



# RHINO FITT <sup>UK</sup>

*A Quality Product of WEC (LEEDS) Co.*

## ERW STEEL PIPES



AN ISO 9001:2015 CERTIFIED COMPANY





W.E.C (Leeds) Ltd, established in the UK in 1997, is today a leading name in the Manufacture and Distribution of specialised hoses for the Oil and Petrochemical industry.

Recognising the opportunity in the piping industry W.E.C (Leeds) ramped up manufacturing to become a major PFV (Pipes, Fittings & Valves), branded as Rhinofitt. Today Rhinofitt is the preferred vendor across UK and Europe for enterprise level projects.

Upping the ante in the international market, based on our success in Europe, we are now one of the leading brands worldwide. Rhinofitt is known for offering a good quality product at competitive prices whilst maintaining a high standard of service and technical knowhow, supported by our wide network of distributors.

W.E.C (Leeds) recognises the need to offer the highest standards of customer service and this has always been a fundamental rule in our business

model as well as our success both for existing and potential new clients.

Within the Rhinofitt range we provide all types of ERW pipes manufactured to cater various industries complying the ever growing demand in quality and service.

## Product Range

Size: ½" to 48" \*\*

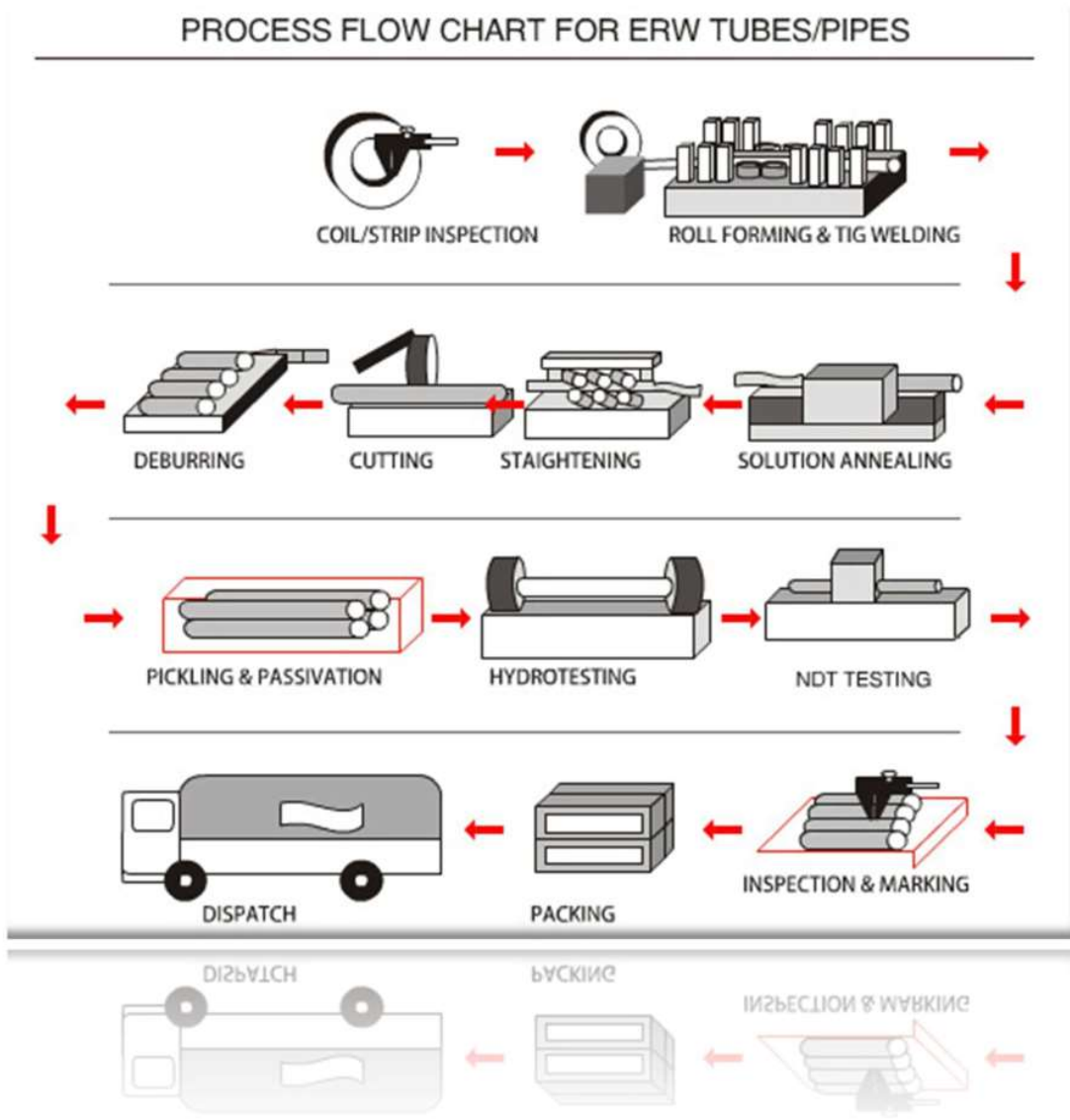
Wall Thickness: 2.5 to 60 mm \*\*

Length: 4 to 12 meters

Specification: ASTM A53 Grade A and B

# Electric Resistance Weld

The processing of Electric Resistance Welded (ERW) pipe begins as a coiled plate of steel with appropriate thickness and specific width to form a pipe that conforms to its relevant specification. ERW pipe is cold formed. The ribbon is pulled through a series of rollers that gradually form it into a cylindrical tube. As the edges of the now cylindrical plate come together, an electric charge is applied at the proper points to heat the edges so they can be welded together. Electric Resistance Welded pipe is a high speed production product that can be made in continuous lengths up to 115'. It produces uniform wall thicknesses and outside dimensions and is made in a wide range of specifications. It does, however, require minimum tonnage to set up on a specific size .



## Quality is Passion

Customer satisfaction drives Rhinofitt in every aspect from production to delivery thus committed to high quality starting from selection of raw material and continues in every stage of manufacturing process. To ensure product reliability through the process, Rhinofitt has fully equipped metallurgical laboratory with all tools for comprehensive product quality testing which includes but not limited to Hydro test and Destructive testing. The constant emphasis on high quality guarantees a long , trouble-free service life to our pipes without breakdowns or degradation.

