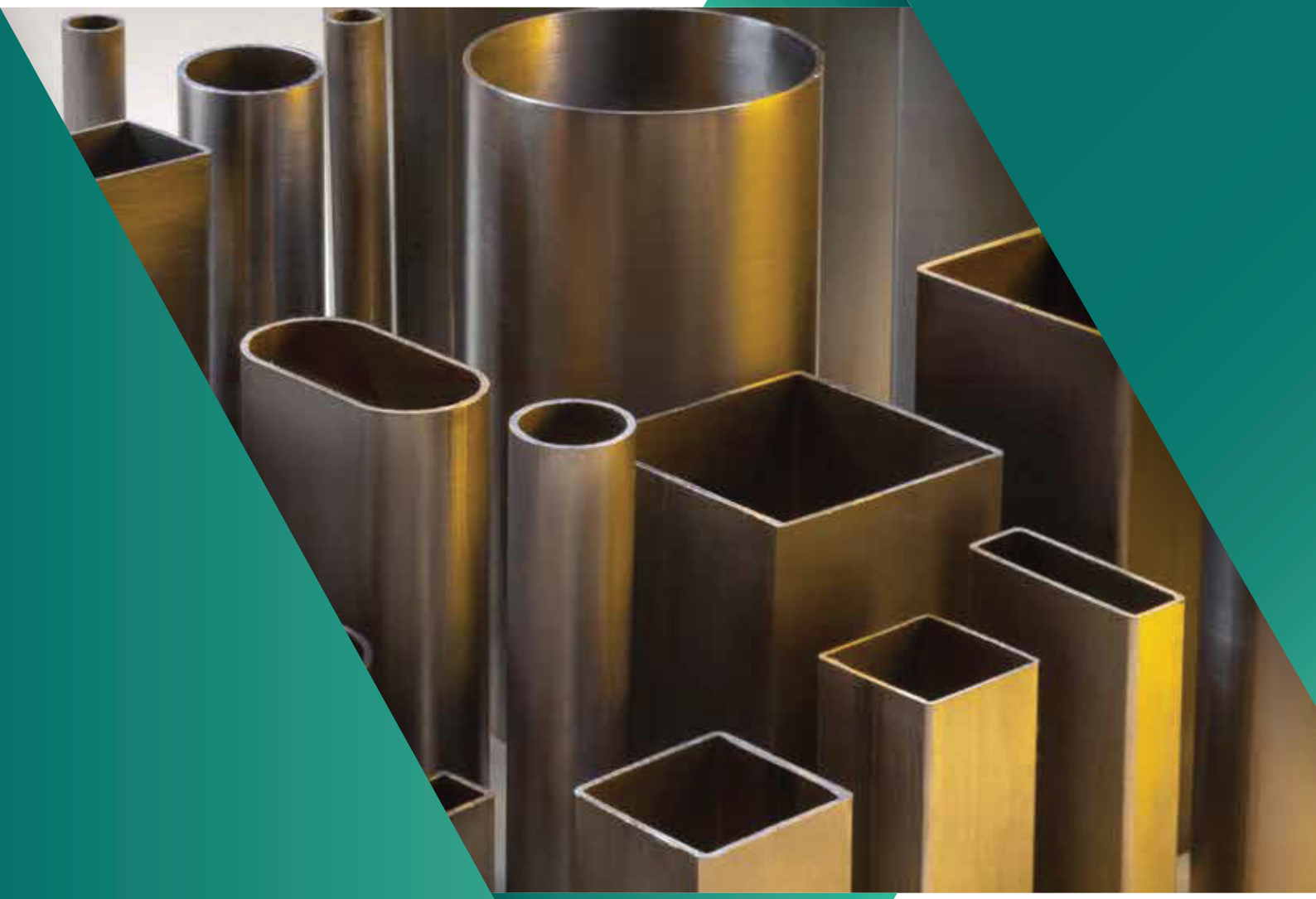
TOSÇELİK Profil ve Sac



Tosçelik
Profil ve Sac

www.toscelik.com.tr

ENG


A SUSTAINABLE WORLD IS POSSIBLE

TOSYALI FOR A SUSTAINABLE LIFE

Tosyalı not only strengthens its position in the steel industry through product quality but also through sustainability-focused efforts. By declaring "Tosyalı for a Sustainable Life" we commit to green steel and decarbonization initiatives, demonstrating our dedication to environmental responsibilities.

Our responsible production and consumption approach includes the use of eco-friendly technologies, and the generation of energy from renewable sources ensures that our production maintains a low carbon footprint. At the same time, our production with a high scrap ratio contributes to the circular economy.

With the commencement of the Solar Power Plant (SPP) project across our facilities, we take pride in having the world's largest rooftop Solar Power Plant. This project not only reduces our energy costs but also contributes to making our steel production one of the cleanest and greenest facilities globally.

At our R&D Center, we focus on sustainability-driven projects, constantly reducing our carbon footprint through process improvements. Through innovation and technological advancements, we pave the way for environmentally friendly methods in steel production.

With a high rate of waste recycling and a commitment to the principles of the circular economy, we strive to leave a sustainable world for future generations. At Tosyalı, we take maximum effort to ensure a livable world for tomorrow. By taking steps today for a sustainable future, we play a pioneering role in the steel industry and maintain our determination to minimize environmental impacts.

GREEN STEEL

TOSYALI
FOR A SUSTAINABLE LIFE

Steel is in life today, at the forefront of change and transformation tomorrow, and at the center of life in the future.

Leader in Green Steel for Today and Tomorrow

- Türkiye's steel producer with the lowest carbon footprint
- Partnerships with world giants in circular economy
- Sustainability-oriented R&D projects and investments
- Leading the steel industry in the use of renewable energy sources

TOSYALI

TOSÇELİK Profil ve Sac

Corporate Values

About Tosçelik Profil ve Sac Endüstrisi A.Ş.

Tosçelik Profil ve Sac Endüstrisi A.Ş., the flagship of Tosyalı was established in İskenderun in 1997 to produce industrial pipes and hollow sections.

The company realized the first special hot rolled flat product production at Osmaniye Flat Structural Steel Production facilities in 2009. This investment is the first flat steel production facility made by the private sector of the Republic of Türkiye.

Tosçelik Profil ve Sac offers products to many sectors such as "Petroleum, Natural Gas and Mining", "Machinery Manufacturing", "Construction", "Automotive", "Water Distribution Installation" and "Furniture" with its product groups including Pipe, Hollow Sections, Coil Sheet and Billet Iron. The company supplies its wide range of products also to the global market, reaching across 6 continents and over 100 countries. Additionally, Tosçelik Profil ve Sac stands as the Europe's Largest ERW Pipe and Hollow Sections manufacturer.

Tosçelik Profil ve Sac aims to produce value-added products with a sustainability-oriented approach that makes a difference in the steel industry since its establishment. In line with this goal, the R&D Center, which was established for the first time in the Osmaniye region in 2017, is the research and development center of all production facilities of Tosyalı.

Tosçelik Profil ve Sac produces "green steel" with a low carbon footprint in its facilities thanks to its investments focusing on sustainability, technology and innovation. Solar power plant installed in the production facilities of Tosçelik Profil ve Sac in Osmaniye is among the top solar power plants in the world. Converting the energy it receives from the sun to steel, Tosçelik Profil ve Sac is ERW pipe and hollow section manufacturer with the lowest carbon footprint in the world.

Vision

To be the architect of a better future through green steel production.

Mission

To represent the best reference to the world as one of the most important and strategic iron and steel companies in Europe and Africa.

Environmentalist

World Company

Sustainability

Innovator

Experienced Staff

Efficiency Oriented

Industry Leading

TOSÇELİK

Profil ve Sac

3
Production facilities on 3 different locations

100+
Supplying its wide range of products to the global market, reaching across 6 continents and over 100 countries

3500+
Direct employment

150+
Variety of more than 150 products

RENEWABLE ENERGY

Among the top five largest solar power plants in the world

INDUSTRY 4.0

INDUSTRY 4.0

INVESTMENT

INVESTMENT

INTEGRITY

INTEGRITY

SUSTAINABILITY

SUSTAINABILITY

GREEN STEEL

GREEN STEEL

DECARBONIZATION

DECARBONIZATION

ECOFRIENDLY

ECOFRIENDLY

PRODUCT DIVERSITY

PRODUCT DIVERSITY

LONG LIFE TIME

LONG LIFE TIME

HIGH PERFORMANCE

HIGH PERFORMANCE

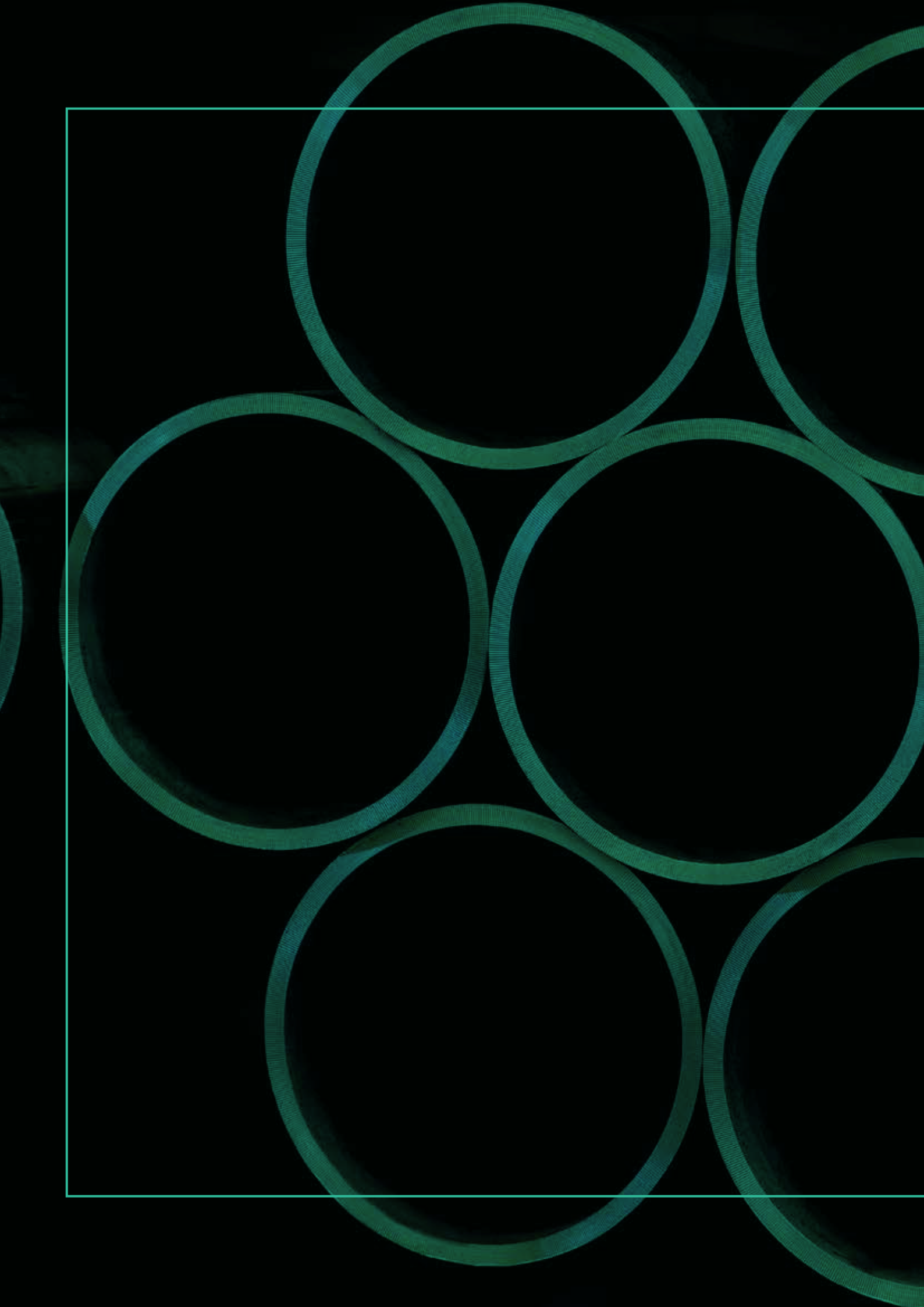
QUALITY

QUALITY

ZERO WASTE

ZERO WASTE

The Content



CONSTRUCTION

Construction Pipes
Square and Rectangular Hollow Sections
Scaffolding Pipes
Special Shaped Hollow Sections
Cold Rolled Pipes
Cold Rolled Square and Rectangular Hollow Sections

