.31	154	172	172	172	207	269	207	294	207	333
				0.250	6.4	8.69	3.94	13.02	172	172	172	172	207	313	207	342	207	388
				0.281	7.1	9.67	4.39	14.32	172	172	172	172	207	347	207	380	207	430
			80 (XS)	0.300	7.6	10.26	4.65	15.24	172	172	172	172	207	372	207	407	207	460
3½	4	101.6		0.083	2.1	3.48	1.58	5.15	51	64	60	75	72	90	79	98	89	111
				0.109	2.8	4.53	2.05	6.82	68	86	80	100	96	120	105	131	119	148
				0.125	3.2	5.18	2.35	7.76	78	98	91	114	110	137	120	150	136	170
				0.141	3.6	5.82	2.64	8.70	88	110	102	128	123	154	135	168	153	191
				0.156	4.0	6.41	2.91	9.63	98	122	114	142	137	171	150	187	170	207
				0.172	4.4	7.04	3.19	10.55	108	134	125	157	151	188	165	206	187	207
				0.188	4.8	7.66	3.47	11.46	117	147	137	171	164	206	180	225	204	254
			40 (Std)	0.226	5.7	9.12	4.14	13.48	139	174	162	193	195	244	207	267	207	302
				0.250	6.4	10.02	4.54	15.02	156	193	182	193	207	274	207	300	207	339
				0.281	7.1	11.17	5.07	16.55	174	193	193	193	207	304	207	332	207	376
			80 (XS)	0.318	8.1	12.52	5.68	18.68	193	193	193	193	207	347	207	379	207	429
4	4½	114.3		0.083	2.1	3.92	1.78	5.81	96	57	53	66	64	80	70	87	79	99
				0.125	3.2	5.85	2.65	8.77	70	87	81	101	97	122	106	133	121	151
				0.141	3.6	6.57	2.98	9.83	78	98	91	114	110	137	120	150	136	170
				0.156	4.0	7.24	3.28	10.88	87	109	101	127	122	152	133	166	151	188
				0.172	4.4	7.96	3.61	11.92	96	120	111	139	134	167	146	183	166	207
				0.188	4.8	8.67	3.93	12.96	104	130	121	152	146	183	160	200	181	226
				0.203	5.2	9.32	4.23	13.99	113	141	132	164	158	198	173	216	196	245
				0.219	5.6	10.02	4.54	15.01	122	152	142	177	170	213	186	233	207	264
			40 (Std)	0.237	6.0	10.80	4.90	16.02	130	163	152	190	183	228	200	250	207	283
				0.250	6.4	11.36	5.15	17.03	139	174	162	193	195	244	207	266	207	302
				0.281	7.1	12.67	5.75	18.77	154	193	180	193	207	270	207	295	207	335
				0.312	7.9	13.97	6.34	20.73	172	193	193	193	207	301	207	329	207	372
			80 (XS)	0.337	8.6	15.00	6.80	22.42	187	193	193	193	207	327	207	358	207	405
5	5 9/16	141.3		0.083	2.1	4.86	2.20	7.21	37	46	43	54	52	65	57	71	64	80
				0.125	3.2	7.27	3.30	10.90	56	70	65	82	79	99	86	108	98	122
				0.156	4.0	9.02	4.09	13.54	70	88	82	102	99	123	108	135	122	152
				0.188	4.8	10.80	4.90	16.16	84	105	98	123	118	148	129	162	146	183
				0.219	5.6	12.51	5.67	18.74	98	123	115	143	138	172	151	188	171	213
			40	0.258	6.6	14.63	6.64	21.92	116	145	135	169	163	203	178	222	201	252
				0.281	7.1	15.87	7.20	23.50	125	156	145	182	175	219	191	239	207	271
				0.312	7.9	17.51	7.94	25.99	139	174	162	193	195	243	207	266	207	301
				0.344	8.7	19.19	8.70	28.45	153	191	178	193	207	268	207	293	207	332
			80 (XS)	0.375	9.5	20.80	9.43	30.88	167	193	193	193	207	292	207	207	207	362
6		168.3		0.083	2.1	5.80	2.63	8.61	31	39	36	45	54	-	59	-	67	-
				0.109	2.8	7.59	3.44	11.43	41	52	48	60	72	-	79	-	90	-
				0.125	3.2	8.69	3.94	13.03	47	59	55	69	83	-	90	-	102	-
				0.141	3.6	9.77	4.43	14.62	53	66	62	77	93	-	102	-	115	-
				0.156	4.0	10.79	4.89	16.21	59	74	68	86	103	-	113	-	128	-
	6⅝			0.172	4.4	11.87	5.38	17.78	64	81	76	95	114	-	124	-	141	-
				0.188	4.8	12.94	5.87	19.35	70	89	82	103	124	-	136	-	154	-
				0.203	5.2	13.94	6.32	20.91	77	96	89	112	134	-	147	-	166	-
				0.219	5.6	15.00	6.80	22.47	83	103	96	120	145	-	158	-	179	-
				0.250	6.4	17.04	7.73	25.55	94	118	110	137	165	-	181	-	205	-
			40	0.280	7.1	18.99	8.61	28.22	105	131	122	153	184	-	201	-	207	227
				0.312	7.9	21.06	9.55	31.25	117	146	136	170	204	-	207	223	207	253
				0.344	8.7	23.10	10.48	34.24	128	161	149	187	207	225	207	246	207	278
				0.375	9.5	25.05	11.36	37.20	140	175	163	193	207	246	207	268	207	304
			80 (XS)	0.432	11.0	28.60	12.97	42.67	162	193	189	193	207	284	207	311	207	352
8		219.1		0.125	3.2	11.36	5.15	17.04	36		45	42	53	64	-	69	-	-
				0.156	4.0	14.12	6.40	21.22	45		57	53	66	79	-	87	-	-
				0.188	4.8	16.96	7.69	25.37	54		68	63	79	95	-	104	-	-
				0.203	5.2	18.28	8.29	27.43	59		74	69	86	103	-	113	-	-
				0.219	5.6	19.68	8.93	29.48	63		79	74	92	111	-	122	-	-
	8⅝			0.250	6.4	22.38	10.15	33.57	73		91	84	106	127	-	139	-	-
				0.277	7.0	24.72	11.21	36.61	79		99	92	115	139	-	152	-	-
				0.312	7.9	27.73	12.58	41.14	90		112	104	130	157	-	171	-	-
				0.322	8.2	28.58	12.96	42.65	93		116	108	135	163	-	178	-	-
				0.344	8.7	30.45	13.81	45.14	99		123	115	144	173	-	189	-	214
				0.375	9.5	33.07	15.00	49.10	108		135	125	157	189	-	206	-	233

