



TOSÇELİK
PROFILE & SHEET IND. CO.

**TOSYALI
HOLDİNG**



TOSÇELİK
PROFILE & SHEET IND. CO.

SU VE GAZ BORULARI
WATER AND GAS PIPES

Malzeme Kalitesi | Material Quality

DIN 17100 / DIN 1626	: St 33, St 37
EN 10025	: S 195, S 235 JR, S 235 J0, S 235 J2
ASTM A 53	: Gr A, Gr B
SI 4314 (ASTM A 795)	: Gr A, Gr B
EN 10217-1 (TS EN 10217-1)	: P 195 TR1/TR2, P 235 T1/TR2, P 265 TR1/TR2
EN 10217-2 (TS EN 10217-2)	: P 195 GH / P 235 GH / P 265 GH / 16 Mo 3
EN 10255	: S 195 T
SI 103	: S 332, S 414
BS 4360	: 40 A, 43 A
SI 530	: 530 A, 530 B, 530/42
EN 10224	: L235, L275, L355

Galvaniz Standartları | Galvanizing Standards:

EN 10240 (TS 11348), DIN 2444, ASTM A 90, ASTM A 53, SI 103, SI 918, BS 729

Diş Açma Standartları | Standards for Threading :

TS 301, DIN 2999, ISO 7-1, BS 21, ANSI B1 20.1, SI 50.3

Diş Açma Standartları | Standards for Threading:

TS 301, DIN 2999, ISO 7-1, BS 21, ANSI B1 20.1, SI 50.3

Boru Uçları | Finishing Operations

Düz Uçlu | Square Cut
Kaynak Ağzı | Bevelled End
Dişli ve Manşonlu | Threaded and Coupled

Yüzey Durumu | Surface Protection

Koruyucu Yağlı | Protective Oil upon Request
Sıcak Daldırma Galvanizli | Hot Dip Galvanized
Astar Boyalı | Primer Coated

Test Sertifikası | Mill Test Certificates

EN 10204 (TS EN 10204)'e göre 2.1, 2.2, 3.1, 3.2 belgeleri
According to EN 10204 2.1, 2.2, 3.1, 3.2

Üretim Programı | Production Program

Su ve Gaz Boruları , Galvanizli borular, Dişli Manşonlu Borular
Water and Gas Pipes, Galvanized Pipes , Threaded & Coupled Pipes

Üretim standartları | Production Standards :

TS 301-1/2/3/4 , EN 10255 (TS EN 10255) CE MARKED,
EN 10224 (TS 9341 EN 10224) ASTM A 53 , DIN 2440 ,
DIN 2441 , BS 1387 , NFA 49-145, ISO 65 (TS ISO 65) ,
UNI 8863 , SI 103, SI 530, SI 4314, ASTM A 795, DIN 1623,
EN 10217-1 (TS EN 10217-1) EN 10217-2 (TS EN 10217-2)

Kalite Kontrol | Quality Control

A - Sızdırmazlık testi | Leak tightness testing
Hidrostatik test | Hydrostatic test ,

B - Tahribatsız Test | Non-Destructive Test
Eddy Current testi | Eddy Current test
Kaynak Dikişi Ultrasonik Testi | Ultrasonic Test of weld seam
(60.3-339.7 mm) (2 3/8" -13 3/8")

C - Mekanik Testler | Destructive tests
Yassılma testi | Flattening test,
Eğme testi | Bending test,
Genişletme testi | Expanding test,
Çekme testi | Tensile test
Çentik Darbe Testi | Charpy V Notch Impact test

D - Kimyasal Analiz | Chemical Analysis
Spektral Analiz | Spectral Analysis
Görsel ve Boyutsal Kontrol | Visual and Dimensional Check



ÜRETİM MATRİSİ - Su ve Gaz Boruları, Galvanizli borular, Dişli Manşonlu Borular

PRODUCTION RANGE - Water and Gas Pipes, Galvanized Pipes, Threaded & Coupled Pipes