## Dimensions and Weights of ASTM A53 Pipes size ½" – 24"

NPS	Specified Outside Diameter in. (mm)	Specified Wall Thickness in. (mm)	Nominal Weight (Mass) per Unit Length Plain End lb/ft (kg/m)	Weight Class	Schedule No.	Test Pressure Apsi (kPa)	
						Grade A	Grade B
½	0.839 (21.3)	0.120 (2.77)	0.85 (1.27)	STD	40	700 (4800)	700 (4800)
		0.147 (3.73)	1.09 (1.62)	XS	80	850 (5900)	850 (5900)
		0.188 (4.78)	1.31 (1.95)	...	160	950 (6500)	950 (6500)
¾	1.050 (26.7)	0.294 (7.47)	1.71 (2.55)	XXS	...	1000 (6900)	1000 (6900)
		0.113 (2.87)	1.13 (1.69)	STD	40	700 (4800)	700 (4800)
		0.154 (3.91)	1.48 (2.20)	XS	80	850 (5900)	850 (5900)
1	1.315 (33.4)	0.219 (5.56)	1.95 (2.90)	...	160	950 (6500)	950 (6500)
		0.308 (7.82)	2.44 (3.64)	XXS	...	1000 (6900)	1000 (6900)
		0.133 (3.38)	1.68 (2.50)	STD	40	700 (4800)	700 (4800)
1¼	1.660 (42.2)	0.179 (4.55)	2.17 (3.24)	XS	80	850 (5900)	850 (5900)
		0.250 (6.35)	2.85 (4.24)	...	160	950 (6500)	950 (6500)
		0.358 (9.09)	3.66 (5.45)	XXS	...	1000 (6900)	1000 (6900)
1½	1.900 (48.3)	0.140 (3.56)	2.27 (3.39)	STD	40	1200 (8300)	1300 (9000)
		0.191 (4.85)	3.00 (4.47)	XS	80	1800 (12400)	1900 (13100)
		0.250 (6.35)	3.77 (5.61)	...	160	1900 (13100)	2000 (13800)
2	2.375 (60.3)	0.382 (9.70)	5.22 (7.77)	XXS	...	2200 (15200)	2300 (15900)
		0.145 (3.68)	2.72 (4.05)	STD	40	1200 (8300)	1300 (9000)
		0.200 (5.08)	3.63 (5.41)	XS	80	1800 (12400)	1900 (13100)
2½	2.875 (73.0)	0.281 (7.14)	4.86 (7.25)	...	160	1950 (13400)	2050 (14100)
		0.400 (10.16)	6.41 (9.56)	XXS	...	2200 (15200)	2300 (15900)
		0.154 (3.91)	3.66 (5.44)	STD	40	2300 (15900)	2500 (17200)
3	3.500 (88.9)	0.218 (5.54)	5.03 (7.48)	XS	80	2500 (17200)	2500 (17200)
		0.344 (8.74)	7.47 (11.11)	...	160	2500 (17200)	2500 (17200)
		0.436 (11.07)	9.04 (13.44)	XXS	...	2500 (17200)	2500 (17200)
3½	4.000 (101.6)	0.203 (5.16)	5.80 (8.63)	STD	40	2500 (17200)	2500 (17200)
		0.276 (7.01)	7.67 (11.41)	XS	80	2500 (17200)	2500 (17200)
		0.375 (9.52)	10.02 (14.90)	...	160	2500 (17200)	2500 (17200)
4	4.500 (114.3)	0.552 (14.02)	13.71 (20.39)	XXS	...	2500 (17200)	2500 (17200)
		0.125 (3.18)	4.51 (6.72)	...	...	1290 (8900)	1500 (1000)
		0.156 (3.96)	5.58 (8.29)	...	...	1600 (11000)	1870 (12900)