List of Specification of ERW Tubes and Pipes for Piping

Standard Specification		Chemical Requirement (Max%)				Physical Requirement			Flattening Test	Bend Test	Hydrostatic Test
		C	Mn	P	S	Tensile Strength Psi (MPa)	Yield Strength Psi (MPa)	Elongation Psi (MPa)	H= Distance between Exterior Surface D= Outside Diameter	Angle x Inner Radius	P=Test Pressure (Psi) S=A.F.Stress(Psi)
ASTM A53	A	0.25	0.95	0.050	0.045	Min. 48,000 (33.8 kg/mm^2)	Min. 30,000 (21.1 kg/mm^2)	625,000 x $\frac{A^{0.2}}{U^{0.9}}$	Apply for Standard Weight And Extra Strong Pipe of NB>2in. Ductility of the Weld H =⅔D Ductility from The Weld H=⅓D	Apply for NB≤2in 90^0 x 6D When Orderd for Close Coiling 180^0 x 8D	Specified Respectively In Size and Grade Note:the Max.P NB≤3in. P=2,500psi NB>3in. P=2,800psi
	B	0.30	1.20	0.050	0.045	Min. 60,000 (42.2 kg/mm^2)	Min. 35,000 (24.6 kg/mm^2)				
BS1387	L	0.20	1.20	0.045	0.045	320~460 N/mm^2 (33~47.2 kg/mm^2)	Min. 195 N/mm^2 (20 kg/mm^2)	Min. 20	Apply for NB>DN50(2in.) Weld Portion H=0.75D The Other Side of Weld Portion H=0.6D (The Weld Shall Be Located At 90 Deg.)	Apply for NB≤DN50 Ungalvanized Tubes At Cold 180^0 x 6D Galvanized Tubes 90^0 x 8D	P=53kgf/cm^2 (50 bar)
	M	0.20	1.20	0.045	0.045						
	H	0.20	1.20	0.045	0.045						
KS D3507 JIS G3452	SPP SGP			0.040	0.040	Min.290 N/mm^2		30	H=⅔D	90^0 x 6D	2.5MPa (25kgf/cm^2)
JIS G3454	STPG370	0.25	0.30-0.90	0.040	0.040	Min 370 N/mm^2	Min. 215 N/mm^2	30	H=2/3D		
	STPG410	0.30	0.30-1.00			Min 410 N/mm^2	Min. 245 N/mm^2	25			
JIS G3444	STK290	-	-	0.050	0.050	Min.290 N/mm^2	-	30	H=2/3D	90^o x 6D	
	STK400	0.25	-	0.040	0.040	Min.400 N/mm^2	Min.235 N/mm^2	23	H=2/3D	90^o x 6D	
	STK490	0.18	1.65	0.035	0.035	Min.490 N/mm^2	Min.315 N/mm^2	23	H=7/8D	90^o x 6D	
	STK500	0.24	0.30-1.30	0.040	0.040	Min.500 N/mm^2	Min.355 N/mm^2	15	H=7/8D	90^o x 8D	
	STK540	0.23	1.5	0.040	0.040	Min.540 N/mm^2	Min.390 N/mm^2	20	H=7/8D	90^o x 6D	
JIS G3466	STK R400	0.25	1.5	0.040	0.040	Min. 400 N/mm^2	Min. 245 N/mm^2	23			
	STK R490	0.18		0.040	0.040	Min. 490 N/mm^2	Min. 325 N/mm^2	23			
API 5L	PSL1 A	0.22	0.90	0.030	0.030	Min. 48,000(331)	Min. 30,000(207)	e = 625,000x $\frac{A^{0.2}}{U^{0.9}}$	Weld Portion H = ⅔D The Other Side of Weld Portion H =⅔D The test shall be made alternately with the weld at 0deg. And at 90 deg. From the line of direction of force. (Weld ductility Test) D ≥ $2\frac{3}{8}$ in. H = $\frac{3.07t}{0.07+3\ t/D}$ (for Grades less than X 52) H = $\frac{3.05t}{0.05+3\ t/D}$ (for Grades X 52)		※ 1 Specified respectively in size and grade Note : P=$\frac{2St}{D}$ or 3,000. Whichever is the smaller [a]2500psi. Max [b]2800psi. Max [c]3000psi. Max [d]D<16in. 7260psi Max D≥16in. 3630 psi Max
	PSL1 B	0.26	1.20	0.030	0.030	Min. 60,000(414)	Min. 35,000(241)	e = 625,000x $\frac{A^{0.2}}{U^{0.9}}$			
	PSL1 X42	0.26	1.30	0.030	0.030	Min. 60,000(414)	Min. 42,000(290)	e = 625,000x $\frac{A^{0.2}}{U^{0.9}}$			
	PSL1 X46	0.26	1.40	0.030	0.030	Min. 63,000(434)	Min. 46,000(317)	e = 625,000x $\frac{A^{0.2}}{U^{0.9}}$			
	PSL1 X52	0.26	1.40	0.030	0.030	Min. 66,000(455)	Min. 52,000(359)	e = 625,000x $\frac{A^{0.2}}{U^{0.9}}$			
	PSL2 B	0.22	1.20	0.025	0.015	60,000~110,000 (414~758)	35,000~65,000 (241~448)	e = 625,000x $\frac{A^{0.2}}{U^{0.9}}$			
	PSL2 X42	0.22	1.30	0.025	0.015	60,000~110,000 (414~758)	42,000~72,000 (290~496)	e = 625,000x $\frac{A^{0.2}}{U^{0.9}}$			
	PSL2 X46	0.22	1.40	0.025	0.015	63,000~110,000 (434~758)	46,000~76,000 (317~524)	e = 625,000x $\frac{A^{0.2}}{U^{0.9}}$			
	PSL2 X52	0.22	1.40	0.025	0.015	66,000~110,000 (455~758)	52,000~77,000 (359~531)	e = 625,000x $\frac{A^{0.2}}{U^{0.9}}$			
API 5CT	H-40	-	-	0.030	0.030	Min. 60,000 (414)	40,000~80,000 (276~552)	e = 625,000x $\frac{A^{0.2}}{U^{0.9}}$	(Grade H40) D/t ≥16 H=0.5D D/t <16 H=D(0.83-0.0206D/t) The weld shall be located at 90 deg. (Grade J55 & K55) D/t ≥16 H=0.65D 3.93≤D/t<16 H=D(0.980-0.0518D/t) D/t<3.93 H=D(1.104-0.0518D/t) The weld shall be located at 90 deg.		Specified respectively in size and grade. Note : P=$\frac{(2 \cdot f \cdot YS\ min \cdot t)}{D}$ or 3,000. Whichever is the smaller. (f: 0.6 for Grade H40, J55 and K55 larger than Label 1: $9\frac{5}{8}$ or 0.8 for all other grades and sizes)
	J-55	-	-	0.030	0.030	Min. 75,000 (517)	55,000~80,000 (379~552)	e = 625,000x $\frac{A^{0.2}}{U^{0.9}}$			
	K-55	-	-	0.030	0.030	Min. 95,000 (655)	55,000~80,000 (379~552)	e = 625,000x $\frac{A^{0.2}}{U^{0.9}}$			