Dış Çap ve Et Kalınlığı | Outside Diameter and Wall Thickness :

Ebat | Size		Et Kalınlığı | Wall Thickness (mm)																				
mm	İnch	1.0	1.2	1.5	2.0	2.3	2.6	2.9	3.2	3.5	3.6	4.0	4.5	5.0	5.4	6.0	7.0	8.0	10.0	11.0	12.5	13.0
17.2	3/8"																					
21.3	1/2"																					
26.9	3/4"																					
33.7	1"																					
42.4	1 1/4"																					
48.3	1 1/2"																					
60.3	2"																					
76.1	2 1/2"																					
88.9	3"																					
114.3	4"																					
139.7	5"																					
165.1	6"																					
168.3	6"																					
177.8	7"																					
193.7	7 5/8																					
219.1	8"																					
244.5	9"																					
273.0	10"																					
323.9	12"																					
339.7	13 3/8																					

Uzunluk | Length : Düz Uçlu ve Kaynak Ağızı | Plain End - Bevelled : 4 - 13 m (4- 14.6 m)

Dişli Manşonlu | Threaded and Coupled : 5,8 - 7,5 m (5 - 8,5 m)

*Gri renkli ebatlar ve kaliteler 2012 yılı ikinci yarısında yeni kurulan Osmaniye ERW tesislerimizde üretilebilecektir.

Dimensions and grades marked with grey will be able to be produced in new Osmaniye ERW plant at the second period of 2012

** Ebatlara göre uzunluk değişebilir. | Length varies with the dimensions specified in the production program



DIN 2440 & 2441

Ebat | Size			DIN 2440					DIN 2441				
Dış Çap | Outside Diameter			Et Kalınlığı WT mm.	Birim Ağırlık | Mass per Unit Length				Et Kalınlığı mm.	Birim Ağırlık | Mass per Unit Length			
DN	inch.	mm.		BPE kg/m	BTC kg/m	GPE kg/m	GTC kg/m		BPE kg/m	BTC kg/m	GPE kg/m	GTC kg/m
10	3/8	17.2	2.35	0.85	0.86	0.90	0.91	2.9	1.02	1.03	1.09	1.10
15	1/2	21.3	2.65	1.22	1.23	1.29	1.30	3.25	1.45	1.46	1.52	1.53
20	3/4	26.9	2.65	1.58	1.59	1.67	1.68	3.25	1.90	1.91	1.99	2.00
25	1	33.7	3.25	2.44	2.46	2.55	2.57	4.05	2.97	2.99	3.08	3.10
32	1 1/4	42.4	3.25	3.14	3.17	3.29	3.32	4.05	3.84	3.87	3.98	4.01
40	1 1/2	48.3	3.25	3.61	3.65	3.78	3.82	4.05	4.43	4.47	4.60	4.64
50	2	60.3	3.65	5.10	5.17	5.31	5.38	4.50	6.17	6.24	6.38	6.45
65	2 1/2	76.1	3.65	6.51	6.63	6.78	6.90	4.50	7.90	8.02	8.17	8.29
80	3	88.9	4.05	8.47	8.64	8.79	8.96	4.85	10.10	10.30	10.42	10.62
100	4	114.3	4.50	12.10	12.40	12.51	12.81	5.40	14.40	14.70	14.81	15.11
125	5	139.7	4.85	16.20	16.70	16.71	17.21	5.40	17.80	18.30	18.31	18.81
150	6	165.1	4.85	19.20	19.80	19.80	20.40	5.40	21.20	21.80	21.80	22.40