PRODUCTION STANDARD AND STEEL GRADE

EN 10219	S235JRH, S275J0H, S275J2H, S355J0H, S355J2H, S355K2H, S275NH, S275NLH, S275MH, S275MLH, S355NH, S355NLH, S355MH, S355MLH, S420MH, S420MLH
SI 1458-1	S235JRH, S275J0H, S275J2H, S355J0H, S355J2H, S355K2H, S275NH, S275NLH, S275MH, S275MLH, S355NH, S355NLH, S355MH, S355MLH, S420MH, S420MLH
ASTM A500	Grade B, Grade C, Grade D
EN 10305-3	E155, E190, E195, E220, E235, E260, E275, E320, E355, E370, E420
EN 10305-5	E155, E190, E195, E220, E235, E260, E275, E320, E355, E370, E420
AS/NZS 1163	C250, C350, C450, C250L0, C350L0
EN 10210	S235JRH, S275J0H, S275J2H, S355J0H, S355J2H, S355K2H, S275NH, S275NLH S355NH, S355NLH, S420NH, S420NLH
EN 39	S235GT

HEAT TREATMENT

Type	Section	Dimension (mm)			
		Weld Seam & HAZ		Full Body	
		Outside Diameter	Wall Thickness	Outside Diameter	Wall Thickness
Stress Relieving	Circular	Ø42,2-339,7	2,00-13,00	Ø21,3-339,7	1,50-13,00
	Square	60x60-250x250	3,00-10,00	40x40-250x250	2,00-10,00
	Rectangular	80x40-300x200	3,00-10,00	40x30-300x200	2,00-10,00
Normalizing	Circular	Ø42,2-339,7	2,00-13,00	Ø21,3-339,7	1,50-13,00
	Square	60x60-250x250	3,00-10,00	-	-
	Rectangular	80x40-300x200	3,00-10,00	-	-

SURFACE CONDITION

		Outside Diameter (mm)	Wall Thickness (mm)	Outside Diameter (mm)	Wall Thickness (mm)
Uncoated		✓	✓	✓	✓
Protective Oiled		✓	✓	✓	✓
Galvanized	Hot Dip	Ø21,3-219,1	1,80-7,11	30x30-100x100	2,00-7,11
	Pre Galvanized	Ø26,9-125,0	1,00-3,00	25x25-125x125 30x20-160-80	1,00-3,00
Primer Coated		Ø13,0-339,7	1,00-13,00	15x15-250x250 25x15-300x200	1,00-10,00

EN 10305-3/5 Surface Condition	
S1	Uncoated
S2	Pickled
S3	Cold Rolled
S4	Coated

PIPE END

- ✓ Plain End (Square Cut)
- ✓ Bevelled (Chamfered)
- ✓ Threaded and Coupled (Ø21,3-168,3 mm/1,80-7,11 mm thickness)
  (ISO 7.1, ANSI B1.20)

QUALITY CONTROL TESTS

MECHANICAL TEST

- ✓ Tensile Test
- ✓ Charpy V Notch Impact Test
- ✓ Flattening Test
- ✓ Expanding Test
- ✓ Bending Test

CHEMICAL ANALYSIS

- ✓ Spectral Analysis

NON-DESTRUCTIVE TEST

- ✓ Eddy Current Test ISO 10893-2
- ✓ Ultrasonic Test (Weld Seam) ISO 10893-11

DIMENSIONAL AND VISUAL INSPECTION

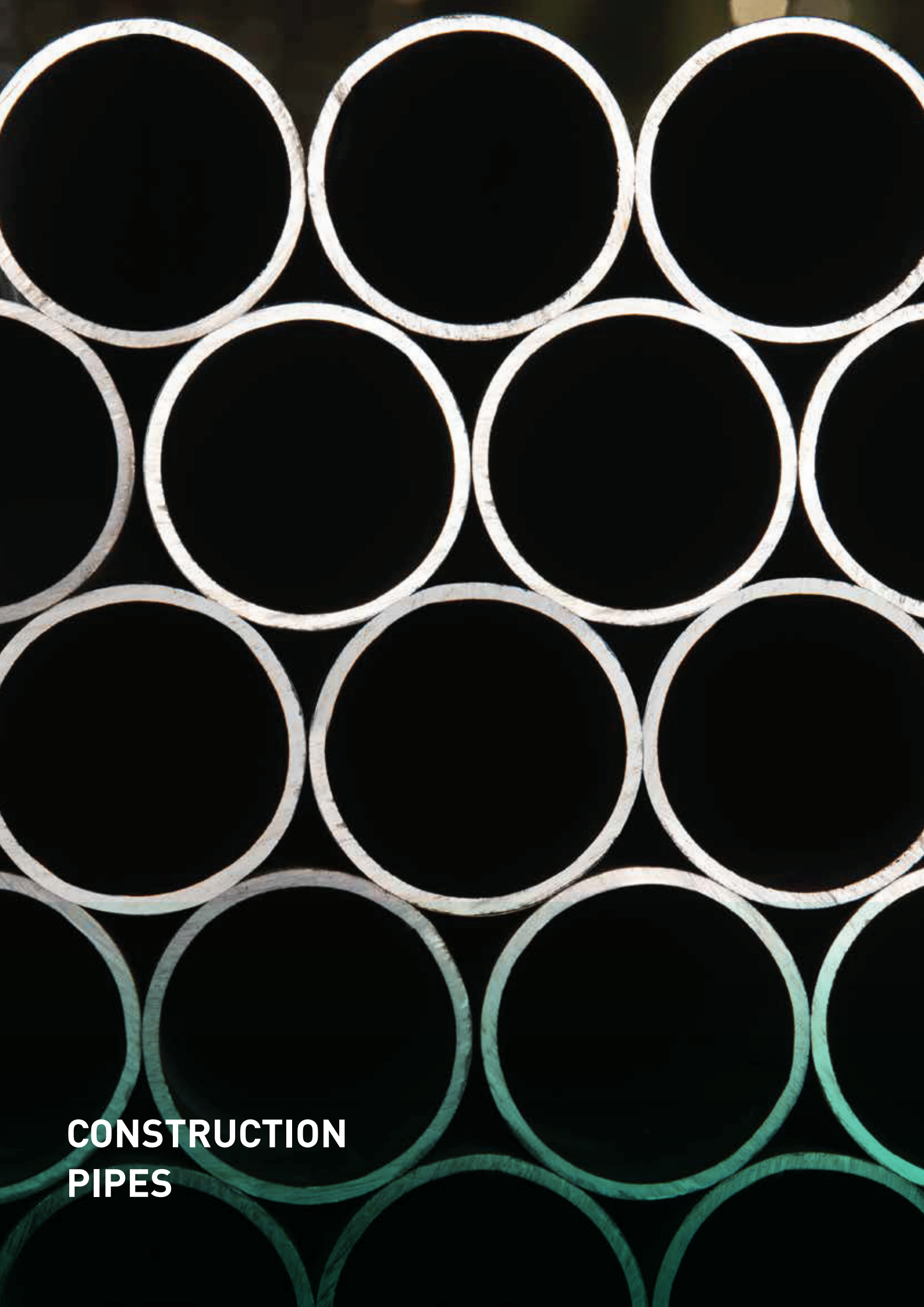
METALLOGRAPHIC EXAMINATION

- ✓ Macro Examination
- ✓ Micro Examination
- ✓ Micro Hardness Test
- ✓ Grain Size Control