5	5.563 (141.3)	0.188 (4.78)	6.66 (9.92)	...	...	1930 (13330)	2260 (15600)
		0.216 (5.49)	7.58 (11.29)	STD	40	2220 (15300)	2500 (17200)
		0.250 (6.35)	8.69 (12.93)	...	...	2500 (17200)	2500 (17200)
6	6.625 (167.8)	0.281 (7.14)	9.67 (14.40)	...	...	2500 (17200)	2500 (17200)
		0.300 (7.62)	10.26 (15.27)	XS	80	2500 (17200)	2500 (17200)
		0.438 (11.13)	14.34 (21.35)	...	160	2500 (17200)	2500 (17200)
7	7.625 (193.7)	0.600 (15.24)	18.60 (27.68)	XXS	...	2500 (17200)	2500 (17200)
		0.125 (3.18)	5.18 (7.72)	...	...	1120 (7700)	1310 (9000)
		0.156 (3.96)	6.41 (9.53)	...	...	1400 (6700)	1640 (11300)
8	8.625 (218.3)	0.188 (4.78)	7.66 (11.41)	...	...	1690 (11700)	1970 (13600)
		0.226 (5.74)	9.12 (13.57)	STD	40	2030 (14000)	2370 (16300)
		0.250 (6.35)	10.02 (14.92)	...	...	2250 (15500)	2500 (17200)
9	9.625 (244.8)	0.281 (7.14)	11.17 (16.63)	...	...	2500 (17200)	2500 (17200)
		0.318 (8.08)	12.52 (18.63)	XS	80	2800 (19300)	2800 (19300)
		0.125 (3.18)	5.85 (8.71)	...	...	1000 (6900)	1170 (8100)
10	10.625 (270.3)	0.156 (3.96)	7.24 (10.78)	...	...	1250 (8600)	1460 (10100)
		0.188 (4.78)	8.67 (12.91)	...	...	1500 (10300)	1750 (12100)
		0.219 (5.56)	10.02 (14.91)	...	...	1750 (12100)	2040 (14100)
11	11.625 (294.8)	0.237 (6.02)	10.80 (16.07)	STD	40	1900 (13100)	2210 (15200)
		0.250 (6.35)	11.36 (16.90)	...	...	2000 (13800)	2330 (16100)
		0.281 (7.14)	12.67 (18.87)	...	...	2250 (15100)	2620 (18100)
12	12.625 (321.3)	0.312 (7.92)	13.97 (20.78)	...	...	2500 (17200)	2800 (19300)
		0.337 (8.56)	15.00 (22.32)	XS	80	2700 (18600)	2800 (19300)
		0.438 (11.13)	19.02 (28.32)	...	120	2800 (19300)	2800 (19300)
13	13.625 (346.8)	0.531 (13.49)	22.53 (33.54)	...	160	2800 (19300)	2800 (19300)
		0.674 (17.12)	27.57 (41.03)	XXS	...	2800 (19300)	2800 (19300)
		0.156 (3.96)	9.02 (13.41)	...	...	1010 (7000)	1180 (8100)
14	14.625 (372.3)	0.188 (4.78)	10.80 (16.09)	...	...	1220 (8400)	1420 (9800)
		0.219 (5.56)	12.51 (18.61)	...	...	1420 (9800)	1650 (11400)
		0.258 (6.55)	14.63 (21.77)	STD	40	1670 (11500)	1950 (13400)
15	15.625 (397.8)	0.281 (7.14)	15.87 (23.62)	...	...	1820 (12500)	2120 (14600)
		0.312 (7.92)	17.51 (26.05)	...	...	2020 (13900)	2360 (16300)
		0.344 (8.74)	19.19 (28.57)	...	...	2230 (15400)	2600 (17900)