Grade	O.C	Standard	Alternative
A	$2\frac{3}{8}$ and over[a]	60	75
B	$2\frac{3}{8}$ and over[b]	60	75
X42	$5\frac{9}{16}$ and under[c]	60	75[d]
~	$6\frac{5}{8}$ ~ 8^5 and under[c]	75	75[d]
X80	$10\frac{3}{4}$ ~ 18 and[c]	85	85[d]
	20 over[c]	90	90[d]

Project Used SeAH Pipes

Type of project	Project Name	Place	Time	Standard
Building	DRAGON BAY - TOWER HH - 05	Quảng Ninh	2020	BS 1387 ASTM A53-A
Building	SAIGON INDIGO HOTEL	HCM	2020	BS 1387 ASTM A53-A
Building	VINHOMES GRAND PARK - DISTRICT 9	TPHCM	2019-2020	BS 1387 ASTM A53-A
Building	VINHOMES - METROPOLIS OFFICE BUILDING	Hà Nội	2019-2020	BS 1387 ASTM A53-A
Building	FELIZ EN VISTA APARTMENT	HCM	2018 - 2020	BS 1387 ASTM A53-A
Building	EMPIRE CITY	TPHCM	2018-2020	ASTM A53-A
Building	SUNSHINE CENTER	Hà Nội	2018-2019	BS 1387 ASTM A53-A
Building	SAI GON PEARL	TPHCM	2018-2019	ASTM A53-A
Building	LIM TOWER 3	TPHCM	2018-2019	BS 1387 ASTM A53-A
Building	AB CENTRAL SQUARE	Khánh Hòa	2018-2019	BS 1387 ASTM A53-A
Building	TRADE CENTER & SUPERMARKET HUNG CUONG BIG C	Quảng Ngãi	2019	BS 1387 ASTM A53-A
Building	OPAL TOWER	TPHCM	2019	BS 1387 ASTM A53-A
Building	HILTON HOTEL SAIGON	TPHCM	2019	BS 1387 ASTM A53-A
Building	THE MARQ	TPHCM	2019	BS 1387 ASTM A53-A
Building	TMS LUXURY HOTEL	BÌNH ĐỊNH	2019-2020	BS 1387 ASTM A53-A
Building	SUNSHINE CITY SAIGON	TPHCM	2019	BS 1387 ASTM A53-A
Building	HOUSE OF LAO NATIONAL ASSEMBLY	LÀO	2019-2020	BS 1387 ASTM A53-A
Building	SWISSTOUCHES LALUNA RESORT	Khánh Hòa	2020	BS 1387 ASTM A53-A
Building	ASIANA CAPELLA	TPHCM	2020	BS 1387
Building	HÀ ĐÔ CENTROSA GARDEN	TPHCM	2018	BS 1387 ASTM A53-A
Building	PULLMAN HOTEL HAIPHONG	Hải Phòng	2019	BS 1387 ASTM A53-A
Building	VIETTEL MILITARY TELECOM HEAD OFFICE	Hà Nội	2018-2020	BS 1387 ASTM A53-A
Building	KINGDOM 101	TPHCM	2018-2019	BS 1387 ASTM A53-A
Building	URBAN AREA - APARTMENT BUIDING	Nha Trang	2018 - 2020	BS 1387 ASTM A53-A
Building	LOVERA VISTA APARMENT	HCM	2019 - 2020	BS 1387 ASTM A53-A
Building	CELADON CITY - URBAN AREA	HCM	2019	BS 1387
Building	COMPASS ONE APARMENT	Bình Dương	2019	BS 1387
Building	ONEHUB SAIGON	HCM	2018	BS 1387 ASTM A53-A
Building	THE SUN AVENUE	HCM	2018	BS 1387
Building	VIET CAPPITAL CENTER	HCM	2018	BS 1387