COATING TESTS

TEST CERTIFICATES

According to EN 10204, 2.1, 2.2, 3.1, 3.2 certificates



CONSTRUCTION PIPES

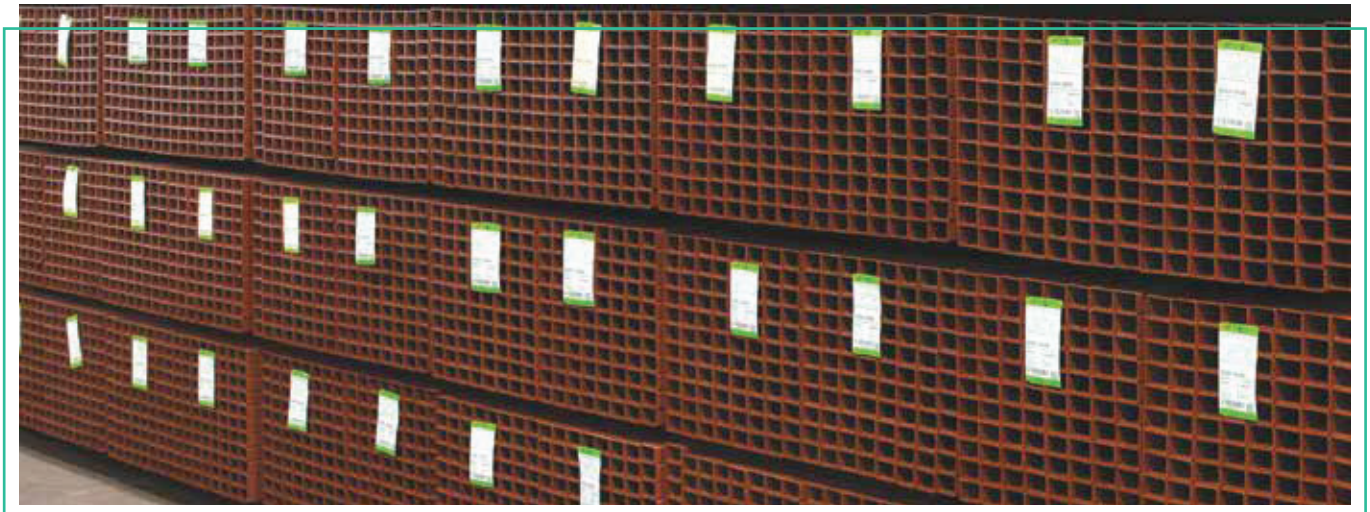
Production Range For Construction Pipe

Outside Diameter (mm)	Wall Thickness (mm)																		
	1,00	1,20	1,50	2,00	2,50	2,60	3,00	3,20	3,60	4,00	4,50	5,00	6,00	6,30	7,00	8,00	9,00	10,00	13,00
	Mass Per Unit Length (kg/m)																		
Ø13,0	0,30	0,35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ø16,0	0,37	0,44	0,54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ø17,2	-	-	0,58	0,75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ø19,0	0,44	0,53	0,65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ø21,0	0,49	0,59	0,72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ø21,3	0,50	0,59	0,73	0,95	1,16	1,20	1,35	1,43	-	-	-	-	-	-	-	-	-	-	-
Ø22,0	0,52	0,62	0,76	0,99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ø25,0	0,59	0,70	0,87	1,13	1,39	1,44	1,63	-	-	-	-	-	-	-	-	-	-	-	-
Ø26,7	0,63	0,75	0,93	1,22	1,49	1,55	1,75	1,85	2,05	2,24	-	-	-	-	-	-	-	-	-
Ø26,9	0,64	0,76	0,94	1,23	1,50	1,56	1,77	1,87	2,07	2,26	-	-	-	-	-	-	-	-	-
Ø28,6	0,68	0,81	1,00	1,31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ø32,0	0,76	0,91	1,13	1,48	1,82	1,89	2,15	-	-	-	-	-	-	-	-	-	-	-	-
Ø33,4	0,80	0,95	1,18	1,55	1,90	1,97	2,25	2,38	2,65	2,90	3,21	3,50	-	-	-	-	-	-	-
Ø33,7	0,81	0,96	1,19	1,56	1,92	1,99	2,27	2,41	2,67	2,93	3,24	3,54	-	-	-	-	-	-	-
Ø35,0	0,84	1,00	1,24	1,63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ø38,0	0,91	1,09	1,35	1,78	2,19	2,27	2,59	2,75	3,05	3,35	3,72	4,07	-	-	-	-	-	-	-
Ø40,0	0,96	1,15	1,42	1,87	2,31	2,40	2,74	-	-	-	-	-	-	-	-	-	-	-	-
Ø42,2	1,02	1,21	1,51	1,98	2,45	2,54	2,90	3,08	3,43	3,77	4,18	4,59	5,36	-	-	-	-	-	-
Ø42,4	1,02	1,22	1,51	1,99	2,46	2,55	2,91	3,09	3,44	3,79	4,21	4,61	5,39	-	-	-	-	-	-
Ø45,0	1,09	1,30	1,61	2,12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ø48,3	-	1,39	1,73	2,28	2,82	2,93	3,35	3,56	3,97	4,37	4,86	5,34	6,26	-	-	-	-	-	-
Ø50,0	1,21	1,44	1,79	2,37	2,93	3,04	3,48	-	-	-	-	-	-	-	-	-	-	-	-
Ø51,0	-	1,47	1,83	2,42	2,99	3,10	3,55	-	-	-	-	-	-	-	-	-	-	-	-
Ø57,0	-	1,65	2,05	2,71	3,36	3,49	3,99	4,25	4,74	5,23	5,83	6,41	7,55	-	-	-	-	-	-
Ø60,3	1,46	1,75	2,18	2,88	3,56	3,70	4,24	4,51	5,03	5,55	6,19	6,82	8,03	8,39	9,20	-	-	-	-
Ø63,0	-	1,83	2,27	3,01	3,73	3,87	4,44	4,72	5,27	5,82	6,49	7,15	-	-	-	-	-	-	-
Ø73,0	-	-	-	3,50	4,35	4,51	5,18	5,51	6,16	6,81	7,60	8,38	9,91	10,36	11,39	-	-	-	-
Ø76,1	1,85	2,22	2,76	3,65	4,54	4,71	5,41	5,75	6,44	7,11	7,95	8,77	10,37	10,84	-	-	-	-	-
Ø80,0	-	-	-	3,85	4,78	4,96	5,70	6,06	6,78	7,50	8,38	9,25	-	-	-	-	-	-	-
Ø88,9	-	-	-	4,29	5,33	5,53	6,35	6,76	7,57	8,37	9,37	10,34	12,27	12,83	14,14	15,96	-	-	-
Ø96,0	-	-	-	4,64	5,76	5,99	6,88	7,32	8,20	9,07	10,15	11,22	13,32	-	-	-	-	-	-
Ø101,6	-	-	3,70	4,91	6,11	6,35	7,29	7,76	8,70	9,63	10,78	11,91	14,14	14,81	16,33	18,47	20,55	-	-
Ø114,3	-	-	-	5,54	6,89	7,16	8,23	8,77	9,83	10,88	12,18	13,48	16,02	16,78	18,52	20,97	23,37	25,72	-
Ø125,0	-	-	-	6,07	7,55	7,85	9,03	9,61	10,78	11,94	13,37	14,80	17,61	18,44	-	-	-	-	-
Ø127,0	-	-	-	6,17	7,68	7,98	9,17	9,77	10,95	12,13	13,59	15,04	17,90	18,75	20,71	23,48	26,19	28,85	-
Ø133,0	-	-	-	-	8,05	8,36	9,62	10,24	11,49	12,72	14,26	15,78	18,79	19,68	-	-	-	-	-
Ø139,7	-	-	-	-	8,46	8,79	10,11	10,77	12,08	13,39	15,00	16,61	19,78	20,72	22,91	25,98	29,01	31,98	-
Ø152,4	-	-	-	-	9,24	9,60	11,05	11,77	13,21	14,64	16,41	18,17	21,66	22,70	25,10	28,49	31,83	35,12	-
Ø159,0	-	-	-	-	9,65	10,03	11,54	12,29	13,80	15,29	17,14	18,99	22,64	23,72	26,24	29,79	33,29	36,74	-
Ø165,1	-	-	-	-	-	-	11,99	12,78	14,34	15,89	17,82	19,74	23,54	24,67	27,29	30,99	34,64	38,25	-
Ø168,3	-	-	-	-	10,22	10,62	12,23	13,03	14,62	16,21	18,18	20,13	24,01	25,17	27,84	31,62	35,36	39,04	49,79
Ø177,8	-	-	-	-	-	-	12,93	13,78	15,46	17,14	19,23	21,31	25,42	26,64	29,48	33,50	37,46	41,38	52,83
Ø193,7	-	-	-	-	-	-	-	-	16,88	18,71	21,00	23,27	27,77	29,11	32,23	36,63	40,99	45,30	57,93
Ø219,1	-	-	-	-	-	-	-	-	19,13	21,22	23,81	26,40	31,53	33,06	36,61	41,65	46,63	51,56	66,07
Ø244,5	-	-	-	-	-	-	-	-	-	23,72	26,63	29,53	35,29	37,01	41,00	46,66	52,27	57,83	74,21
Ø273,0	-	-	-	-	-	-	-	-	-	26,53	29,80	33,04	39,51	41,43	45,92	52,28	58,59	64,86	83,35
Ø323,9	-	-	-	-	-	-	-	-	-	-	-	39,32	47,04	49,34	54,70	62,32	69,89	77,41	99,67
Ø339,7	-	-	-	-	-	-	-	-	-	-	-	41,27	49,37	51,80	57,43	65,44	73,40	81,30	104,73

Length Range

- 4,0 - 7,5 m
- 4,0 - 8,0 m
- 4,0 - 8,5 m
- 4,0 - 9,0 m
- 4,0 - 13,0 m
- 4,5 - 14,0 m
- 4,8 - 14,0 m

SQUARE AND RECTANGULAR HOLLOW SECTIONS



Production Range For Square Hollow Section

Outside Diameter (mm)			Wall Thickness (mm)												
			1,00	1,20	1,50	2,00	2,50	3,00	3,50	4,00	4,50	5,00	6,00	8,00	10,00
			Mass Per Unit Length (kg/m)												
15	x	15	0,42	0,49	0,59	0,74	-	-	-	-	-	-	-	-	-
20	x	20	0,58	0,68	0,83	1,05	1,25	1,42	-	-	-	-	-	-	-
25	x	25	0,73	0,87	1,06	1,36	1,64	1,89	-	-	-	-	-	-	-
30	x	30	0,89	1,06	1,30	1,68	2,03	2,36	-	-	-	-	-	-	-
35	x	35	1,05	1,24	1,53	1,99	2,42	2,83	-	-	-	-	-	-	-
38	x	38	1,14	1,36	1,67	2,18	2,66	3,12	-	-	-	-	-	-	-
40	x	40	1,20	1,43	1,77	2,31	2,82	3,30	3,76	4,20	-	-	-	-	-
45	x	45	-	1,62	2,00	2,62	3,21	3,77	-	-	-	-	-	-	-
50	x	50	1,52	1,81	2,24	2,93	3,60	4,25	4,86	5,45	6,02	6,56	-	-	-
60	x	60	1,83	2,19	2,71	3,56	4,39	5,19	5,96	6,71	7,43	8,13	9,45	-	-
70	x	70	-	-	3,18	4,19	5,17	6,13	7,06	7,97	8,85	9,70	11,33	-	-
75	x	75	-	-	3,42	4,50	5,56	6,60	7,61	8,59	9,55	10,48	12,27	-	-
80	x	80	-	-	-	4,82	5,96	7,07	8,16	9,22	10,26	11,27	13,21	16,36	-
90	x	90	-	-	-	5,45	6,74	8,01	9,26	10,48	11,67	12,84	15,10	18,87	22,42
100	x	100	-	-	4,59	6,07	7,53	8,96	10,36	11,73	13,08	14,41	16,98	21,39	25,56
120	x	120	-	-	-	-	9,10	10,84	12,56	14,25	15,91	17,55	20,75	26,41	31,84
125	x	125	-	-	-	-	9,49	11,31	13,11	14,87	16,62	18,33	21,69	-	-
140	x	140	-	-	-	-	-	12,72	14,75	16,76	18,74	20,69	24,52	31,43	38,12
150	x	150	-	-	-	-	-	13,67	15,85	18,01	20,15	22,26	26,40	33,95	41,26
160	x	160	-	-	-	-	-	14,61	16,95	19,27	21,56	23,83	28,29	36,46	44,40
180	x	180	-	-	-	-	-	16,49	19,15	21,78	24,39	26,97	32,05	41,48	50,68
200	x	200	-	-	-	-	-	-	-	24,29	27,21	30,11	35,82	46,51	56,96
250	x	250	-	-	-	-	-	-	-	-	-	37,96	45,24	59,07	72,66

Length Range

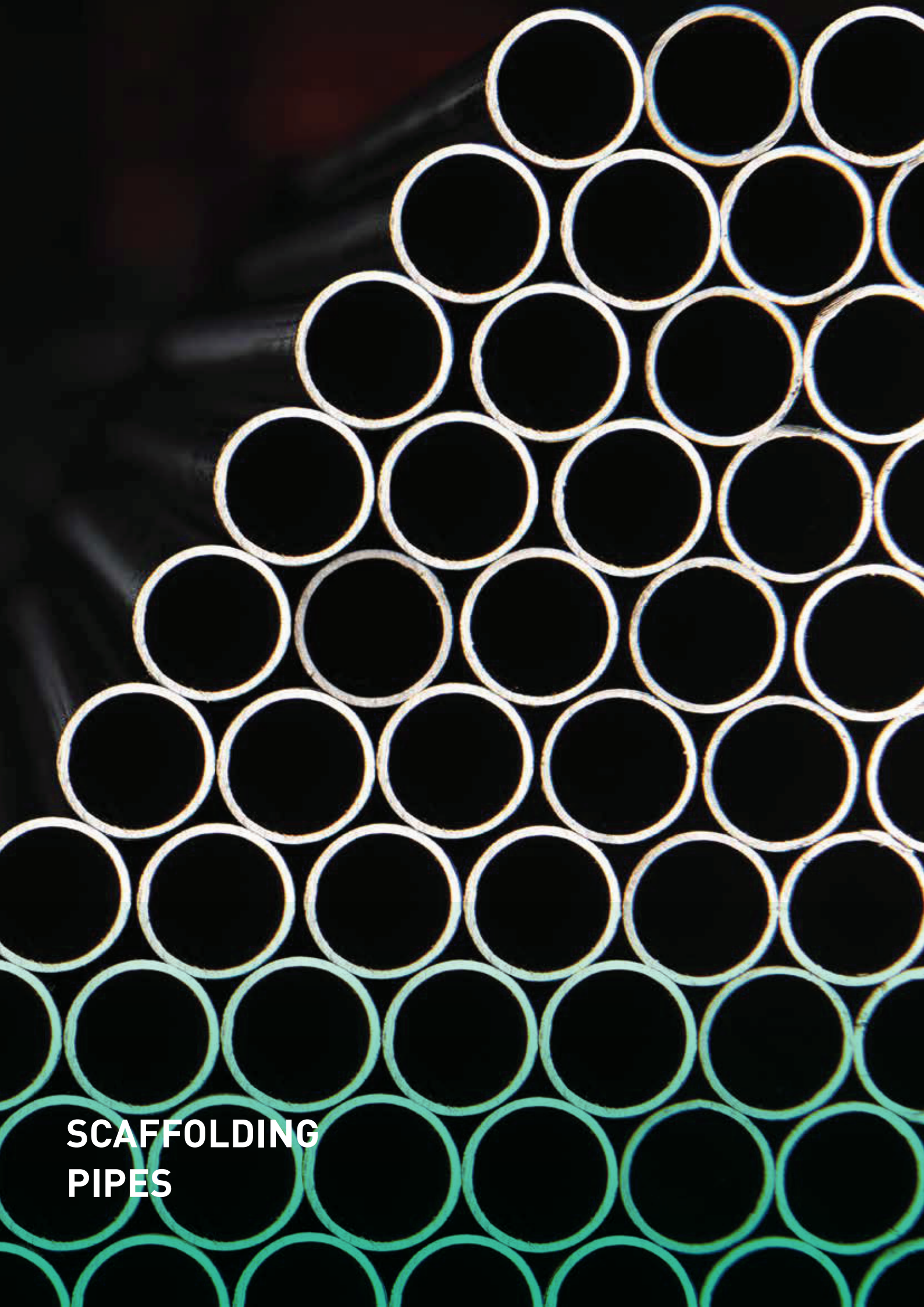
- 4,0 - 7,5 m
- 4,0 - 8,0 m
- 4,0 - 8,5 m
- 4,0 - 9,0 m
- 4,0 - 10,0 m
- 4,0 - 12,0 m
- 4,0 - 12,2 m
- 4,0 - 13,0 m
- 4,0 - 14,0 m
- 5,0 - 14,0 m