BS 1387

Ebat | Size			ORTA SERİ | MEDIUM					AĞIR SERİ | HEAVY				
Dış Çap | Outside Diameter			Et Kalınlığı WT mm.	Birim Ağırlık | Mass per Unit Length				Et Kalınlığı mm.	Birim Ağırlık | Mass per Unit Length			
DN	inch.	mm.		BPE kg/m	BTC kg/m	GPE kg/m	GTC kg/m		BPE kg/m	BTC kg/m	GPE kg/m	GTC kg/m
15	1/2	21.3	2.6	1.21	1.22	1.28	1.29	3.2	1.44	1.45	1.51	1.52
20	3/4	26.9	2.6	1.56	1.57	1.65	1.66	3.2	1.87	1.88	1.96	1.97
25	1	33.7	3.2	2.41	2.43	2.53	2.55	4.0	2.94	2.96	3.05	3.07
32	1 1/4	42.4	3.2	3.10	3.13	3.25	3.28	4.0	3.80	3.83	3.94	3.97
40	1 1/2	48.3	3.2	3.57	3.61	3.74	3.78	4.0	4.38	4.42	4.55	4.59
50	2	60.3	3.6	5.03	5.10	5.24	5.31	4.5	6.19	6.26	6.40	6.47
65	2 1/2	76.1	3.6	6.43	6.55	6.70	6.82	4.5	7.93	8.05	8.20	8.32
80	3	88.9	4.0	8.37	8.54	8.69	8.86	5.0	10.30	10.50	10.62	10.82
100	4	114.3	4.5	12.20	12.50	12.61	12.91	5.4	14.50	14.80	14.91	15.21
125	5	139.7	5.0	16.60	17.10	17.11	17.61	5.4	17.90	18.40	18.41	18.91
150	6	165.1	5.0	19.70	20.30	20.30	20.90	5.4	21.30	21.90	21.90	22.50

ISO 65

Ebat | Size			ORTA SERİ | MEDIUM					AĞIR SERİ | HEAVY				
Dış Çap | Outside Diameter			Et Kalınlığı WT mm.	Birim Ağırlık | Mass per Unit Length				Et Kalınlığı mm.	Birim Ağırlık | Mass per Unit Length			
DN	inch.	mm.		BPE kg/m	BTC kg/m	GPE kg/m	GTC kg/m		BPE kg/m	BTC kg/m	GPE kg/m	GTC kg/m
15	1/2	21.3	2.6	1.21	1.22	1.28	1.29	3.2	1.44	1.45	1.51	1.52
20	3/4	26.9	2.6	1.56	1.57	1.65	1.66	3.2	1.87	1.88	1.96	1.97
25	1	33.7	3.2	2.41	2.43	2.53	2.55	4.0	2.93	2.95	3.05	3.07
32	1 1/4	42.4	3.2	3.10	3.13	3.25	3.28	4.0	3.79	3.82	3.94	3.97
40	1 1/2	48.3	3.2	3.57	3.60	3.73	3.77	4.0	4.37	4.41	4.54	4.58
50	2	60.3	3.6	5.03	5.10	5.24	5.31	4.5	6.19	6.26	6.40	6.47
65	2 1/2	76.1	3.6	6.42	6.54	6.70	6.81	4.5	7.93	8.05	8.20	8.32
80	3	88.9	4.0	8.36	8.53	8.69	8.85	5.0	10.30	10.50	10.62	10.82
100	4	114.3	4.5	12.20	12.50	12.61	12.91	5.4	14.50	14.80	14.91	15.21
125	5	139.7	5.0	16.60	17.10	17.11	17.61	5.4	17.90	18.40	18.41	18.91
150	6	165.1	5.0	19.80	20.30	20.30	21.00	5.4	21.30	21.90	21.90	22.50