Project Used SeAH Pipes

Type of project	Project Name	Place	Time	Standard
Building	The 67 BUIDING	HCM	2019	BS 1387 ASTM A53-A
Resort	VITOURS HOANG CƯƠNG LUXURY RESORT & HOTAL DANANG	Đà Nẵng	2020	ASTM A53-A
Resort	TUI BLUE TAM KY HOTEL	Quảng Nam	2020	BS 1387 ASTM A53-A
Resort	LANDSCAPE RESORT - CAM RANH	CAM RANH	2018 - 2020	BS 1387 ASTM A53-A
Resort	BA NA HILL, NAM HOI AN	Đà Nẵng	2019-2020	BS 1387 ASTM A53-A
Hospotal	SOC TRANG OBSTERTRICS AND PEDIATRICS HOSPITAL	Sóc Trăng	2018 - 2020	BS 1387 ASTM A53-A
Hospital	EASTERN INTERNATIONAL MULTI-HOSPITAL	Bình Dương	2011 - 2014	BS 1387 ASTM A53-A
Hospital	AMERICAN INTERNATIONAL HOSPITAL	TPHCM	2016 - 2017	BS 1387 ASTM A53-A
Hospital	MILITARY CENTER HOSPITAL 108	Hà Nội	2016	BS 1387 ASTM A53-A
Hospital	VIET - FRENCH HOSPITAL (FV)	TPHCM	2002 - 2003	BS 1387 ASTM A53-A
Port	CAI MEP - THI VAI PORT	Vũng Tàu	2009 - 2013	ASTM A53-B
Building	9 VIEW APARTMENT	TPHCM	2017	BS 1387 ASTM A53-A
Building	SONADEZI BUILDING	Đồng Nai	2010 - 2011	BS 1387 ASTM A53-A
Building	CITY GARDEN	TPHCM	2016	BS 1387 ASTM A53-A
Building	D'.CAPITALE	Hà Nội	2016	BS 1387 ASTM A53-A
Building	DIAMOND CITY	TPHCM	2016	BS 1387 ASTM A53-A
Building	DIAMOND ISLAND	TPHCM	2016 - 2019	BS 1387 ASTM A53-A
Building	DIAMOND LOTUS	TPHCM	2016 - 2017	BS 1387 ASTM A53-A
Building	DRAGON BAY	Quảng Ninh	2017 - 2018	BS 1387 ASTM A53-A
Building	EVERRICH 8	TPHCM	2016 - 2018	BS 1387 ASTM A53-A
Building	DEUTSCHES HAUS	TPHCM	2016 -2017	BS 1387 ASTM A53-A
Building	UNION SQUARE	TPHCM	2016 -2017	BS 1387 ASTM A53-A
Building	FOREST IN THE SKY - FLAMINGO ĐẠI LẢI RESORT	Vĩnh Phúc	2016	BS 1387 ASTM A53-A
Building	MIPEC RIVER SIDE	Hà Nội	2016 -2017	BS 1387 ASTM A53-A
Building	GREEN BAY	Hà Nội	2017	BS 1387 ASTM A53-A
Building	HANOI CITY COMPLEX (LOTTE CENTER HANOI)	Hà Nội	2009 - 2013	KS D 3507 / 3562 JIS C 8305
Building	SYSTEM OF LOTTE, METRO SUPERMARKET	Hà Nội, TPHCM, Đồng Nai, Cần Thơ	2008-2014	ASTM A53A (B) KS D 3507 / 3562 JIS C 8305
Building	HH01 – NAM CƯỜNG	Hà Nội	2016 - 2017	BS 1387 ASTM A53-A
Building	BEST WESTERN PREMIER HOTEL - HAVANA NHA TRANG	Khánh Hòa	2008 - 2012	BS 1387 ASTM A53-A
Building	PULLMAN HOTEL SAI GON	TPHCM	2012 - 2013	BS 1387 ASTM A53-A