Production Range For Rectangular Hollow Section

Outside Diameter (mm)			Wall Thickness (mm)												
			1,00	1,20	1,50	2,00	2,50	3,00	3,50	4,00	4,50	5,00	6,00	8,00	10,00
			Mass Per Unit Length (kg/m)												
20	X	10	0,42	0,49	0,59	0,74	-	-	-	-	-	-	-	-	-
20	X	15	0,50	0,59	0,71	-	-	-	-	-	-	-	-	-	-
25	X	15	0,58	0,68	0,83	1,05	-	-	-	-	-	-	-	-	-
25	X	20	0,65	0,77	0,94	1,21	-	-	-	-	-	-	-	-	-
30	X	10	0,58	0,68	0,83	1,05	-	-	-	-	-	-	-	-	-
30	X	15	0,65	0,77	0,94	1,21	-	-	-	-	-	-	-	-	-
30	X	20	0,73	0,87	1,06	1,36	1,64	1,89	-	-	-	-	-	-	-
35	X	15	0,73	0,87	1,06	1,36	-	-	-	-	-	-	-	-	-
35	X	25	0,89	1,06	1,30	1,68	2,03	2,36	-	-	-	-	-	-	-
40	X	20	0,89	1,06	1,30	1,68	2,03	2,36	-	-	-	-	-	-	-
40	X	25	0,97	1,15	1,41	1,83	2,23	-	-	-	-	-	-	-	-
40	X	30	1,05	1,24	1,53	1,99	2,42	2,83	-	-	-	-	-	-	-
50	X	20	1,05	1,24	1,53	1,99	2,42	2,83	-	-	-	-	-	-	-
50	X	25	1,13	1,34	1,65	2,15	2,62	3,07	-	-	-	-	-	-	-
50	X	30	1,20	1,43	1,77	2,31	2,82	3,30	3,76	4,20	-	-	-	-	-
50	X	40	-	1,62	2,00	2,62	3,21	3,77	-	-	-	-	-	-	-
60	X	20	-	1,43	1,77	2,31	2,82	3,30	-	-	-	-	-	-	-
60	X	30	-	1,62	2,00	2,62	3,21	3,77	-	-	-	-	-	-	-
60	X	40	1,52	1,81	2,24	2,93	3,60	4,25	-	-	-	-	-	-	-
70	X	30	-	1,81	2,24	2,93	3,60	4,25	-	-	-	-	-	-	-
70	X	50	-	-	2,71	3,56	4,39	5,19	5,96	6,71	7,43	8,13	-	-	-
75	X	50	-	-	2,83	3,72	4,58	5,42	6,24	7,02	7,79	8,52	-	-	-
80	X	40	1,83	2,19	2,71	3,56	4,39	5,19	5,96	6,71	7,43	8,13	-	-	-
80	X	50	-	-	2,95	3,88	4,78	5,66	6,51	7,34	8,14	8,91	-	-	-
80	X	60	-	-	3,18	4,19	5,17	6,13	7,06	7,97	8,85	9,70	11,33	-	-
90	X	40	-	-	2,95	3,88	4,78	5,66	6,51	7,34	8,14	8,91	-	-	-
90	X	50	-	-	3,18	4,19	5,17	6,13	7,06	7,97	8,85	9,70	11,33	-	-
90	X	60	-	-	3,42	4,50	5,56	6,60	7,61	8,59	9,55	10,48	12,27	-	-
90	X	70	-	-	3,65	4,82	5,96	7,07	8,16	9,22	10,26	11,27	13,21	-	-
100	X	40	-	-	3,18	4,19	5,17	6,13	7,06	7,97	8,85	9,70	11,33	-	-
100	X	50	-	-	3,42	4,50	5,56	6,60	7,61	8,59	9,55	10,48	12,27	-	-
100	X	60	-	-	-	4,82	5,96	7,07	8,16	9,22	10,26	11,27	13,21	-	-
100	X	80	-	-	-	5,45	6,74	8,01	9,26	10,48	11,67	12,84	15,10	-	-
120	X	40	-	-	-	4,82	5,96	7,07	8,16	9,22	10,26	11,27	13,21	-	-
120	X	60	-	-	-	5,45	6,74	8,01	9,26	10,48	11,67	12,84	15,10	-	-
120	X	80	-	-	-	6,07	7,53	8,96	10,36	11,73	13,08	14,41	16,98	21,39	-
120	X	100	-	-	-	-	8,31	9,90	11,46	12,99	14,50	15,98	18,87	-	-
140	X	60	-	-	-	6,07	7,53	8,96	10,36	11,73	13,08	14,41	16,98	-	-
140	X	80	-	-	-	-	8,31	9,90	11,46	12,99	14,50	15,98	18,87	-	-
140	X	100	-	-	-	-	9,10	10,84	12,56	14,25	15,91	17,55	20,75	-	-
150	X	50	-	-	-	6,07	7,53	8,96	10,36	11,73	13,08	14,41	16,98	-	-
150	X	70	-	-	-	6,70	8,31	9,90	11,46	12,99	14,50	15,98	18,87	-	-
150	X	100	-	-	-	-	9,49	11,31	13,11	14,87	16,62	18,33	21,69	27,67	33,41
160	X	40	-	-	-	6,07	7,53	8,96	10,36	11,73	13,08	14,41	16,98	-	-
160	X	80	-	-	-	-	9,10	10,84	12,56	14,25	15,91	17,55	20,75	26,41	31,84
160	X	140	-	-	-	-	-	13,67	15,85	18,01	20,15	22,26	26,40	33,95	41,26
180	X	100	-	-	-	-	-	12,72	14,75	16,76	18,74	20,69	24,52	31,43	38,12
180	X	140	-	-	-	-	-	14,61	16,95	19,27	21,56	23,83	28,29	36,46	44,40
200	X	100	-	-	-	-	-	13,67	15,85	18,01	20,15	22,26	26,40	33,95	41,26
200	X	120	-	-	-	-	-	-	-	19,27	21,56	23,83	28,29	36,46	-
200	X	150	-	-	-	-	-	-	18,60	21,15	23,68	26,18	31,11	40,23	49,11
200	X	160	-	-	-	-	-	-	19,15	21,78	24,39	26,97	32,05	41,48	50,68
250	X	100	-	-	-	-	-	-	-	21,15	23,68	26,18	31,11	40,23	-
250	X	150	-	-	-	-	-	-	21,35	24,29	27,21	30,11	35,82	46,51	56,96
300	X	200	-	-	-	-	-	-	26,84	30,57	34,28	37,96	45,24	59,07	72,66

Length Range

- 4,0 - 7,5 m
- 4,0 - 8,0 m
- 4,0 - 8,5 m
- 4,0 - 9,0 m
- 4,0 - 10,0 m
- 4,0 - 12,0 m
- 4,0 - 12,2 m
- 4,0 - 13,0 m
- 4,0 - 14,0 m
- 5,0 - 13,0 m
- 5,0 - 14,0 m



SCAFFOLDING PIPES

Production Range For Scaffolding Pipe

Outside Diameter (mm)	Wall Thickness (mm)						
	2,00	2,50	3,00	3,20	4,00	5,00	6,00
	Mass Per Unit Length (kg/m)						
Ø26,9	1,23	1,50	1,77	1,87	2,26	-	-
Ø33,7	1,56	1,92	2,27	2,41	2,93	3,54	-
Ø38,0	1,78	2,19	2,59	2,75	3,35	4,07	-
Ø42,4	1,99	2,46	2,91	3,09	3,79	4,61	5,39
Ø48,3	2,28	2,82	3,35	3,56	4,37	5,34	6,26
Ø60,3	2,88	3,56	4,24	4,51	5,55	6,82	8,03
Ø76,1	3,65	4,54	5,41	5,75	7,11	8,77	10,37

Length Range

4,0 - 9,0 m 4,5 - 14,0 m

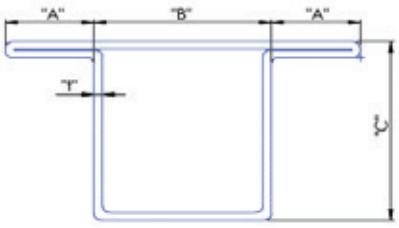
SPECIAL SHAPED HOLLOW SECTIONS

Production Range For Special Shaped Hollow Section

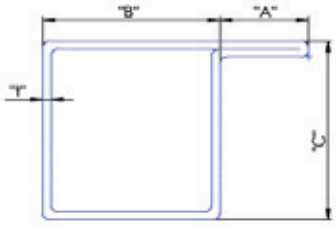
Type	Outside Diameter (mm) (AXBXC)	Wall Thickness (mm)											
		0,50	0,60	0,70	0,80	0,90	1,00	1,20	1,40	1,50	2,00	2,50	3,00
		Mass Per Unit Length (kg/m)											
Oval Section	30X15	0,31	0,38	0,43	0,50	0,55	0,61	0,73	0,84	0,89	1,18	1,45	1,72
Oval Section	40X16	-	0,48	0,55	0,64	0,72	0,80	0,95	1,11	1,19	1,55	1,88	2,21
Oval Section	40X20	-	0,51	0,59	0,68	0,76	0,84	1,00	1,16	1,24	1,63	1,98	2,23
Oval Section	50X25	-	-	-	0,82	0,91	1,01	1,22	1,41	1,51	1,99	2,47	2,94
Oval Section	50X32	-	-	-	0,87	0,97	1,08	1,29	1,49	1,60	2,12	2,63	3,13
Elliptical Section	40X20	-	0,47	0,55	0,62	0,70	0,78	0,92	1,07	1,14	1,51	1,86	2,21
D-Section	40X30	-	-	-	0,80	0,90	0,99	1,19	1,38	1,47	1,95	2,41	2,87
28 L-Section	12.5 x 25 x 28	-	-	-	-	-	-	1,24	1,41	1,53	2,03	2,46	3,01
28 T-Section	12.5 x 25 x 28	-	-	-	-	-	-	1,45	1,71	1,80	2,39	2,99	3,56
28 Z-Section	12.5 x 25 x 28	-	-	-	-	-	-	1,45	1,71	1,80	2,39	2,99	3,56
33 L-Section	15 x 30 x 33	-	-	-	-	-	-	1,45	1,71	1,80	2,39	2,99	3,56
33 T-Section	15 x 30 x 33	-	-	-	-	-	-	1,74	2,03	2,16	2,86	3,56	4,26
33 Z-Section	15 x 30 x 33	-	-	-	-	-	-	1,74	2,03	2,16	2,86	3,56	4,26
Octagonal Section	140x140	-	-	-	-	-	-	-	-	-	7,28	9,11	10,89