## Dimensions and Weights of ASTM A53 Pipes size ½" – 24"

NPS	Specified Outside Diameter in. (mm)	Specified Wall Thickness in. (mm)	Nominal Weight (Mass) per Unit Length Plain End lb/ft (kg/m)	Weight Class	Schedule No.	Test Pressure Apsi (kPa)	
						Grade A	Grade B
6	6.625 (168.3)	0.375 (9.52)	20.80 (30.94)	XS	80	2430 (16800)	2800 (19300)
		0.500 (12.70)	27.06 (40.28)	...	120	2800 (19300)	2800 (19300)
		0.625 (15.88)	32.99 (49.11)	...	160	2800 (19300)	2800 (19300)
		0.750 (19.05)	38.59 (57.43)	XXS	...	2800 (19300)	2800 (19300)
		0.188 (4.78)	12.94 (19.27)	...	...	1020 (7000)	1190 (8200)
		0.219 (5.56)	15.00 (22.31)	...	...	1190 (8200)	1390 (9600)
		0.250 (6.35)	17.04 (25.36)	...	...	1360 (9400)	1580 (10900)
		0.280 (7.11)	18.99 (28.26)	STD	40	1520 (10500)	1780 (12300)
		0.312 (7.92)	21.06 (31.32)	...	...	1700 (11700)	1980 (13700)
		0.344 (8.74)	23.10 (34.39)	...	...	1870 (12900)	2180 (15000)
		0.375 (9.52)	25.05 (37.28)	...	...	2040 (14100)	2380 (16400)
		0.432 (10.97)	28.60 (42.56)	XS	80	2350 (16200)	2740 (18900)
		0.562 (14.27)	36.43 (54.20)	...	120	2800 (19300)	2800 (19300)
		0.719 (18.26)	45.39 (67.56)	...	160	2800 (19300)	2800 (19300)
8	8.625 (219.1)	0.864 (21.95)	53.21 (79.22)	XXS	...	2800 (19300)	2800 (19300)
		0.188 (4.78)	16.96 (25.26)	...	...	780 (5400)	920 (6300)
		0.250 (6.35)	22.38 (33.31)	...	20	1040 (7200)	1220 (8400)
		0.277 (7.04)	24.72 (36.31)	...	30	1160 (7800)	1350 (9300)
		0.312 (7.92)	27.73 (41.24)	...	...	1300 (9000)	1520 (10500)
		0.322 (8.18)	28.58 (42.55)	STD	40	1340 (9200)	1570 (10800)
		0.344 (8.74)	30.45 (45.34)	...	...	1440 (9900)	1680 (11600)
		0.375 (9.52)	33.07 (49.20)	...	...	1570 (10800)	1830 (12600)
		0.406 (10.31)	35.67 (53.08)	...	60	1700 (11700)	2000 (13800)
		0.438 (11.13)	38.33 (57.08)	...	...	1830 (12600)	2130 (14700)
		0.500 (12.70)	43.43 (64.64)	XS	80	2090 (14400)	2430 (16800)
		0.594 (15.09)	51.00 (75.92)	...	100	2500 (17200)	2800 (19300)
		0.719 (18.26)	60.77 (90.44)	...	120	2800 (19300)	2800 (19300)
		0.812 (20.62)	67.82 (100.92)	...	140	2800 (19300)	2800 (19300)