Project Used SeAH Pipes

Type of project	Project Name	Place	Time	Standard
Building	LUCASTA VILLA AREA	TPHCM	2016	BS 1387 ASTM A53-A
Building	NAM SAI GON HIGH-CLASS APARTMENT AREA	TPHCM	2016 - 2017	BS 1387 ASTM A53-A
Building	LUCASTA RESIDENTIAL AREA	TPHCM	2016	BS 1387 ASTM A53-A
Building	LAKEVIEW CITY	TPHCM	2016 - 2017	BS 1387 ASTM A53-A
Building	GARDEN MALL	TPHCM	2017	BS 1387 ASTM A53-A
Building	MASTERI THẢO ĐIỀN	TPHCM	2016	BS 1387 ASTM A53-A
Building	HOUSE OF VIETNAM NATIONAL ASSEMBLY & BA DINH NEW MEETING HALL	Hà Nội	2012 - 2014	BS 1387 ASTM A53-A
Building	PANORAMA NHA TRANG	Khánh Hòa	2016 - 2017	BS 1387 ASTM A53-A
Building	SKYLAKE	Hà Nội	2017 - 2018	BS 1387 ASTM A53-A
Building	SOL BEACH HOUSE	Kiên Giang	2016	BS 1387 ASTM A53-A
Building	SUNRISE CITY	TPHCM	2009	KS D 3507 JIS C 8305
Building	THẢO ĐIỀN PEARL	TPHCM	2011 - 2013	BS 1387 ASTM A53-A
Building	THE LANDMARK 81	TPHCM	2016 - 2017	BS 1387 ASTM A53-A
Building	BITEXCO FINANCIAL TOWER BUILDING	TPHCM	2006 - 2010	KS D 3507 JIS C 8305
Building	KEANGNAM HANOI LANDMARK TOWER	Hà Nội	2008 - 2010	KS D 3507 JIS C 8305
Building	SAIGON TIMES SQUARE BUILDING	TPHCM	2008 - 2011	BS 1387 ASTM A53-A JIS C 8305
Building	VINCOM TWIN TOWER	Hà Nội	2004	BS 1387 ASTM A53-A JIS C 8305
Building	HEAD OFFICE OF VIETINBANK - HA NOI BANK	Hà Nội	2014 -	BS 1387 ASTM A53-A JIS C 8305
Building	VIETCOMBANK TOWER	TPHCM	2012 - 2014	BS 1387 ASTM A53-A
Building	VINCOM BAC NINH	Bắc Ninh	2017 - 2018	BS 1387 ASTM A53-A
Building	MARIE CURIE	TPHCM	2016 -2017	BS 1387 ASTM A53-A
Building	ETOW CENTRAL	TPHCM	2016 -2017	BS 1387 ASTM A53-A
Building	VINHOME RIVERSIDE THE HARMONY	Hà Nội	2016 - 2017	BS 1387 ASTM A53-A
Building	VINHOMES GARDENIA	Hà Nội	2016	BS 1387 ASTM A53-A
Building	VINHOMES GOLDEN RIVER	TPHCM	2016 -2017	BS 1387 ASTM A53-A
Building	VINHOMES GOLDEN VIEW	TPHCM	2016 -2017	BS 1387 ASTM A53-A
Building	VTV	Hà Nội	2016	BS 1387 ASTM A53-A
Building	VINHOMES METROPOLIS	Hà Nội	2016 - 2017	BS 1387 ASTM A53-A
Building	VINHOMES THANG LONG	Hà Nội	2016 - 2017	BS 1387 ASTM A53-A
Building	VINHOMES TIMES CITY PARK HILL 5	Hà Nội	2016	BS 1387 ASTM A53-A

Project Used SeAH Pipes

Type of project	Project Name	Place	Time	Standard
Oil and Gas	BRA-A CPP TOPSIDES TALISMAN RIG	Vũng Tàu	2002 - 2004	BS 1387 ASTM A53-B
Oil and Gas	NGHI SON REFINE AND PETROCHEMIC FACTORY	Thanh Hóa	2005 - 2014	ASTM A53-B
Oil and Gas	DUNG QUAT OIL REFINE FACTORY	Quảng Ngãi	2007 - 2009	API 5LB1
Infrastructure	LIEN KHUONG PORT	Lâm Đồng	2007 - 2009	ASTM A53-B
Infrastructure	CAM RANH INTERNATIONAL AIRPORT	Khánh Hòa	2017	BS 1387 ASTM A53-A
Infrastructure	DA NANG INTERNATIONAL AIRPORT	Đà Nẵng	2016 - 2017	BS 1387 ASTM A53-A
Infrastructure	DA NANG HIGH SPEED - QUANG NGAI	Quảng Ngãi	2014 - 2017	BS 1387 ASTM A53-A
Infrastructure	CAN THO BRIDGE	Cần Thơ	2010	BS 1387 ASTM A53-A
Infrastructure	NHAT TAN BRIDGE	Hà Nội	2010 - 2014	BS 1387 ASTM A53-A
Infrastructure	TÂN VŨ - LẠCH HUYỆN SEA - CROOSING BRIDGE	Hải Phòng	2015 - 2017	BS 1387 ASTM A53-A
Infrastructure	ĐÔNG TÂY HIGHWAY & THU THIEM TUNNEL	TPHCM	2005 - 2010	BS 1387 ASTM A53-A
Infrastructure	HO CHI MINH CITY - LONG THANH - DAU GIAY HIGHWAY	TPHCM	2010 - 2014	BS 1387 ASTM A53-A
Infrastructure	ĐÈO CẢ TUNNEL	Phú Yên	2014 - 2017	BS 1387 ASTM A53-A
Infrastructure	HẢI VÂN TUNNEL	Huế - Đà Nẵng	2001 - 2005	BS 1387 ASTM A53-A
Air Port	TÂN SƠN NHẤT AIRPORT	TPHCM	2004 - 2007	JIS G 3452 JIS G 3454
Air Port	EXPANDING TAN SON NHAT AIRPORT	TPHCM	2015 - 2016	JIS G 3452 JIS G 3454
Air Port	NỘI BÀI T2 AIRPORT	Hà Nội	2012 - 2014	JIS G 3452 JIS G 3454
Air Port	CẦN THƠ AIRPORT	Cần Thơ	2009 - 2010	BS 1387 ASTM A53-A
Structure	PHÚ THỌ STADIUM (TPHCM)	TPHCM	2000 - 2003	JIS G 3444 STK400
Structure	ANTENNA & TELECOM MAST PIPING (VIETTEL, VINAPHONE, MOBIFONE VÀ GTEL)	Việt Nam	2008-2014	JIS G 3444 STK490
Industrial Zone	HAI YEN INDUSTRIAL ZONE	Quảng Ninh	2017	BS 1387 ASTM A53-A
Industrial Zone	VIỆT NAM - SINGAPORE BẮC NINH INDUSTRIAL ZONE	Bắc Ninh	2017	BS 1387 ASTM A53-A
Resort	LA PERLA VILLA RESORT	Bình Thuận	2017 - 2018	BS 1387 ASTM A53-A
Resort	HA NOI INFORMATION TECHNOLOGY PARK	Hà Nội	2017 - 2018	BS 1387 ASTM A53-A
Resort	SHARATON ĐÀ NẴNG	Đà Nẵng	2016 -2017	BS 1387 ASTM A53-A
Resort	COCO BAY	Đà Nẵng	2017	BS 1387 ASTM A53-A
Resort	COCO SKYLINE RESORT	Đà Nẵng	2017	BS 1387 ASTM A53-A
Resort	ĐẠI DƯƠNG SƠN TRÀ PARK	Đà Nẵng	2016 - 2017	BS 1387 ASTM A53-A
Resort	HỒ TRÀM STRIP	Vũng Tàu	2017	BS 1387 ASTM A53-A
Resort	QUEEN PEARL MŨI NÉ	Bình Thuận	2016 - 2017	BS 1387 ASTM A53-A
Resort	SENTOSA VILLA	Bình Thuận	2016 - 2017	BS 1387 ASTM A53-A
Resort	VINPEARL PREMIUM NHA TRANG	Khánh Hòa	2016 - 2017	BS 1387 ASTM A53-A