Length Range

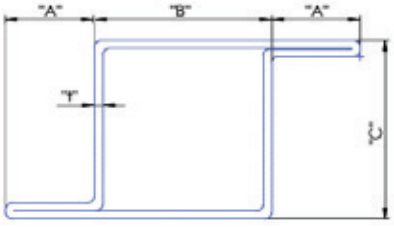
4,0 - 8,5 m 4,0 - 13,0 m



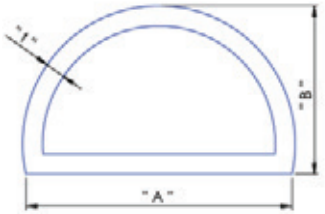
T-Section



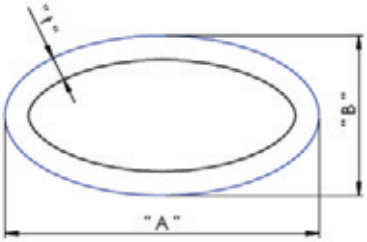
L-Section



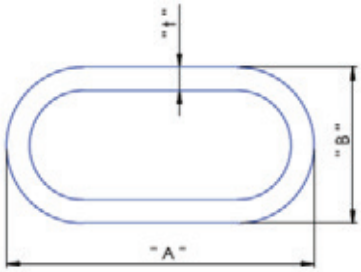
Z-Section



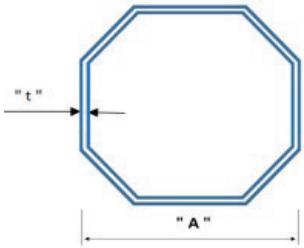
D-Section



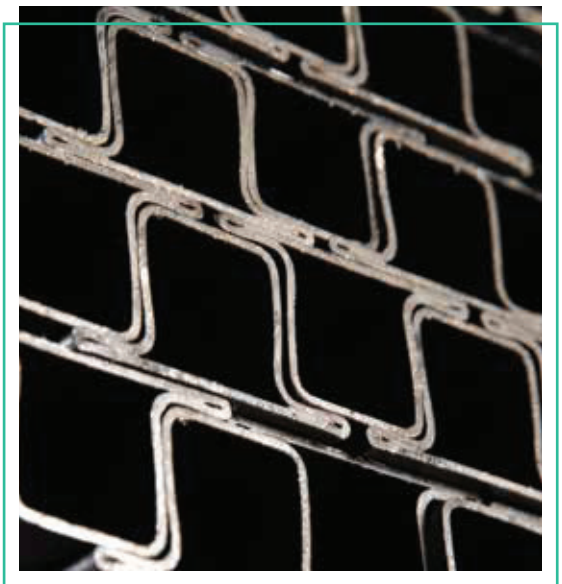
Elliptical Section



Oval Section



Octagonal Section



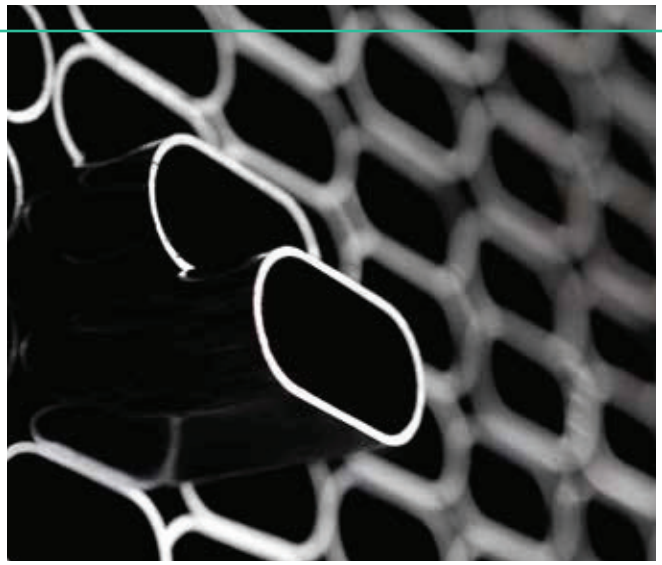
COLD ROLLED PIPES

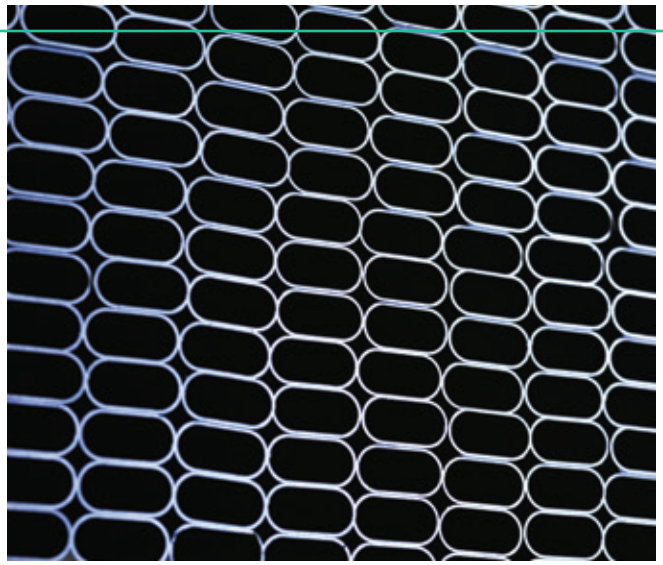
Production Range For Cold Rolled Pipe

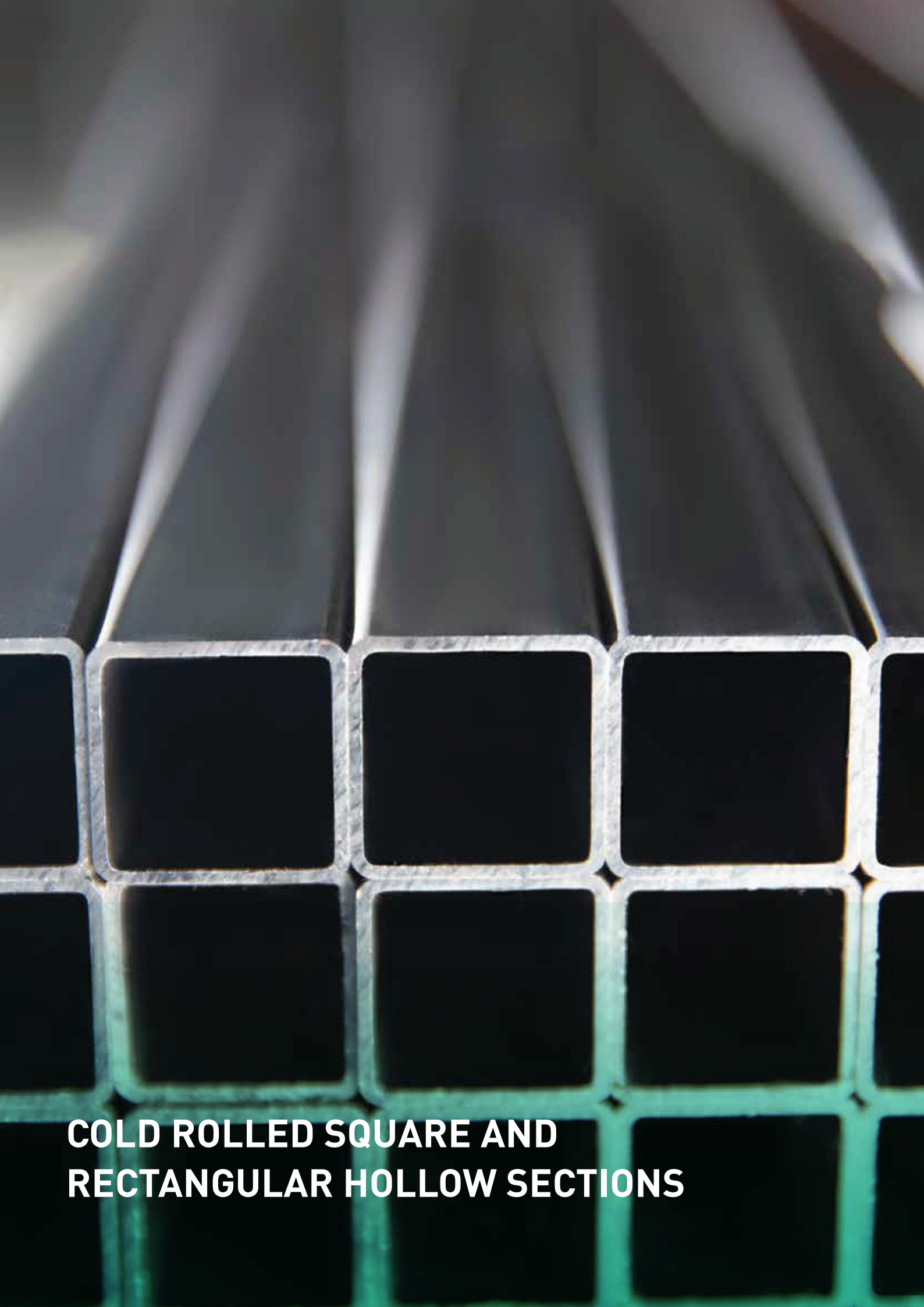
Outside Diameter (mm)	Wall Thickness (mm)											
	0,50	0,60	0,70	0,80	0,90	1,00	1,20	1,40	1,50	2,00	2,50	3,00
	Mass Per Unit Length (kg/m)											
Ø8	0,09	0,11	0,13	0,14	0,16	0,17	0,20	0,23	-	-	-	-
Ø9	0,10	0,12	0,14	0,16	0,18	0,20	0,23	0,26	0,28	-	-	-
Ø10	0,12	0,14	0,16	0,18	0,20	0,22	0,26	0,30	0,31	-	-	-
Ø13	0,15	0,18	0,21	0,24	0,27	0,30	0,35	0,40	0,43	-	-	-
Ø16	0,19	0,23	0,26	0,30	0,34	0,37	0,44	0,50	0,54	0,69	-	-
Ø19	0,23	0,27	0,32	0,36	0,40	0,44	0,53	0,61	0,65	0,84	-	-
Ø21	0,25	0,30	0,35	0,40	0,45	0,49	0,59	0,68	0,72	0,94	-	-
Ø22	0,27	0,32	0,37	0,42	0,47	0,52	0,62	0,71	0,76	0,99	-	-
Ø25	0,30	0,36	0,42	0,48	0,53	0,59	0,70	0,81	0,87	1,13	1,39	1,63
Ø25,4	0,31	0,37	0,43	0,49	0,54	0,60	0,72	0,83	0,88	1,15	-	-
Ø28	-	0,41	0,47	0,54	0,60	0,67	0,79	0,92	0,98	1,28	1,57	1,85
Ø28,6	-	0,41	0,48	0,55	0,61	0,68	0,81	0,94	1,00	1,31	1,61	1,89
Ø30	-	0,44	0,51	0,58	0,65	0,72	0,85	0,99	1,05	1,38	1,70	2,00
Ø32	-	0,46	0,54	0,62	0,69	0,76	0,91	1,06	1,13	1,48	1,82	2,15
Ø35	-	0,51	0,59	0,67	0,76	0,84	1,00	1,16	1,24	1,63	2,00	2,37
Ø38	-	0,55	0,64	0,73	0,82	0,91	1,09	1,26	1,35	1,78	2,19	2,59
Ø42	-	-	0,71	0,81	0,91	1,01	1,21	1,40	1,50	1,97	2,44	2,89
Ø45	-	-	0,76	0,87	0,98	1,09	1,30	1,51	1,61	2,12	2,62	3,11
Ø48	-	-	0,82	0,93	1,05	1,16	1,38	1,61	1,72	2,27	2,81	3,33
Ø51	-	-	-	0,99	1,11	1,23	1,47	1,71	1,83	2,42	2,99	3,55
Ø60,3	-	-	-	1,17	1,32	1,46	1,75	2,03	2,18	2,88	3,56	4,24
Ø76,1	-	-	-	-	-	-	-	-	2,76	3,65	4,54	5,41

Length Range

4,0 - 8,5 m







COLD ROLLED SQUARE AND RECTANGULAR HOLLOW SECTIONS

Production Range For Cold Rolled Square Hollow Section

Outside Diameter (mm)			Wall Thickness (mm)											
			0,50	0,60	0,70	0,80	0,90	1,00	1,20	1,40	1,50	2,00	2,50	3,00
			Mass Per Unit Length(kg/m)											
10	X	10	0,15	0,18	0,20	0,23	0,26	0,28	0,33	0,37	0,40	-	-	-
15	X	15	0,23	0,27	0,31	0,36	0,40	0,44	0,52	0,59	0,63	0,81	-	-
20	X	20	0,31	0,36	0,42	0,48	0,54	0,59	0,71	0,81	0,87	1,12	1,36	1,45
25	X	25	-	0,46	0,53	0,61	0,68	0,75	0,89	1,03	1,10	1,44	1,76	1,92
30	X	30	-	0,55	0,64	0,73	0,82	0,91	1,08	1,25	1,34	1,75	2,15	2,39
35	X	35	-	-	-	0,86	0,96	1,07	1,27	1,47	1,57	2,07	2,54	2,86
40	X	40	-	-	-	0,98	1,10	1,22	1,46	1,69	1,81	2,38	2,93	3,33
50	X	50	-	-	-	-	-	1,54	1,84	2,13	2,28	3,01	3,72	4,28
60	X	60	-	-	-	-	-	-	-	-	2,75	3,64	4,50	5,22

Length Range

4,0 - 8,5 m

Production Range For Cold Rolled Rectangular Hollow Section

Outside Diameter (mm)			Wall Thickness (mm)											
			0,50	0,60	0,70	0,80	0,90	1,00	1,20	1,40	1,50	2,00	2,50	3,00
			Mass Per Unit Length (kg/m)											
20	X	10	0,23	0,27	0,31	0,36	0,40	0,44	0,52	0,59	0,63	0,81	-	-
25	X	15	0,31	0,36	0,42	0,48	0,54	0,59	0,71	0,81	0,87	1,12	1,36	1,45
30	X	10	0,31	0,36	0,42	0,48	0,54	0,59	0,71	0,81	0,87	1,12	1,36	1,45
30	X	15	-	0,41	0,48	0,54	0,61	0,67	0,80	0,92	0,99	1,28	1,56	1,69
30	X	20	-	0,46	0,53	0,61	0,68	0,75	0,89	1,03	1,10	1,44	1,76	1,92
35	X	15	-	0,46	0,53	0,61	0,68	0,75	0,89	1,03	1,10	1,44	1,76	1,92
40	X	10	-	0,46	0,53	0,61	0,68	0,75	0,89	1,03	1,10	1,44	1,76	1,92
40	X	20	-	0,55	0,64	0,73	0,82	0,91	1,08	1,25	1,34	1,75	2,15	2,39
40	X	30	-	-	-	0,86	0,96	1,07	1,27	1,47	1,57	2,07	2,54	2,86
50	X	10	-	0,55	0,64	0,73	0,82	0,91	1,08	1,25	1,34	1,75	2,15	2,39
50	X	20	-	-	-	0,86	0,96	1,07	1,27	1,47	1,57	2,07	2,54	2,86
50	X	25	-	-	-	0,92	1,03	1,14	1,37	1,58	1,69	2,22	2,74	3,10
50	X	30	-	-	-	0,98	1,10	1,22	1,46	1,69	1,81	2,38	2,93	3,33
60	X	20	-	-	-	-	1,10	1,22	1,46	1,69	1,81	2,38	2,93	3,33
60	X	30	-	-	-	1,11	1,24	1,38	1,65	1,91	2,05	2,69	3,33	3,80
60	X	40	-	-	-	-	-	1,54	1,84	2,13	2,28	3,01	3,72	4,28
80	X	40	-	-	-	-	-	-	-	-	2,75	3,64	4,50	5,22