ISO 65

Ebat | Size			HAFİF SERİ I | LIGHT I					HAFİF SERİ II | LIGHT II				
Dış Çap | Outside Diameter			Et Kalınlığı WT mm.	Birim Ağırlık | Mass per Unit Length				Et Kalınlığı mm.	Birim Ağırlık | Mass per Unit Length			
DN	inch.	mm.		BPE kg/m	BTC kg/m	GPE kg/m	GTC kg/m		BPE kg/m	BTC kg/m	GPE kg/m	GTC kg/m
15	1/2	21.3	2.3	1.08	1.09	1.15	1.16	2.0	0.947	0.976	1.02	1.03
20	3/4	26.9	2.3	1.39	1.40	1.48	1.49	2.3	1.38	1.39	1.47	1.48
25	1	33.7	2.9	2.20	2.22	2.32	2.34	2.6	1.98	2.00	2.10	2.12
32	1 1/4	42.4	2.9	2.80	2.85	2.97	3.00	2.6	2.54	2.57	2.69	2.72
40	1 1/2	48.3	2.9	3.24	3.28	3.41	3.45	2.9	3.23	3.27	3.40	3.44
50	2	60.3	3.2	4.49	4.56	4.71	4.78	2.9	4.08	4.15	4.30	4.37
65	2 1/2	76.1	3.2	5.73	5.85	6.00	6.12	3.2	5.71	5.83	5.98	6.01
80	3	88.9	3.6	7.55	7.72	7.87	8.04	3.2	6.72	6.89	7.04	7.21
100	4	114.3	4.0	10.80	11.10	11.22	11.52	3.6	9.75	10.00	10.17	10.42

BPE : Siyah Düz Uçlu | Black Plain End

BTC : Siyah Dişli Manşonlu | Black Threaded Coupled

GPE : Galvanizli Düz Uçlu | Galvanized Plain End

GTC : Galvanizli Dişli Manşonlu | Galvanized Threaded Coupled

EN 10255 & (TS 301)

Ebat | Size			ORTA SERİ | MEDIUM					AĞIR SERİ | HEAVY				
Dış Çap | Outside Diameter			Et Kalınlığı WT	Birim Ağırlık | Mass per Unit Length				Et Kalınlığı WT	Birim Ağırlık | Mass per Unit Length			
DN	inch.	mm.		BPE	BTC	GPE	GTC		BPE	BTC	GPE	GTC
10	3/8	17.2	2.3	0.89	0.90	0.96	0.97	2.9	1.02	1.03	1.11	1.12
15	1/2	21.3	2.6	1.21	1.22	1.28	1.29	3.2	1.44	1.45	1.51	1.52
20	3/4	26.9	2.6	1.56	1.57	1.65	1.66	3.2	1.87	1.88	1.96	1.97
25	1	33.7	3.2	2.41	2.43	2.53	2.55	4.0	2.93	2.95	3.04	3.06
32	1 1/4	42.4	3.2	3.10	3.13	3.25	3.28	4.0	3.79	3.82	3.93	3.96
40	1 1/2	48.3	3.2	3.56	3.60	3.73	3.77	4.0	4.37	4.41	4.54	4.58
50	2	60.3	3.6	5.03	5.10	5.24	5.31	4.5	6.19	6.26	6.40	6.47
65	2 1/2	76.1	3.6	6.42	6.54	6.69	6.81	4.5	7.93	8.05	8.20	8.32
80	3	88.9	4.0	8.36	8.53	8.68	8.87	5.0	10.3	10.5	10.62	10.82
100	4	114.3	4.5	12.20	12.50	12.61	12.91	5.4	14.5	14.8	14.91	15.21
125	5	139.7	5.0	16.60	17.10	17.11	17.61	5.4	17.90	18.40	18.41	18.91
150	6	165.1	5.0	19.80	20.40	20.40	21.00	5.4	21.30	21.90	21.90	22.50

EN 10255 & (TS 301)