Approved Certifications

American Petroleum Institute

Certificate of Authority to use the Official API Monogram

License Number: 5CT-1139 ORIGINAL

The American Petroleum Institute hereby grants to

SEAH STEEL VINA CORPORATION
No. 7, Street 3A, Bienhoa 2
Industrial Zone
Bien Hoa City, Dong Nai Province
Vietnam

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and **API-5CT** and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: **5CT-1139**

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

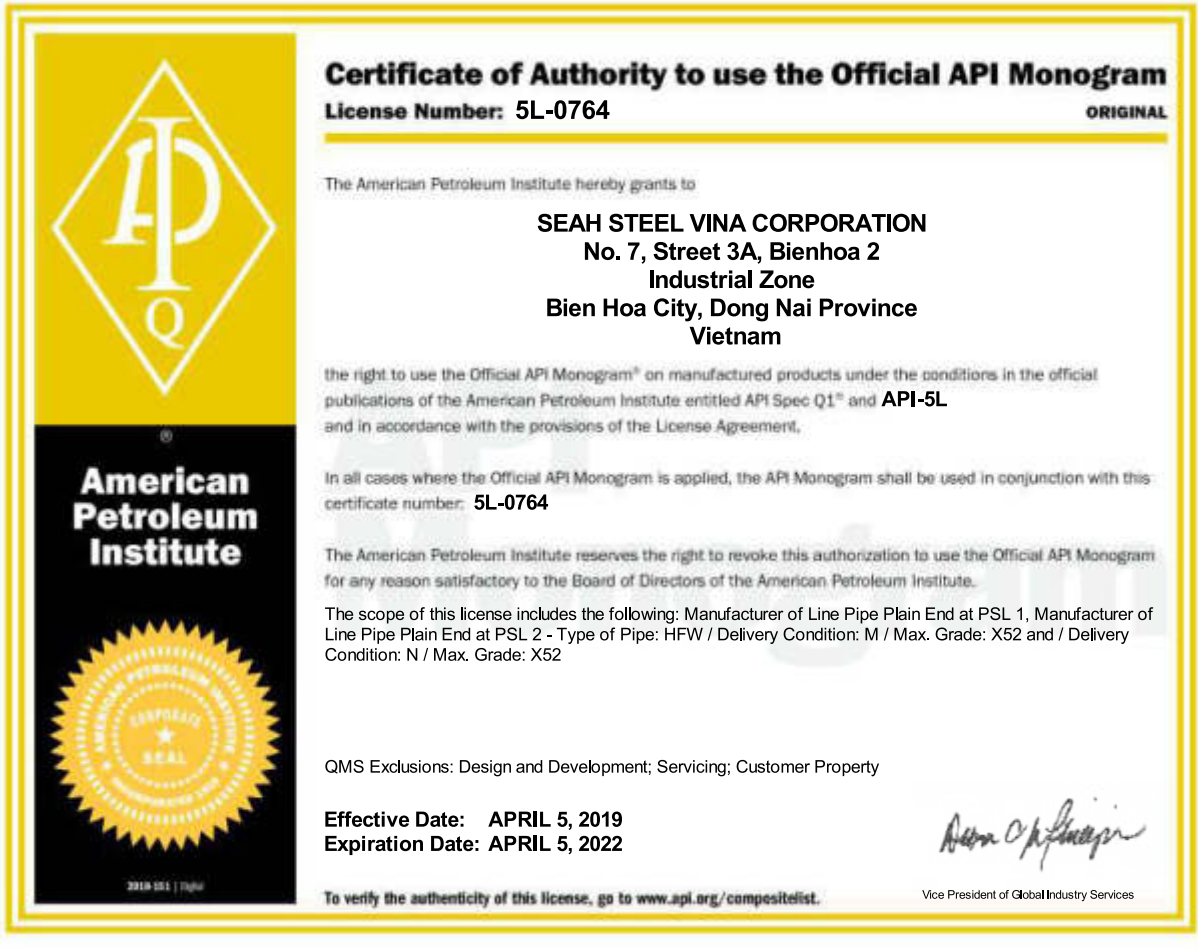
The scope of this license includes the following: Manufacturer of Electric-Welded Casing or Tubing (Plain End) - H40, PSL 1, - J55, PSL 1, - K55, PSL 1