0.875 (22.22)	72.49 (107.88)	XXS	...	2800 (19300)	2800 (19300)		
10	10.750 (273.1)	0.906 (23.01)	74.76 (111.27)	...	160	2800 (19300)	2800 (19300)
		0.250 (6.35)	28.07 (49.73)	...	20	1040 (7200)	1220 (8400)
		0.307 (7.80)	34.29 (65.20)	...	30	1160 (7800)	1350 (9300)
		0.375 (9.27)	40.42 (60.31)	STD	40	1340 (9200)	1570 (10800)
		0.500 (12.70)	54.80 (81.55)	XS	60	1700 (11700)	2000 (13800)
		0.594 (15.09)	64.51 (96.01)	...	80	2090 (14400)	2430 (16800)
		0.844 (21.44)	89.41 (133.06)	...	120	2800 (19300)	2800 (19300)
		1.125 (28.58)	115.80 (172.33)	...	160	2800 (19300)	2800 (19300)
		1.000 (25.40)	104.26 (155.15)	XXS	140	2800 (19300)	2800 (19300)
		0.250 (6.35)	33.42 (49.73)	...	20	800 (5500)	940 (6500)
12	12.752 (323.9)	0.330 (8.38)	43.81 (65.20)	...	30	880 (6100)	1030 (7100)
		0.375 (9.52)	49.65 (73.88)	STD	...	960 (6600)	1120 (7700)
		0.406 (10.31)	53.58 (79.73)	...	40	1130 (7800)	1310 (9000)
		0.562 (14.27)	73.22 (108.96)	...	...	1210 (8300)	1410 (9700)
		0.500 (12.70)	65.49 (97.46)	XS	...	1290 (8900)	1500 (10300)
		0.688 (17.48)	88.75 (32.08)	...	80	1930 (13300)	2250 (15500)
		1.000 (25.40)	125.49 (186.75)	...	120	2800 (19300)	2800 (19300)
		1.312 (33.32)	160.44 (238.76)	...	160	2800 (19300)	2800 (19300)
		1.000 (25.40)	125.49 (186.75)	XXS	...	2800 (19300)	2800 (19300)
		0.210 (5.33)	30.96 (46.04)	...	...	540 (3700)	630 (4300)
14	14.000 (355.6)	0.250 (6.35)	36.75 (54.69)	...	10	640 (4400)	750 (5200)
		0.312 (7.92)	45.65 (67.90)	...	20	800 (5500)	940 (6500)
		0.344 (8.74)	50.22 (74.76)	...	...	880 (6100)	1030 (7100)
		0.375 (9.52)	54.62 (81.25)	STD	30	960 (6600)	1120 (7700)
		0.438 (11.13)	63.50 (94.55)	...	40	1130 (7800)	1310 (9000)
		0.469 (11.91)	67.84 (100.94)	...	...	1210 (8300)	1410 (9700)
		0.500 (12.70)	72.16 (107.39)	XS	...	1290 (8900)	1500 (10300)
		0.750 (19.05)	106.23 (158.10)	...	80	1930 (13300)	2250 (15500)
		1.094 (27.79)	150.93 (224.65)	...	120	2800 (19300)	2800 (19300)
		1.406 (35.71)	189.29 (281.70)	...	160	2800 (19300)	2800 (19300)
2.200 (55.88)	277.51 (413.01)	...	...	2800 (19300)	2800 (19300)		