Ebat | Size			TİP L1 | TYPE L1				TİP L2 | TYPE L2					
Dış Çap | Outside Diameter			Et Kalınlığı WT	Birim Ağırlık | Mass per Unit Length				Et Kalınlığı WT	Birim Ağırlık | Mass per Unit Length			
DN	inch.	mm.		BPE	BTC	GPE	GTC		BPE	BTC	GPE	GTC
10	3/8	17.2	2.0	0.74	0.75	0.81	0.82	1.8	0.67	0.68	0.74	0.75
15	1/2	21.3	2.3	1.08	1.09	1.15	1.16	2.0	0.947	0.956	1.02	1.03
20	3/4	26.9	2.3	1.39	1.40	1.48	1.49	2.3	1.38	1.39	1.47	1.48
25	1	33.7	2.9	2.20	2.22	2.32	2.34	2.6	1.98	2.00	2.10	2.12
32	1 1/4	42.4	2.9	2.82	2.85	2.98	3.00	2.6	2.54	2.57	2.69	2.72
40	1 1/2	48.3	2.9	3.24	3.28	3.41	3.45	2.9	3.23	3.27	3.40	3.44
50	2	60.3	3.2	4.49	4.56	4.71	4.78	2.9	4.08	4.15	4.30	4.37
65	2 1/2	76.1	3.2	5.73	5.85	6.00	6.12	3.2	5.71	5.83	5.98	6.01
80	3	88.9	3.6	7.55	7.72	7.87	8.04	3.2	6.72	6.89	7.04	7.21
100	4	114.3	4.0	10.80	11.10	11.22	11.52	3.6	9.75	10.00	10.17	10.42

NF A 49-145

Ebat | Size			HAFİF SERİ | LIGHT				ORTA SERİ | MEDIUM				AĞIR SERİ | HEAVY						
Dış Çap Outside Diameter			Et Kalınlığı WT	Birim Ağırlık Mass per Unit Length				Et Kalınlığı WT	Birim Ağırlık Mass per Unit Length				Et Kalınlığı WT	Birim Ağırlık Mass per Unit Length			
DN	inch.	mm.		BPE	BTC	GPE	GTC		BPE	BTC	GPE	GTC		BPE	BTC	GPE	GTC
15	1/2	21.3	2.3	1.08	1.09	1.15	1.16	2.6	1.20	1.21	1.27	1.28	3.2	1.43	1.44	1.50	1.51
20	3/4	26.9	2.3	1.4	1.41	1.49	1.50	2.6	1.56	1.57	1.65	1.66	3.2	1.87	1.88	1.96	1.97
25	1	33.7	2.9	2.20	2.22	2.32	2.34	3.2	2.41	2.43	2.53	2.55	4.0	2.93	2.95	3.05	3.07
32	1 1/4	42.4	2.9	2.82	2.85	2.98	3.00	3.2	3.09	3.12	3.24	3.27	4.0	3.79	3.82	3.94	3.97
40	1 1/2	48.3	2.9	3.25	3.29	3.42	3.46	3.2	3.56	3.60	3.73	3.77	4.0	4.37	4.41	4.54	4.58
50	2	60.3	3.2	4.51	4.58	4.73	4.80	3.6	5.03	5.10	5.24	5.31	4.5	6.19	6.26	6.40	6.47
65	2 1/2	76.1	3.2	5.75	5.87	6.02	6.14	3.6	6.44	6.56	6.72	6.84	4.5	7.95	8.07	8.22	8.34
80	3	88.9	3.2	6.76	6.93	7.08	7.24	4.0	8.38	8.55	8.70	8.87	4.9	10.0	10.2	10.32	10.52
100	4	114.3	3.6	9.83	10.10	10.25	10.52	4.5	12.20	12.50	12.61	12.91	5.4	14.5	14.8	14.91	15.21
125	5	139.7	4.5	15.00	15.50	15.63	16.15	4.5	15.00	15.50	15.63	16.15	5.4	17.90	18.40	18.41	18.91
150	6	165.1	4.5	17.80	18.40	18.55	19.17	4.5	17.80	18.40	18.55	19.17	5.4	21.30	21.90	21.90	22.50