QMS Exclusions: Design and Development; Servicing; Customer Property

Effective Date: JULY 1, 2019
Expiration Date: APRIL 5, 2022

Vice President of Global Industry Services

To verify the authenticity of this license, go to www.api.org/compositelist.



American Petroleum Institute

Certificate of Authority to use the Official API Monogram

License Number: 5L-0764 ORIGINAL

The American Petroleum Institute hereby grants to

SEAH STEEL VINA CORPORATION
No. 7, Street 3A, Bienhoa 2
Industrial Zone
Bien Hoa City, Dong Nai Province
Vietnam

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and **API-5L** and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: **5L-0764**

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

The scope of this license includes the following: Manufacturer of Line Pipe Plain End at PSL 1, Manufacturer of Line Pipe Plain End at PSL 2 - Type of Pipe: HFW / Delivery Condition: M / Max. Grade: X52 and / Delivery Condition: N / Max. Grade: X52

QMS Exclusions: Design and Development; Servicing; Customer Property

Effective Date: APRIL 5, 2019
Expiration Date: APRIL 5, 2022

Vice President of Global Industry Services

To verify the authenticity of this license, go to www.api.org/compositelist.

FM APPROVED

Certificate of Compliance

This certificate is issued for the following:

Steel Pipe for Automatic Fire Sprinkler Systems

Steel Pipe Manufactured to
ASTM A53 / A53M Schedule 40
ASTM A795 / A795M Schedule 40
ASTM A135 / A135M Schedule 40
Sizes 1 through 8 inch NPS
(See Attached Table for Additional Details)

Prepared for: SeAH Steel America Inc, 2100 Main St. Suite 100
Irvine, CA 92614, United States

Manufacturing Location: SeAH Steel Vina Corp, No. 7, 3A Road Bien Hoa II Industrial Zone
Dong Nai, Vietnam

FM Approvals Class: 1630 – "Steel Pipe for Automatic Fire Sprinkler Systems"

Approval Identification: 3066277 Approval Granted: March 28, 2017

To verify the availability of the Approved product, please refer to www.approvalguide.com

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

David B. Fuller
AVP, Manager – Fire Protection
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062
USA

FM Approvals
Member of the FM Global Group

FM APPROVED

Certificate of Compliance

This certificate is issued for the following:

Steel Pipe for Automatic Fire Sprinkler Systems

Product	Listing Country	Nominal Pipe Size, in.	Rated Working Pressure, psi	Rated Working Pressure, kPa	Certification Type
Schedule 40[a,b,c,d,e,g,m,p,r,s]	United States of America	1, 1-1/4, 1-1/2, 2	175	1205	FM Approved
Schedule 40[a,b,c,d,e,g,m,p,r,s]	United States of America	1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 3-1/2, 4, 5, 6, 8	300	2070	FM Approved

Notes:
a - FM Approved for use with FM Approved pipe couplings on rolled or cut grooves
b - FM Approved for use with FM Approved pipe fittings when threaded
c - FM Approved for use in welded systems when supplied with standard bevel on ends
d - When hot dip galvanized by factory, the sprinkler pipe is FM Approved for dry pipe systems
e - Any FM Approved pipe coupling or fitting suitable for use with Schedule 10 pipe may be used with this product at the lower rated pressure of the pipe or the fitting
g - FM Approved for use with plain-end fittings
m - FM Approved for use in all steel sprinkler systems composed of uncoated steel pipe
p - Manufactured out of ASTM A53 / A53M Grade A steel
r - Manufactured out of ASTM A135 / A135M Grade A as an alternate material
s - Manufactured out of ASTM A795 / A1795 Grade A as an alternate material

FM Approvals Class: 1630 – "Steel Pipe for Automatic Fire Sprinkler Systems"

Approval Identification: 3066277 Approval Granted: March 28, 2017

To verify the availability of the Approved product, please refer to www.approvalguide.com

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

David B. Fuller
AVP, Manager – Fire Protection
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062
USA

FM Approvals
Member of the FM Global Group

CERTIFICATE OF COMPLIANCE

Certificate Number	20170112-EX15856
Report Reference	EX15660-20101027
Issue Date	2017-JANUARY-12
Issued to:	SEAH STEEL VINA CORPORATION NO 7 ST 3A BIEN HOA II INDUSTRIAL ZONE DONG NAI VIET NAM
This is to certify that representative samples of	METALLIC SPRINKLER PIPE See Addendum Page for Models/Product
	Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	UL 852, Metallic Sprinkler Pipe for Fire Protection Service. ULC/ORD C199S, Light Wall Steel Pipes for Sprinkler Systems for Fire Protection Service.
Additional Information:	See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.