## Dimensions and Weights of ASTM A53 Pipes size ½" – 24"

NPS	Specified Outside Diameter in. (mm)	Specified Wall Thickness in. (mm)	Nominal Weight (Mass) per Unit Length Plain End lb/ft (kg/m)	Weight Class	Schedule No.	Test Pressure Apsi (kPa)	
						Grade A	Grade B
16	16.000 (406.4)	0.219 (5.56)	36.95 (54.96)	...	...	490 (3400)	570 (3900)
		0.250 (6.35)	42.09 (62.64)	...	10	560 (3900)	660 (4500)
		0.312 (7.92)	52.32 (77.83)	...	20	700 (4800)	820 (5700)
		0.344 (8.74)	57.57 (85.71)	...	...	770 (5300)	900 (6200)
		0.375 (9.52)	62.64 (93.17)	STD	30	840 (5800)	980 (6800)
		0.438 (11.13)	72.86 (108.49)	...	...	990 (6800)	1150 (7900)
		0.469 (11.91)	77.87 (115.86)	...	...	1060 (7300)	1230 (8500)
		0.500 (12.70)	82.85 (123.30)	XS	40	1120 (7700)	1310 (9000)
		0.844 (21.44)	136.74 (203.53)	...	80	1900 (13100)	2220 (15300)
		1.219 (30.96)	192.61 (286.64)	...	120	2740 (18900)	2800 (19300)
		1.438 (36.53)	223.85 (333.19)	...	140	2800 (19300)	2800 (19300)
		1.594 (40.49)	245.48 (365.35)	...	160	2800 (19300)	2800 (19300)
		0.250 (6.35)	47.44 (70.60)	...	10	500 (3400)	580 (4000)
		18	18.000 (457)	0.312 (7.92)	58.99 (87.75)	...	20
0.375 (9.52)	70.65 (105.10)			STD	...	750 (5200)	880 (6100)
0.438 (11.13)	82.23 (122.43)			...	30	880 (6100)	1020 (7000)
0.500 (12.70)	93.54 (139.20)			XS	...	1000 (6900)	1170 (8100)
0.562 (14.27)	104.76 (155.87)			...	40	1120 (7700)	1310 (9000)
0.938 (23.83)	171.08 (254.67)			...	80	1880 (13000)	2190 (15100)
1.375 (34.92)	244.37 (363.64)			...	120	2750 (19000)	2800 (19300)
1.562 (39.67)	274.48 (408.45)			...	140	2800 (19300)	2800 (19300)
1.781 (45.24)	308.79 (459.59)			...	160	2800 (19300)	2800 (19300)
0.250 (6.35)	52.78 (78.55)			...	10	450 (3100)	520 (3600)
0.375 (9.52)	78.67 (117.02)			STD	20	680 (4700)	790 (5400)
0.406 (10.31)	84.04 (126.53)			...	...	730 (5000)	850 (5900)
0.500 (12.70)	104.23 (155.12)			XS	30	900 (6200)	1050 (7200)
0.594 (15.09)	123.23 (183.42)			...	40	1170 (8100)	1250 (8600)
20	20.000 (508)	1.031 (26.19)	209.06 (311.17)	...	80	1860 (12800)	2170 (15000)
		1.500 (38.10)	296.65 (441.49)	...	120	2700 (18600)	2800 (19300)
		1.750 (44.45)	341.41 (508.11)	...	140	2800 (19300)	2800 (19300)
		1.969 (50.01)	379.53 (564.81)	...	160	2800 (19300)	2800 (19300)
		0.250 (6.35)	63.47 (94.46)	...	10	380 (2600)	440 (3000)
		0.344 (8.74)	86.99 (129.50)	...	...	520 (3600)	600 (4100)
		0.375 (9.52)	94.71 (140.88)	STD	20	560 (3900)	660 (4500)
		0.469 (11.91)	117.98 (175.54)	...	...	700 (4800)	820 (5700)
		0.500 (12.70)	125.61 (186.94)	XS	...	750 (5200)	880 (6100)
		0.688 (17.48)	171.45 (255.24)	...	40	1030 (7100)	1200 (8300)
		1.219 (30.96)	296.86 (441.78)	...	80	1830 (12600)	2130 (14700)
		1.812 (46.02)	429.79 (639.58)	...	120	2720 (18800)	2800 (19300)
		2.344 (59.54)	542.64 (807.63)	...	160	2800 (19300)	2800 (19300)