Length Range

4,0 - 8,5 m

MECHANICAL INSTALLATION

Water and Gas Pipes
Fire Installation Pipes
Boiler Pipes

PRODUCTION STANDARD AND STEEL GRADE

EN 10255 + A1	S195T
EN 10217-1	P195TR1, P195TR2, P235TR1, P235TR2, P265TR1, P265TR2
EN 10217-2	P195GH, P235GH, P265GH, 16Mo3
EN 10224	L235, L275, L355
ASTM A53	Grade A, Grade B
SI 10255	S195T
SI 530	530A, 530B, X42, X52
SI 4314	Grade A, Grade B
ASTM A795	Grade A, Grade B

EN 10217-1 DELIVERY ROUTE

Starting Material	Forming Operation	Delivery Condition	Applicable for Quality	
			TR1	TR2
Hot Rolled	Cold Formed and Welded	As Rolled	✓	✓
		NW	✓	✓
		NP	✓	✓
		NR	✓	✓
Normalized Rolled		As Rolled	✓	✓
		NW	✓	✓
		NP	✓	✓
		NR	✓	✓

EN 10217-2 DELIVERY ROUTE

Starting Material	Forming Operation	Delivery Condition
Hot Rolled	Cold Formed and Welded	NP
		NR
Normalized Rolled		NW
		NP
		NR

NW: *Normalized Weld Zone*
NP: *Normalized Full Body*
NR: *Normalized Rolled*

HEAT TREATMENT

Type	Dimension (mm)			
	Weld Seam & HAZ		Full Body	
	Outside Diameter	Wall Thickness	Outside Diameter	Wall Thickness
Stress Relieving	Ø42,2-339,7	2,00-13,00	Ø21,3-339,7	1,50-13,00
Normalizing	Ø42,2-339,7	2,00-13,00	Ø21,3-339,7	1,50-13,00

SURFACE CONDITION

- ✓ Uncoated
- ✓ Protective Oiled
- ✓ Galvanized (Ø21,3-219,1 mm/1,80-7,11 mm thickness)
- ✓ Primer Coated (Ø13,0-339,7 mm/1,00-13,00 mm thickness)
- ✓ Powder Epoxy Coated (Ø21,3-339,7 mm/2,60-13,00 mm thickness)
- ✓ PE-PP Coated (Ø21,3-339,7 mm/2,60-13,00 mm thickness)
- ✓ Internal Epoxy Coated (Ø76,1-339,7 mm/2,60-13,00 mm thickness)

PIPE END

- ✓ Plain End (Square Cut)
- ✓ Bevelled (Chamfered)
- ✓ Grooved (Ø33,7-323,9 mm/1,80-6,00 mm thickness)
- ✓ Threaded and Coupled (Ø21,3-168,3 mm/1,80-7,11 mm thickness) (ISO 7.1, ANSI B1.20, EN 10255, ASTM A53)

QUALITY CONTROL TESTS

MECHANICAL TEST

- ✓ Tensile Test
- ✓ Charpy V Notch Impact Test
- ✓ Flattening Test
- ✓ Expanding Test
- ✓ Bending Test

CHEMICAL ANALYSIS

- ✓ Spectral Analysis

NON-DESTRUCTIVE TEST

- ✓ Eddy Current Test ISO 10893-2
- ✓ Ultrasonic Test (Weld Seam) ISO 10893-11
- ✓ Hydrostatic Test
- ✓ Control of Residual Magnetism

DIMENSIONAL AND VISUAL INSPECTION

METALLOGRAPHIC EXAMINATION

- ✓ Macro Examination
- ✓ Micro Examination
- ✓ Micro Hardness Test
- ✓ Grain Size Control

COATING TESTS

TEST CERTIFICATES

According to EN 10204, 2.1, 2.2, 3.1, 3.2 certificates

WATER AND GAS PIPES

Production Range For Water and Gas Pipe

Outside Diameter		Wall Thickness (mm)																			
(mm)	(inch)	1,20	1,50	2,00	2,30	2,60	2,90	3,20	3,50	3,60	4,00	4,50	5,00	5,40	6,00	7,00	8,00	10,00	11,00	12,50	13,00
		Mass Per Unit Length (kg/m)																			
Ø17,2	3/8	-	0,58	0,75	0,85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ø21,3	1/2	0,59	0,73	0,95	1,08	1,20	1,32	1,43	-	-	-	-	-	-	-	-	-	-	-	-	-
Ø26,7	3/4	0,75	0,93	1,22	1,38	1,55	1,70	1,85	2,00	2,05	-	-	-	-	-	-	-	-	-	-	-
Ø26,9	3/4	0,76	0,94	1,23	1,40	1,56	1,72	1,87	2,02	2,07	2,26	2,49	-	-	-	-	-	-	-	-	-
Ø33,4	1	0,95	1,18	1,55	1,76	1,97	2,18	2,38	2,58	2,65	2,90	3,21	3,50	-	-	-	-	-	-	-	-
Ø33,7	1	0,96	1,19	1,56	1,78	1,99	2,20	2,41	2,61	2,67	2,93	3,24	3,54	-	-	-	-	-	-	-	-
Ø42,2	1 1/4	1,21	1,51	1,98	2,26	2,54	2,81	3,08	3,34	3,43	3,77	4,18	4,59	4,90	5,36	-	-	-	-	-	-
Ø42,4	1 1/4	1,22	1,51	1,99	2,27	2,55	2,82	3,09	3,36	3,44	3,79	4,21	4,61	4,93	5,39	-	-	-	-	-	-
Ø48,3	1 1/2	1,39	1,73	2,28	2,61	2,93	3,25	3,56	3,87	3,97	4,37	4,86	5,34	5,71	6,26	-	-	-	-	-	-
Ø60,3	2	-	2,18	2,88	3,29	3,70	4,10	4,51	4,90	5,03	5,55	6,19	6,82	7,31	8,03	9,20	-	-	-	-	-
Ø73,0	2 7/8	-	2,64	3,50	4,01	4,51	5,01	5,51	6,00	6,16	6,81	7,60	8,38	9,00	9,91	11,39	-	-	-	-	-
Ø76,1	2 1/2	-	2,76	3,65	4,19	4,71	5,23	5,75	6,27	6,44	7,11	7,95	8,77	9,41	10,37	11,93	13,43	-	-	-	-
Ø88,9	3	-	3,23	4,29	4,91	5,53	6,15	6,76	7,37	7,57	8,37	9,37	10,34	11,12	12,27	14,14	15,96	-	-	-	-
Ø101,6	3 1/2	-	-	-	-	6,35	7,06	7,76	8,47	8,70	9,63	10,78	11,91	12,81	14,14	16,33	18,47	22,59	-	-	-
Ø114,3	4	-	-	-	-	7,16	7,97	8,77	9,56	9,83	10,88	12,18	13,48	14,50	16,02	18,52	20,97	25,72	-	-	-
Ø139,7	5	-	-	-	-	-	9,78	10,77	11,76	12,08	13,39	15,00	16,61	17,88	19,78	22,91	25,98	31,98	-	-	-
Ø141,3	5	-	-	-	-	-	9,90	10,90	11,89	12,22	13,54	15,18	16,81	18,10	20,02	23,18	26,30	32,38	-	-	-
Ø165,1	6	-	-	-	-	-	11,60	12,78	13,95	14,34	15,89	17,82	19,74	21,27	23,54	27,29	30,99	38,25	-	-	-
Ø168,3	6	-	-	-	-	-	11,83	13,03	14,22	14,62	16,21	18,18	20,13	21,69	24,01	27,84	31,62	39,04	42,67	48,03	49,79
Ø177,8	7	-	-	-	-	-	12,51	13,78	15,04	15,46	17,14	19,23	21,31	22,96	25,42	29,48	33,50	41,38	45,25	50,95	52,83
Ø193,7	7 5/8	-	-	-	-	-	-	-	16,42	16,88	18,71	21,00	23,27	25,07	27,77	32,23	36,63	45,30	49,56	55,85	57,93
Ø219,1	8	-	-	-	-	-	-	-	18,61	19,13	21,22	23,81	26,40	28,46	31,53	36,61	41,65	51,56	56,45	63,68	66,07
Ø244,5	9	-	-	-	-	-	-	-	20,80	21,39	23,72	26,63	29,53	31,84	35,29	41,00	46,66	57,83	63,34	71,51	74,21
Ø273,0	10	-	-	-	-	-	-	-	-	-	26,53	29,80	33,04	35,63	39,51	45,92	52,28	64,86	71,07	80,30	83,35
Ø323,9	12	-	-	-	-	-	-	-	-	-	-	-	39,32	42,41	47,04	54,70	62,32	77,41	84,88	95,99	99,67
Ø339,7	13 3/8	-	-	-	-	-	-	-	-	-	-	-	41,27	44,52	49,37	57,43	65,44	81,30	89,16	100,86	104,73

Length Range

4,0 - 8,5 m 4,0 - 9,0 m 5,0 - 14,0 m

Production Range For EN 10255/SI 10255

Outside Diameter			Heavy		Medium		Serie L*		Serie L1		Serie L2	
DN	(inch)	(mm)	Wall Thickness (mm)	Mass Per Unit Length (kg/m)	Wall Thickness (mm)	Mass Per Unit Length (kg/m)	Wall Thickness (mm)	Mass Per Unit Length (kg/m)	Wall Thickness (mm)	Mass Per Unit Length (kg/m)	Wall Thickness (mm)	Mass Per Unit Length (kg/m)
10	3/8	Ø17,2	-	-	2,30	0,84	2,00	0,75	2,00	0,74	1,80	0,67
15	1/2	Ø21,3	3,20	1,44	2,60	1,21	2,30	1,08	2,30	1,08	2,00	0,95
20	3/4	Ø26,9	3,20	1,87	2,60	1,56	2,30	1,40	2,30	1,39	2,30	1,38
25	1	Ø33,7	4,00	2,93	3,20	2,41	2,90	2,20	2,90	2,20	2,60	1,98
32	1 1/4	Ø42,4	4,00	3,79	3,20	3,10	2,90	2,82	2,90	2,82	2,60	2,54
40	1 1/2	Ø48,3	4,00	4,37	3,20	3,56	2,90	3,25	2,90	3,24	2,90	3,23
50	2	Ø60,3	4,50	6,19	3,60	5,03	3,20	4,51	3,20	4,49	2,90	4,08
65	2 1/2	Ø76,1	4,50	7,93	3,60	6,42	3,20	5,75	3,20	5,73	3,20	5,71
80	3	Ø88,9	5,00	10,30	4,00	8,36	3,20	6,76	3,60	7,55	3,20	6,72
90	3 1/2	Ø101,6	-	-	-	-	3,60	8,70	-	-	-	-
100	4	Ø114,3	5,40	14,50	4,50	12,20	3,60	9,83	4,00	10,80	3,60	9,75
125	5	Ø139,7	5,40	17,88	5,00	16,60	4,50	15,00	-	-	-	-
150	6	Ø165,1	5,40	21,27	5,00	19,80	4,50	17,80	-	-	-	-

*Heat treatment is mandatory for serie L production.