SI 103

Ebat | Size			SINIF A | CLASS A				SINIF B | CLASS B				SINIF C | CLASS C				
Dış Çap Outside Diameter			Et Kalınlığı WT	Birim Ağırlık Mass per Unit Length				Et Kalınlığı WT	Birim Ağırlık Mass per Unit Length				Et Kalınlığı WT	Birim Ağırlık Mass per Unit Length	
DN	inch.	mm.		BPE	BTC	GPE	GTC		BPE	BTC	GPE	GTC		BPE	BTC
15	1/2	21.3	3.25	1.45	1.46	1.52	1.53	2.65	1.22	1.23	1.29	1.30	2.25	1.10	1.11
20	3/4	26.9	3.25	1.90	1.91	1.99	2.00	2.65	1.58	1.59	1.67	1.68	2.35	1.41	1.42
25	1	33.7	4.05	2.97	2.99	3.08	3.10	3.25	2.44	2.46	2.55	2.57	2.90	2.21	2.23
32	1 1/4	42.4	4.05	3.84	3.87	3.98	4.01	3.25	3.14	3.17	3.29	3.32	2.90	2.84	2.87
40	1 1/2	48.3	4.05	4.43	4.47	4.60	4.64	3.25	3.61	3.65	3.78	3.82	2.90	3.26	3.30
50	2	60.3	4.50	6.17	6.24	6.38	6.45	3.65	5.10	5.17	5.31	5.38	3.25	4.56	4.63
65	2 1/2	76.1	4.50	7.90	8.02	8.17	8.29	3.65	6.51	6.63	6.78	6.90	3.25	5.81	5.93
80	3	88.9	4.85	10.1	10.33	10.42	10.62	4.05	8.47	8.64	8.79	8.96	3.65	7.65	7.82
100	4	114.3	5.40	14.4	14.7	14.81	15.11	4.50	12.1	12.4	12.51	12.81	4.05	11.0	11.5
125	5	139.7	5.40	17.8	18.3	18.31	18.81	4.85	16.2	16.7	16.71	17.21	-	-	-
150	6	165.1	5.40	21.2	21.8	21.80	22.40	4.85	19.2	19.8	19.80	20.40	-	-	-