Bruce Mahrenholz, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, pleas e contact a local UL Customer Service Representative at http://ul.com/aboutul/locations/

Page 1 of 2

the standard in safety

Underwriters Laboratories

File EX15660 Vol 1 Issued: 2010-10-27
Revised: 2010-11-19

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

METALLIC SPRINKLER PIPE
(VIZY,VIZY7)

Manufacturer: SEAH STEEL VINA CORPORATION
(100556-810) NO 7 ST 3A
BIEN HOA II INDUSTRIAL ZONE
DONG NAI VIET NAM

Applicant: SEAH STEEL AMERICA INC
(100529-668) SUITE B
9615 S PIONEER BLVD
SANTA FE SPRINGS CA 90670

Listee: SAME AS MANUFACTURER (EX15856)
(100556-810)

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc.(UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. (UL) or any authorized licensee of UL, upon request.

This PROCEDURE, and any subsequent revision, is the property of Underwriters Laboratories Inc.(UL) and the authorized licensee of UL and is not transferable.

Underwriters Laboratories Inc.

Stephen Hewson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program

JIS MARK CERTIFICATE

Certification No. KSVN14003

SeAH STEEL VINA CORPORATION

Korean Standards Association hereby certifies the JIS Mark factory in accordance with the provision of Article 23 of the Japanese Industrial Standardization Law as follows

JIS NUMBER & TITLE

G 3444 : Carbon steel tubes for general structure

GRADE OR TYPE

STK290, STK400, STK490, STK500, STK540

OTHERS

Certificate Valid Date : 04 September, 2017 ~ 03 September, 2020

Original Certification Date : 04 September, 2014

Date of Issue : 02 August, 2017

Baek, Soo Hyun

CHAIRMAN OF KSA

KOREAN STANDARDS ASSOCIATION

JIS MARK CERTIFICATE

Certification No. KSVN14004

SeAH STEEL VINA CORPORATION

Korean Standards Association hereby certifies the JIS Mark factory in accordance with the provision of Article 23 of the Japanese Industrial Standardization Law as follows

JIS NUMBER & TITLE

G 3452 : Carbon steel pipes for ordinary piping

GRADE OR TYPE

[SGP], [SGP-G], [Black Pipe, Galvanized Pipe]

OTHERS

Certificate Valid Date : 04 September, 2017 ~ 03 September, 2020

Original Certification Date : 04 September, 2014

Date of Issue : 02 August, 2017

Baek, Soo Hyun

CHAIRMAN OF KSA

KOREAN STANDARDS ASSOCIATION

Approved Certifications

Certificate

KS CERTIFICATE

This is to certify that the Korean Standard Mark(KS mark) of :

SeAH Steel Vina
No. 7, Street 3A, Bien Hoa II, Industrial Zone, Dong Nai, Viet Nam
CHO JIN HO

has been approved by Korean Standards Association
to the following Korean Standard :

KS D 3507
Carbon steel pipes for ordinary piping
SPP(Black) up to 200A : SPP(White) up to 150A, End

in accordance with the Korean Industrial Standardization Act.

Certificate number : 15-0236

Date certified : 2015-04-15
Expiry date : 2021-03-27
Date issued : 2019-06-17

Certified by
Chairman & CEO

KOREAN STANDARDS ASSOCIATION
305, Teheran-Ro, Gangnam-Gu, Seoul, Korea

Certificate

KS CERTIFICATE

This is to certify that the Korean Standard Mark(KS mark) of :

SeAH Steel Vina
No. 7, Street 3A, Bien Hoa II, Industrial Zone, Dong Nai, Viet Nam
CHO JIN HO

has been approved by Korean Standards Association
to the following Korean Standard :

KS D 3562
Carbon steel pipes for pressure service
SPS 250(Sch40) up to 200A, End

in accordance with the Korean Industrial Standardization Act.

Certificate number : 15-0237

Date certified : 2015-04-15
Expiry date : 2021-03-27
Date issued : 2019-06-17

Certified by
Chairman & CEO

KOREAN STANDARDS ASSOCIATION
305, Teheran-Ro, Gangnam-Gu, Seoul, Korea

BUREAU VERITAS
Certification

SEAH STEEL VINA CORPORATION

NO.7, ROAD 3A, BIEN HOA 2 INDUSTRIAL ZONE, LONG BINH TAN WARD, BIEN HOA CITY, DONG NAI PROVINCE, VIETNAM

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organization has been audited and found to be in accordance with the requirements of the Management System standards detailed below.

Standard

ISO 9001:2015

Scope of certification

MANUFACTURE OF ELECTRIC RESISTANCE WELDED PIPE (ERW PIPE) WITH SIZE RANGE:

*** NOMINAL BORE: 3/8" (10A) UP TO 8" (200A)**
*** OUTSIDE DIAMETER: 15.9MM UP TO 219.1 MM**
*** WALL THICKNESS: 0.8MM UP TO 12MM**
*** S.H.S AND R.H.S WITH THICKNESS 0.8MM UP TO 7.0MM**
*** LENGTH: MAX 12.850 METERS**

Original cycle start date:	**30 March 2016**
Expiry date of previous cycle:	**29 March 2019**
Recertification Audit date:	**21 February 2019**
Recertification cycle start date:	**29 March 2019**

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **29 March 2022**

Certificate no.: **VN.4383849/Q** Version: **1** Revision date: **29 March 2019**

NGUYEN TU HAI

UKAS MANAGEMENT SYSTEMS
0008

Certification body address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom
Local Office: Unit 4.4A, 4th Floor, E-Town 1 Building,364 Cong Hoa Street, Tan Binh District, Ho Chi Minh City, Vietnam

Further clarifications regarding the scope of this certificate and the applicability of the Management System requirements may be obtained by consulting the organization. To check this certificate validity, please call **+84-28-3812 2246.**