Production Range For ASTM A53

NPS	DN	Outside Diameter		Wall Thickness		Mass Per Unit Length		Weight Class	SCH no	Grade A Test Pressure		Grade B Test Pressure	
		(inch)	(mm)	(inch)	(mm)	(lb/ft)	(kg/m)			(psi)	(bar)	(psi)	(bar)
3/8	10	0.675	Ø17,1	0,091	2,31	0,57	0,84	STD	40	700	48	700	48
1/2	15	0.840	Ø21,3	0,109	2,77	0,85	1,27	STD	40	700	48	700	48
3/4	20	1.050	Ø26,7	0,113	2,87	1,13	1,69	STD	40	700	48	700	48
				0,154	3,91	1,48	2,20	XS	80	850	59	850	59
1	25	1.315	Ø33,4	0,133	3,38	1,68	2,50	STD	40	700	48	700	48
				0,179	4,55	2,17	3,24	XS	80	850	59	850	59
1 1/4	32	1.660	Ø42,2	0,140	3,56	2,27	3,39	STD	40	1200	83	1300	90
				0,191	4,85	3,00	4,47	XS	80	1800	124	1900	131
				0,250	6,35	3,77	5,61		160	1900	131	2000	138
1 1/2	40	1.900	Ø48,3	0,145	3,68	2,72	4,05	STD	40	1200	83	1300	90
				0,200	5,08	3,63	5,41	XS	80	1800	124	1900	131
				0,281	7,14	4,86	7,25		160	1950	134	2050	141
2	50	2.375	Ø60,3	0,154	3,91	3,66	5,44	STD	40	2300	159	2500	172
				0,218	5,54	5,03	7,48	XS	80	2500	172	2500	172
2 1/2	65	2.875	Ø73,0	0,203	5,16	5,80	8,63	STD	40	2500	172	2500	172
				0,276	7,01	7,67	11,41	XS	80	2500	172	2500	172
3	80	3.500	Ø88,9	0,125	3,18	4,51	6,72			1290	89	1500	100
				0,156	3,96	5,58	8,29			1600	110	1870	129
				0,188	4,78	6,66	9,92			1930	133	2260	156
				0,216	5,49	7,58	11,29	STD	40	2220	153	2500	172
				0,250	6,35	8,69	12,93			2500	172	2500	172
				0,281	7,14	9,67	14,40			2500	172	2500	172
				0,300	7,62	10,26	15,27	XS	80	2500	172	2500	172
3 1/2	90	4.000	Ø101,6	0,125	3,18	5,18	7,72			1120	77	1310	90
				0,156	3,96	6,41	9,53			1400	97	1640	113
				0,188	4,78	7,66	11,41			1690	117	1970	136
				0,226	5,74	9,12	13,57	STD	40	2030	140	2370	163
				0,250	6,35	10,02	14,92			2250	155	2500	172
				0,281	7,14	11,17	16,63			2500	172	2500	172
				0,318	8,08	12,52	18,63	XS	80	2800	193	2800	193
4	100	4.500	Ø114,3	0,125	3,18	5,85	8,71			1000	69	1170	81
				0,156	3,96	7,24	10,78			1250	86	1460	101
				0,188	4,78	8,67	12,91			1500	103	1750	121
				0,219	5,56	10,02	14,91			1750	121	2040	141
				0,237	6,02	10,80	16,07	STD	40	1900	131	2210	152
				0,250	6,35	11,36	16,90			2000	138	2330	161
				0,281	7,14	12,67	18,87			2250	151	2620	181
				0,312	7,92	13,97	20,78			2500	172	2800	193
				0,337	8,56	15,00	22,32	XS	80	2700	186	2800	193
5	125	5.563	Ø141,3	0,156	3,96	9,02	13,41			1010	70	1180	81
				0,188	4,78	10,80	16,09			1220	84	1420	98
				0,219	5,56	12,51	18,61			1420	98	1650	114
				0,258	6,55	14,63	21,77	STD	40	1670	115	1950	134
				0,281	7,14	15,87	23,62			1820	125	2120	146
				0,312	7,92	17,51	26,05			2020	139	2360	163
				0,344	8,74	19,19	28,57			2230	154	2600	179
				0,375	9,52	20,80	30,94	XS	80	2430	168	2800	193

NPS	DN	Outside Diameter		Wall Thickness		Mass Per Unit Length		Weight Class	SCH no	Grade A Test Pressure		Grade B Test Pressure	
		(inch)	(mm)	(inch)	(mm)	(lb/ft)	(kg/m)			(psi)	(bar)	(psi)	(bar)
6	150	6.625	Ø168,3	0,188	4,78	12,94	19,27			1020	70	1190	82
				0,219	5,56	15,00	22,31			1190	82	1390	96
				0,250	6,35	17,04	25,36			1360	94	1580	109
				0,280	7,11	18,99	28,26	STD	40	1520	105	1780	123
				0,312	7,92	21,06	31,32			1700	117	1980	137
				0,344	8,74	23,10	34,39			1870	129	2180	150
				0,375	9,52	25,05	37,28			2040	141	2380	164
				0,432	10,97	28,60	42,56	XS	80	2350	162	2740	189
8	200	8.625	Ø219,1	0,188	4,78	16,96	25,26			780	54	920	63
				0,203	5,16	18,28	27,22			850	59	1000	69
				0,219	5,56	19,68	29,28			910	63	1070	74
				0,250	6,35	22,38	33,31		20	1040	72	1220	84
				0,277	7,04	24,72	36,31		30	1160	78	1350	93
				0,312	7,92	27,73	41,24			1300	90	1520	105
				0,322	8,18	28,58	42,55	STD	40	1340	92	1570	108
				0,344	8,74	30,45	45,34			1440	99	1680	116
				0,375	9,52	33,07	49,20			1570	108	1830	126
				0,406	10,31	35,67	53,08		60	1700	117	2000	138
				0,438	11,13	38,33	57,08			1830	126	2130	147
				0,500	12,70	43,43	64,64	XS	80	2090	144	2430	168
10	250	10.750	Ø273,0	0,188	4,78	21,23	31,62			630	43	730	50
				0,203	5,16	22,89	34,08			680	47	800	55
				0,219	5,56	24,65	36,67			730	50	860	59
				0,250	6,35	28,06	41,75		20	840	58	980	68
				0,279	7,09	31,23	46,49			930	64	1090	75
				0,307	7,80	34,27	51,01		30	1030	71	1200	83
				0,344	8,74	38,27	56,96			1150	79	1340	92
				0,365	9,27	40,52	60,29	STD	40	1220	84	1430	99
				0,438	11,13	48,28	71,87			1470	101	1710	118
				0,500	12,70	54,79	81,52	XS	60	1670	115	1950	134
12	300	12.750	Ø323,8	0,203	5,16	27,23	40,55			570	39	670	46
				0,219	5,56	29,34	43,63			620	43	720	50
				0,250	6,35	33,41	49,71		20	710	49	820	57
				0,281	7,14	37,46	55,75			790	54	930	64
				0,312	7,92	41,48	61,69			880	61	1030	71
				0,330	8,38	43,81	65,18		30	930	64	1090	75
				0,344	8,74	45,62	67,90			970	67	1130	78
				0,375	9,52	49,61	73,78	STD		1060	73	1240	85
				0,406	10,31	53,57	79,70		40	1150	79	1340	92
				0,438	11,13	57,65	85,82			1240	85	1440	99
				0,500	12,70	65,48	97,43	XS		1410	97	1650	114

Production Range For SI 530

DN		Outside Diameter		Wall Thickness (mm)	Mass Per Unit Length (kg/m)	Test Pressure (bar)			
(mm)	(inch)	(mm)	(inch)			530A	530B	530 X42	530 X52
80	3	Ø88,9	3 1/2	3,96	8,32	111	129	-	-
				4,76	9,88	133	155	-	-
				5,56	11,43	155	181	-	-
100	4	Ø114,3	4 1/2	3,96	10,80	86	101	-	-
				4,76	12,86	103	121	-	-
				5,56	14,91	121	141	-	-
				6,35	16,91	138	161	-	-
125	5	Ø141,3	5 9/16	3,96	13,45	70	81	-	-
				4,76	16,03	84	98	-	-
				5,56	18,61	98	114	-	-
				6,35	21,13	112	130	-	-
150	6	Ø168,3	6 5/8	3,96	16,09	59	68	102	127
				4,76	19,20	70	82	123	152
				5,56	22,31	82	96	144	478
				6,35	25,36	94	109	164	203
				7,14	28,38	105	123	184	228
				7,94	31,40	117	137	205	254
				9,52	37,31	141	164	207	304
200	8	Ø219,1	8 5/8	3,96	21,06	45	66	79	97
				4,76	25,16	54	79	94	117
				5,56	29,28	63	92	110	136
				6,35	33,32	72	105	126	156
				7,14	37,32	81	118	142	175
				7,94	41,35	90	131	157	195
				9,52	49,26	108	157	189	234
225	9	Ø244,5	9 5/8	3,96	23,55	40	59	71	87
				4,76	28,14	48	71	85	105
				5,56	32,76	56	82	99	122
				6,35	37,30	64	94	113	140
				7,14	41,80	72	106	127	157
				7,94	46,32	81	118	141	175
				9,52	55,23	97	141	169	210
250	10	Ø273,1	10 3/4	3,96	26,35	36	53	63	78
				4,76	31,50	43	63	76	94
				5,56	36,68	51	74	88	109
				6,35	41,77	58	84	101	125
				7,14	46,83	65	95	114	141
				7,94	51,92	72	105	126	156
				9,52	61,94	87	152	152	188
				11,11	71,78	101	147	177	219
300	12	Ø323,9	12 3/4	3,96	31,32	30	44	53	66
				4,76	37,46	36	53	64	79
				5,56	43,65	43	62	75	92
				6,35	49,73	48	71	85	105
				7,14	55,78	55	80	96	119
				7,94	61,87	61	89	106	132
				9,52	73,88	73	106	128	158
				11,11	85,70	85	124	149	185

Production Range For DVGW Approved Galvanized Drinking Water Pipe (DVGW 7101)

Production Norm	NPS	Outside Diameter (mm)	Serie	Wall Thickness (mm)	Steel Grade	Surface	Pipe End
EN 10255	1/2	Ø21,3	Medium	2,60	S195T	Galvanized	Plain End Threaded and Coupled
	3/4	Ø26,9	Medium	2,60			
	1	Ø33,7	Medium	3,20			
	1 1/4	Ø42,4	Medium	3,20			
	1 1/2	Ø48,3	Medium	3,20			
	2	Ø60,3	Medium	3,60			
	2 1/2	Ø76,1	Medium	3,60			
	3	Ø88,9	Medium	4,00			
	4	Ø114,3	Medium	4,50			
	5	Ø139,7	Medium	5,00			
	6	Ø165,1	Medium	5,00			

FIRE INSTALLATION PIPES

Production Range For ASTM A795/SI 4314

Nominal Diameter		Outside Diameter		Sch 10						Sch 30 ve Sch 40					
				Wall Thickness		Mass Per Unit Length		Test Pressure		Wall Thickness		Mass Per Unit Length		Test Pressure	
DN	NPS	(inch)	(mm)	(inch)	(mm)	(lb/ft)	(kg/m)	(psi)	(bar)	(inch)	(mm)	(lb/ft)	(kg/m)	(psi)	(bar)
15	1/2	0.840	Ø21,3	-	-	-	-	-	-	0,109	2,77	0,85	1,27	700	48
20	3/4	1.050	Ø26,7	0,083	2,11	0,86	1,28	700	48	0,113	2,87	1,13	1,69	700	48
25	1	1.315	Ø33,4	0,109	2,77	1,41	2,09	700	48	0,133	3,38	1,68	2,50	700	48
32	1 1/4	1.660	Ø42,2	0,109	2,77	1,81	2,69	1000	69	0,140	3,56	2,27	3,39	1000	69
40	1 1/2	1.900	Ø48,3	0,109	2,77	2,09	3,11	1000	69	0,145	3,68	2,72	4,05	1000	69
50	2	2.375	Ø60,3	0,109	2,77	2,64	3,93	1000	69	0,154	3,91	3,66	5,45	1000	69
65	2 1/2	2.875	Ø73,0	0,120	3,05	3,53	5,26	1000	69	0,203	5,16	5,80	8,64	1000	69
80	3	3.500	Ø88,9	0,120	3,05	4,34	6,46	1000	69	0,216	5,49	7,58	11,29	1000	69
90	3 1/2	4.000	Ø101,6	0,120	3,05	4,98	7,41	1200	83	0,226	5,74	9,12	13,58	1200	83
100	4	4.500	Ø114,3	0,120	3,05	5,62	8,37	1200	83	0,237	6,02	10,80	16,09	1200	83
125	5	5.563	Ø141,3	0,134	3,40	7,78	11,58	1200	83	0,258	6,55	14,63	21,79	1200	83
150	6	6.625	Ø168,3	0,134	3,40	9,30	13,85	1000	69	0,280	7,11	18,99	28,29	1200	83
200	8	8.625	Ø219,1	0,188	4,78	16,96	25,26	800	55	0,277	7,04	24,72	36,82	1200	83
250	10	10.750	Ø273,1	0,188	4,78	21,23	31,62	700	48	0,307	7,80	34,27	51,05	1000	69

Production Range For FM (Factory Mutual) Approved Fire Installation Pipe (FM Approvals Class:1630)