BPE : Siyah Düz Uçlu | Black Plain End

BTC : Siyah Dişli Maşonlu | Black Threaded Coupled

GPE : Galvanizli Düz Uçlu | Galvanized Plain End

GTC : Galvanizli Dişli Maşonlu | Galvanized Threaded Coupled

ASTM A 53

NPS	Dış Çap Outside Diameter		Et Kalınlığı Wall Thickness		Birim ağırlık Mass per Unit Length				Ağırlık Sınıfı Weight Class	Schedule No
					BPE		BTC			
					lb/ft	kg/m	lb/ft	kg/m		
	inch	mm	inch	mm						
3/8	0.675	17.1	0.091	2.31	0.57	0.84	0.57	0.84	STD	40
1/2	0.840	21.3	0.109	2.77	0.85	1.27	0.86	1.27	STD	40
3/4	1.050	26.7	0.113	2.87	1.13	1.69	1.14	1.69	STD	40
			0.154	3.91	1.48	2.20	1.48	2.21	XS	80
1	1.315	33.4	0.133	3.38	1.68	2.50	1.69	2.50	STD	40
			0.179	4.55	2.17	3.24	2.19	3.25	XS	80
1 1/4	1.660	42.2	0.140	3.56	2.27	3.39	2.28	3.40	STD	40
			0.191	4.85	3.00	4.77	3.03	4.49	XS	80
			0.250	6.35	3.77	5.61			...	160
1 1/2	1.900	48.3	0.145	3.68	2.72	4.05	2.74	4.04	STD	40
			0.200	5.08	3.63	5.41	3.65	5.39	XS	80
2	2.375	60.3	0.154	3.91	3.66	5.44	3.68	5.46	STD	40
			0.218	5.54	5.03	7.48	5.08	7.55	XS	80
2 1/2	2.875	73.0	0.203	5.16	5.80	8.63	5.85	8.67	STD	40
			0.276	7.01	7.67	11.41	7.75	11.52	XS	80
3	3.500	88.9	0.125	3.18	4.51	6.72			...	...
			0.156	3.96	5.58	8.29			...	...
			0.188	4.78	6.66	9.92			...	...
			0.216	5.49	7.58	11.29	7.68	11.35	STD	40
			0.250	6.35	8.69	12.93			...	...
			0.281	7.14	9.67	14.40			...	...
			0.300	7.62	10.26	15.27	10.35	15.39	XS	80
3 1/2	4.000	101.6	0.125	3.18	5.18	7.72			...	...
			0.156	3.86	6.41	9.53			...	...
			0.188	4.78	7.66	11.41			...	...
			0.226	5.74	9.12	13.57	9.27	13.71	STD	40
			0.250	6.35	10.02	14.92			...	...
			0.281	7.14	11.17	16.63			...	...
			0.318	8.08	12.52	18.63	12.67	18.82	XS	80
4	4.500	114.3	0.125	3.18	5.85	8.71			...	...
			0.156	3.96	7.24	10.78			...	...
			0.188	4.78	8.67	12.91			...	...
			0.219	5.56	10.02	14.91			...	...
			0.237	6.02	10.80	16.07	10.92	16.23	STD	40
			0.250	6.35	11.36	16.90			...	...
			0.281	7.14	12.67	18.87			...	...
			0.312	7.92	13.97	20.78			...	...
			0.337	8.56	15.00	22.32	15.20	22.60	XS	80
5	5.563	141.3	0.156	3.96	9.02	13.41			...	...
			0.188	4.78	10.80	16.09			...	...
			0.219	5.56	12.51	18.61			...	...
			0.258	6.55	14.63	21.77	14.90	22.07	STD	40
			0.281	7.14	15.87	23.62			...	...
			0.312	7.92	17.51	26.05			...	...
			0.344	8.74	19.19	28.57			...	...
			0.375	9.52	20.80	30.94	21.04	31.42	XS	80
6	6.625	168.3	0.188	4.78	12.94	19.27			...	...
			0.219	5.56	15.00	22.31			...	...
			0.250	6.35	17.04	25.36			...	...
			0.280	7.11	18.99	28.26	19.34	28.58	STD	40
			0.312	7.92	21.06	31.32			...	...
			0.344	8.74	23.10	34.39			...	...
			0.375	9.52	25.05	37.28			...	...
			0.432	10.97	28.60	42.56	28.88	43.05	...	...
8	8.625	219.1	0.188	4.78	16.96	25.26			...	...
			0.203	5.16	18.28	27.22			...	...
			0.219	5.56	19.68	29.28			...	...
			0.250	6.35	22.38	33.31			...	20
			0.277	7.04	24.72	36.31	25.53	38.07	...	30
			0.312	7.92	27.73	41.24			...	...
			0.322	8.18	28.58	42.55	29.35	43.73	STD	40
			0.344	8.74	30.45	45.34			...	...
			0.375	9.52	33.07	49.20			...	...
			0.406	10.31	35.67	53.08			...	60
			0.438	11.13	38.33	57.08			...	...
			0.500	12.70	43.43	64.64	44.00	65.41	XS	80
10	10.750	273.0	0.188	4.78	21.23	31.62			...	...
			0.203	5.16	22.89	34.08			...	...
			0.219	5.56	24.65	36.37			...	...
			0.250	6.35	28.06	41.75			...	20
			0.279	7.09	31.23	46.49	32.33	48.80	...	...
			0.307	7.80	34.27	51.01	35.33	53.27	...	30
			0.344	8.74	38.27	56.96			...	...
			0.365	9.27	40.52	60.29	41.49	63.36	STD	40
			0.438	11.13	48.28	71.87			...	...
			0.500	12.70	54.79	81.52	55.55	83.17	XS	60
12	12.750	323.9	0.203	5.16	22.89	34.08			...	...
			0.219	5.56	24.65	36.37			...	...
			0.250	6.35	28.06	41.75			...	20
			0.281	7.14	37.46	55.75			...	...
			0.312	7.92	41.48	61.69			...	...
			0.330	8.38	43.81	65.18	45.47	67.72	...	30
			0.344	8.74	45.62	67.90			...	...
			0.375	9.52	49.61	73.78	51.28	76.21	STD	...
			0.406	10.31	53.57	79.70			...	40
			0.438	11.13	57.65	85.82		
			0.500	12.70	65.48	97.43	66.91	99.40	XS	...