### Notes:

- For specified wall thicknesses greater than the heaviest specified wall thickness listed in this table for the applicable specified outside diameter, the test pressure shall be the highest value listed for the applicable specified outside diameter and grade.
- For pipe smaller than NPS 2 with a specified wall thickness less than the lightest specified wall thickness listed in this table for the applicable specified outside diameter and grade.
- For all sizes of Grade A and B pipe smaller than NPS 2, the test pressures were assigned arbitrarily. Test pressures for intermediate specified outside diameters need not exceed those given in this table for the next larger listed size.

### Permissible Variations in Wall Thickness

The minimum wall thickness at any point shall not be more than 12.5% under the nominal wall thickness specified.

### Permissible Variations in Weights per Foot

Weight of any length shall not vary more than 10% over and 3.5% under that specified.

NOTE — NPS 4 and smaller — weighed in lots.

Larger sizes shall be weighed separately by length.

### Tensile Requirements

Properties	SMLS & ERW	
	Grade A	Grade B
Tensile Strength, min., psi	48,000	60,000
Yield Strength, min., psi	30,000	35,000

## Chemical Requirements ASTM A53

Chemical elements	Type E (ERW)	
	Gr. A	Gr. B
Carbon max. %	0.25	0.3
Manganese %	0.95	1.2
Phosphorous, max. %	0.05	0.05
Sulfur, max. %	0.045	0.045
Copper, max. %	0.4	0.4
Nickel, max. %	0.4	0.4
Chromium, max. %	0.4	0.4
Molybdenum, max. %	0.15	0.15
Vanadium, max. %	0.08	0.08

The total composition for these five elements shall not exceed 1.00%.



LARGE DIAMETER WITH SPECIAL WALL-THICKNESS



PRE-INSULATED PIPE (HDPE/RP etc.)



INNER/OUTER EPOXY COATED PIPES



INDUSTRIAL/WATER DISTRIBUTION/CONSTRUCTION


## OTHER PRODUCTS




**RHINOFITT**<sup>UK</sup>   
A Quality Product of WEC (LEEDS) Co.

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