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Ebat Size mm	Et Kalınlığı (mm) Wall Thickness (mm)																					
	1.40	1.60	1.80	2.00	2.30	2.60	2.90	3.20	3.60	4.00	4.50	5.00	5.60	6.30	7.10	8.00	8.80	10.00	11.00	12.50		
	Birim Ağırlık kg/m | Mass per Unit Length (kg/m)																					
21.3	0.69	0.78	0.87	0.95	1.080	1.200	1.320	1.430	1.57	1.71	1.86											
26.9	0.88	1.00	1.11	1.23	1.400	1.560	1.720	1.870	2.07	2.26	2.49	2.7										
33.7	1.12	1.27	1.42	1.56	1.78	1.99	2.20	2.41	2.67	2.93	3.24	3.54	3.88	4.26	4.66	5.07						
42.4	1.42	1.61	1.80	1.99	2.27	2.55	2.82	3.09	3.44	3.79	4.21	4.61	5.08	5.61	6.18	6.79	7.29					
48.3	1.62	1.84	2.06	2.28	2.61	2.93	3.25	3.56	3.97	4.37	4.86	5.34	5.90	6.53	7.21	7.95	8.57					
60.3	2.03	2.32	2.60	2.88	3.29	3.70	4.11	4.51	5.03	5.55	6.19	6.82	7.55	8.39	9.32	10.30	11.20	12.40				
76.1	2.58	2.94	3.30	3.65	4.19	4.71	5.24	5.75	6.44	7.11	7.95	8.77	9.74	10.80	12.10	13.40	14.60	16.30				
88.9		3.44	3.87	4.29	4.91	5.53	6.15	6.76	7.57	8.38	9.37	10.30	11.50	12.80	14.30	16.00	17.40	19.50				
114.3					6.35	7.16	7.97	8.77	9.83	10.90	12.20	13.50	15.00	16.80	18.80	21.00	22.90	25.70				
139.7					7.79	8.79	9.76	10.80	12.10	13.40	15.00	16.60	18.50	20.70	23.20	26.00	28.40	32.00				
165.1					9.23	10.42	11.60	12.78	14.34	15.89	17.82	19.74	22.03	24.67	27.66	30.99	33.92	38.25				
168.3					9.42	10.60	11.80	13.00	14.60	16.20	18.20	20.10	22.50	25.20	28.20	31.60	34.60	39.00	42.67			
177.8					9.95	11.23	12.51	13.78	15.47	17.14	19.23	21.31	23.78	26.64	29.89	33.50	36.67	41.38	45.25			
219.1					12.30	13.90	15.50	17.00	19.10	21.20	23.80	26.40	29.50	33.10	37.10	41.60	45.60	51.60	56.45	63.68		
244.5					13.74	15.51	17.28	19.04	21.39	23.72	26.63	29.53	32.99	37.01	41.57	46.66	51.15	57.83	63.34	71.51		
273					15.40	17.30	19.30	21.30	23.90	26.50	29.80	33.00	36.90	41.40	46.60	52.30	57.30	64.90	71.07	80.3		
323.9						20.6	22.96	25.31	28.43	31.55	35.44	39.32	43.96	49.34	55.47	62.32	68.38	77.41	84.88	95.99		
339.7						21.6	24.09	26.55	29.84	33.11	37.2	41.27	46.14	51.8	58.23	65.44	71.81	81.3	89.16	100.9		