Production Norm	NPS	Outside Diameter (mm)	Weight Class (Schedule No)	Wall Thickness (mm)	Nominal Working Pressure (PSI)	Steel Grade	Surface	Pipe End
ASTM A53	1/2	Ø21,3	5	1,65	175	Grade A Grade B	Uncoated Primer Coated Galvanized	Plain End Bevelled
	3/4	Ø26,7	5	1,65				
	1	Ø33,4	5	1,65				
	1 1/4	Ø42,2	5	1,65				
	1 1/2	Ø48,3	5	1,65				
	2	Ø60,3	5	1,65				
	2	Ø60,3	30	3,18	175			Bevelled Grooved
	2 1/2	Ø73	30	4,78				
	3	Ø88,9	30	4,78				
	3 1/2	Ø101,6	30	4,78				
	5	Ø141,3	30	4,78				
	6	Ø168,3	0,188 in.	4,78				
	1/2	Ø21,3	40	2,77	175 300			Plain End Threaded and Coupled
	1/2	Ø21,3	80	3,73				
	3/4	Ø26,7	40	2,87				
	3/4	Ø26,7	80	3,91				
	1	Ø33,4	40	3,38				
	1	Ø33,4	80	4,55				
	1 1/4	Ø42,2	40	3,56				
	1 1/4	Ø42,2	80	4,85				
	1 1/2	Ø48,3	40	3,68				
	1 1/2	Ø48,3	80	5,08				
	2	Ø60,3	40	3,91				
	2	Ø60,3	80	5,54				
	2 1/2	Ø73	40	5,16	300			Threaded and Coupled
	2 1/2	Ø73	80	7,01				
	3	Ø88,9	40	5,49				
	3	Ø88,9	80	7,62				
	3 1/2	Ø101,6	40	5,74				
	3 1/2	Ø101,6	80	8,08				
	4	Ø114,3	40	6,02				
	4	Ø114,3	80	8,56				
	1/2	Ø21,3	10	2,11	175			Plain End Bevelled
	3/4	Ø26,7	10	2,11				
	1	Ø33,4	10	2,77				Plain End Bevelled Grooved
	1 1/4	Ø42,2	10	2,77				
	1 1/2	Ø48,3	10	2,77				
	2	Ø60,3	10	2,77				
	2 1/2	Ø73	10	3,05				Bevelled Grooved
	3	Ø88,9	10	3,05				
	3 1/2	Ø101,6	10	3,05				
	4	Ø114,3	10	3,05				
	5	Ø141,3	10	3,40				
	6	Ø168,3	10	3,40				
	8	Ø219,1	0.188 in.	4,78				
	10	Ø273	0.188 in.	4,78				
	12	Ø323,8	0.188 in.	4,78				

Production Norm	NPS	Outside Diameter (mm)	Weight Class (Schedule No)	Wall Thickness (mm)	Nominal Working Pressure (PSI)	Steel Grade	Surface	Pipe End
ASTM A53	1/2	Ø21,3	40	2,77	175	Grade A Grade B	Uncoated Primer Coated Galvanized	Bevelled
	3/4	Ø26,7	40	2,87				
	1	Ø33,4	40	3,38				Bevelled Grooved
	1 1/4	Ø42,2	40	3,56				
	1 1/2	Ø48,3	40	3,68				
	2	Ø60,3	40	3,91				
	2 1/2	Ø73	40	5,16				
	3	Ø88,9	40	5,49				
	3 1/2	Ø101,6	40	5,74				
	4	Ø114,3	40	6,02				
	5	Ø141,3	40	6,55	175 300			Bevelled Threaded and Coupled
	6	Ø168,3	40	7,11				
	8	Ø219,1	40	8,18	175			Bevelled
	10	Ø273	40	9,27				
	12	Ø323,8	40	10,31				
	1/2	Ø21,3	80	3,73	175			Bevelled
	3/4	Ø26,7	80	3,91				
	1	Ø33,4	80	4,55				
	1 1/4	Ø42,2	80	4,85				
	1 1/2	Ø48,3	80	5,08				
	2	Ø60,3	80	5,54				
	2 1/2	Ø73	80	7,01				
	3	Ø88,9	80	7,62				
	3 1/2	Ø101,6	80	8,08				
	4	Ø114,3	80	8,56				
	5	Ø141,3	80	9,52	175 300			Bevelled Threaded and Coupled
	6	Ø168,3	80	10,97				
ASTM A795	1/2	Ø21,3	5	1,65	175	Grade A Grade B	Uncoated Primer Coated Galvanized	Plain End Bevelled
	3/4	Ø26,7	5	1,65				
	1	Ø33,4	5	1,65				
	1 1/4	Ø42,2	5	1,65				
	1 1/2	Ø48,3	5	1,65				
	2	Ø60,3	5	1,65				
	1	Ø33,4	7	2,11	175			Plain End Bevelled
	1 1/4	Ø42,2	7	2,11				
	1 1/2	Ø48,3	7	2,11				
	2	Ø60,3	7	2,11				
	2 1/2	Ø73	7	2,77				Bevelled
	3	Ø88,9	7	2,77				
	3 1/2	Ø101,6	7	2,77				
	4	Ø114,3	7	2,77				
	2	Ø60,3	30	3,18	175			Bevelled Grooved
	5	Ø141,3	30	4,78				
	6	Ø168,3	0,188 in.	4,78				
	1	Ø33,4	10	2,77	175			Grooved
	1 1/4	Ø42,2	10	2,77				
	1 1/2	Ø48,3	10	2,77				

Production Range For FM (Factory Mutual) Approved Fire Installation Pipe (FM Approvals Class:1630)

Production Norm	NPS	Outside Diameter (mm)	Weight Class (Schedule No)	Wall Thickness (mm)	Nominal Working Pressure (PSI)	Steel Grade	Surface	Pipe End
ASTM A795	2	Ø60,3	10	2,77	175	Grade A Grade B	Uncoated Primer Coated Galvanized	Grooved
	2 1/2	Ø73	10	3,05				
	3	Ø88,9	10	3,05				
	3 1/2	Ø101,6	10	3,05				
	4	Ø114,3	10	3,05				
	5	Ø141,3	10	3,40				
	6	Ø168,3	10	3,40				
	8	Ø219,1	0.188 in.	4,78				
	10	Ø273	0.188 in.	4,78				
	12	Ø323,8	0.188 in.	4,78				
	1/2	Ø21,3	40	2,77	300			Threaded and Coupled
	3/4	Ø26,7	40	2,87				
	1	Ø33,4	40	3,38	175 300			Grooved Threaded and Coupled
	1 1/4	Ø42,2	40	3,56				
	1 1/2	Ø48,3	40	3,68				
	2	Ø60,3	40	3,91				
	2 1/2	Ø73	40	5,16				
	3	Ø88,9	40	5,49				
	3 1/2	Ø101,6	40	5,74				
	4	Ø114,3	40	6,02				
	5	Ø141,3	40	6,55	300			Threaded and Coupled
	6	Ø168,3	40	7,11				
	1/2	Ø21,3	10	2,11	175 300			Plain End Bevelled
	1/2	Ø21,3	40	2,77				
	3/4	Ø26,7	10	2,11				
	3/4	Ø26,7	40	2,87				
	1	Ø33,4	10	2,77				
	1	Ø33,4	40	3,38				
	1 1/4	Ø42,2	10	2,77				
	1 1/4	Ø42,2	40	3,56				
	1 1/2	Ø48,3	10	2,77				
	1 1/2	Ø48,3	40	3,68				
	2	Ø60,3	10	2,77				
	2	Ø60,3	40	3,91				
	2 1/2	Ø73	10	3,05	300			Bevelled
	2 1/2	Ø73	40	5,16				
	3	Ø88,9	10	3,05				
	3	Ø88,9	40	5,49				
	3 1/2	Ø101,6	10	3,05				
	3 1/2	Ø101,6	40	5,74				
	4	Ø114,3	10	3,05				
	4	Ø114,3	40	6,02				
	5	Ø141,3	10	3,40				
	5	Ø141,3	40	6,55				
	6	Ø168,3	10	3,40				
	6	Ø168,3	40	7,11				
	8	Ø219,1	0.188 in.	4,78				

Production Norm	NPS	Outside Diameter (mm)	Weight Class (Schedule No)	Wall Thickness (mm)	Nominal Working Pressure (PSI)	Steel Grade	Surface	Pipe End
ASTM A795	8	Ø219,1	40	8,18	300	Grade A Grade B	Uncoated Primer Coated Galvanized	Bevelled
	10	Ø273	0.188 in.	4,78				
	10	Ø273	40	9,27				
	12	Ø323,8	0.188 in.	4,78				
	12	Ø323,8	40	10,31				
EN 10255	1/2	Ø21,3	Medium	2,60	175 300	S195T	Uncoated Primer Coated Galvanized	Plain End Bevelled
	3/4	Ø26,9	Medium	2,60				
	1	Ø33,7	Medium	3,20				
	1 1/4	Ø42,4	Medium	3,20				
	1 1/2	Ø48,3	Medium	3,20				
	2	Ø60,3	Medium	3,60				
	2 1/2	Ø76,1	Medium	3,60	300			Bevelled
	3	Ø88,9	Medium	4,00				
	4	Ø114,3	Medium	4,50				
	5	Ø139,7	Medium	5,00				
	6	Ø165,1	Medium	5,00				
	1	Ø33,7	Medium	3,20	175			Grooved
	1 1/4	Ø42,4	Medium	3,20				
	1 1/2	Ø48,3	Medium	3,20				
	2	Ø60,3	Medium	3,60				
	2 1/2	Ø76,1	Medium	3,60				
	3	Ø88,9	Medium	4,00				
	4	Ø114,3	Medium	4,50				
	5	Ø139,7	Medium	5,00				
	6	Ø165,1	Medium	5,00				
	1/2	Ø21,3	Light 1	2,30	175			Plain End Bevelled
	3/4	Ø26,9	Light 1	2,30				
	1	Ø33,7	Light 1	2,90				Plain End Bevelled Grooved
	1 1/4	Ø42,4	Light 1	2,90				
	1 1/2	Ø48,3	Light 1	2,90				
	2	Ø60,3	Light 1	3,20				
	2 1/2	Ø76,1	Light 1	3,20				Bevelled Grooved
	3	Ø88,9	Light 1	3,60				
	4	Ø114,3	Light 1	4,00				
	1/2	Ø21,3	Light 2	2,00				Plain End Bevelled
	3/4	Ø26,9	Light 2	2,30				
	1	Ø33,7	Light 2	2,60				Plain End Bevelled Grooved
	1 1/4	Ø42,4	Light 2	2,60				
	1 1/2	Ø48,3	Light 2	2,90				
	2	Ø60,3	Light 2	2,90				
	2 1/2	Ø76,1	Light 2	3,20				Bevelled Grooved
	3	Ø88,9	Light 2	3,20				
	4	Ø114,3	Light 2	3,60				

Production Range For UL (Underwriters Laboratories) Approved Fire Installation Pipe (UL 852)

Production Norm	NPS	Outside Diameter (mm)	Weight Class (Schedule No)	Wall Thickness (mm)	Steel Grade	Surface	Pipe End
ASTM A53 ASTM A795	3/4	Ø26,7	10	2,11	Grade A Grade B	Uncoated Primer Coated Galvanized	Plain End Bevelled Grooved
	1	Ø33,4	10	2,77			
	1 1/4	Ø42,2	10	2,77			
	1 1/2	Ø48,3	10	2,77			
	2	Ø60,3	10	2,77			
	2 1/2	Ø73	10	3,05			
	3	Ø88,9	10	3,05			
	3 1/2	Ø101,6	10	3,05			
	4	Ø114,3	10	3,05			
	5	Ø141,3	10	3,40			
	6	Ø168,3	10	3,40			
	8	Ø219,1	0,188 in.	4,78			
	10	Ø273	0,188 in.	4,78			
	5	Ø141,3	0.188 in.	4,78			
	6	Ø168,3	0.188 in.	4,78			
	8	Ø219,1	30	7,04			
	10	Ø273	30	7,80			
	1/2	Ø21,3	40	2,77			
	3/4	Ø26,7	40	2,87			
	1	Ø33,4	40	3,38			
	1 1/4	Ø42,2	40	3,56			
	1 1/2	Ø48,3	40	3,68			
	2	Ø60,3	40	3,91			
	2 1/2	Ø73	40	5,16			
	3	Ø88,9	40	5,49			
	3 1/2	Ø101,6	40	5,74			
	4	Ø114,3	40	6,02			
	5	Ø141,3	40	6,55			
	6	Ø168,3	40	7,11			
ASTM A53	3/4	Ø26,7	80	3,91			
	1	Ø33,4	80	4,55			
	1 1/4	Ø42,2	80	4,85			
	1 1/2	Ø48,3	80	5,08			
	2	Ø60,3	80	5,54			
	3	Ø88,9	80	7,62			
	3 1/2	Ø101,6	80	8,08			
	4	Ø114,3	80	8,56			
	5	Ø141,3	80	9,52			
	6	Ø168,3	80	10,97			
	8	Ø219,1	80	12,70			
	12	Ø323,8	30	8,38			
	12	Ø323,8	Weight Class STD	9,52			
	8	Ø219,1	40	8,18			
	10	Ø273	40	9,27			
	12	Ø323,8	40	10,31			

BOILER PIPES

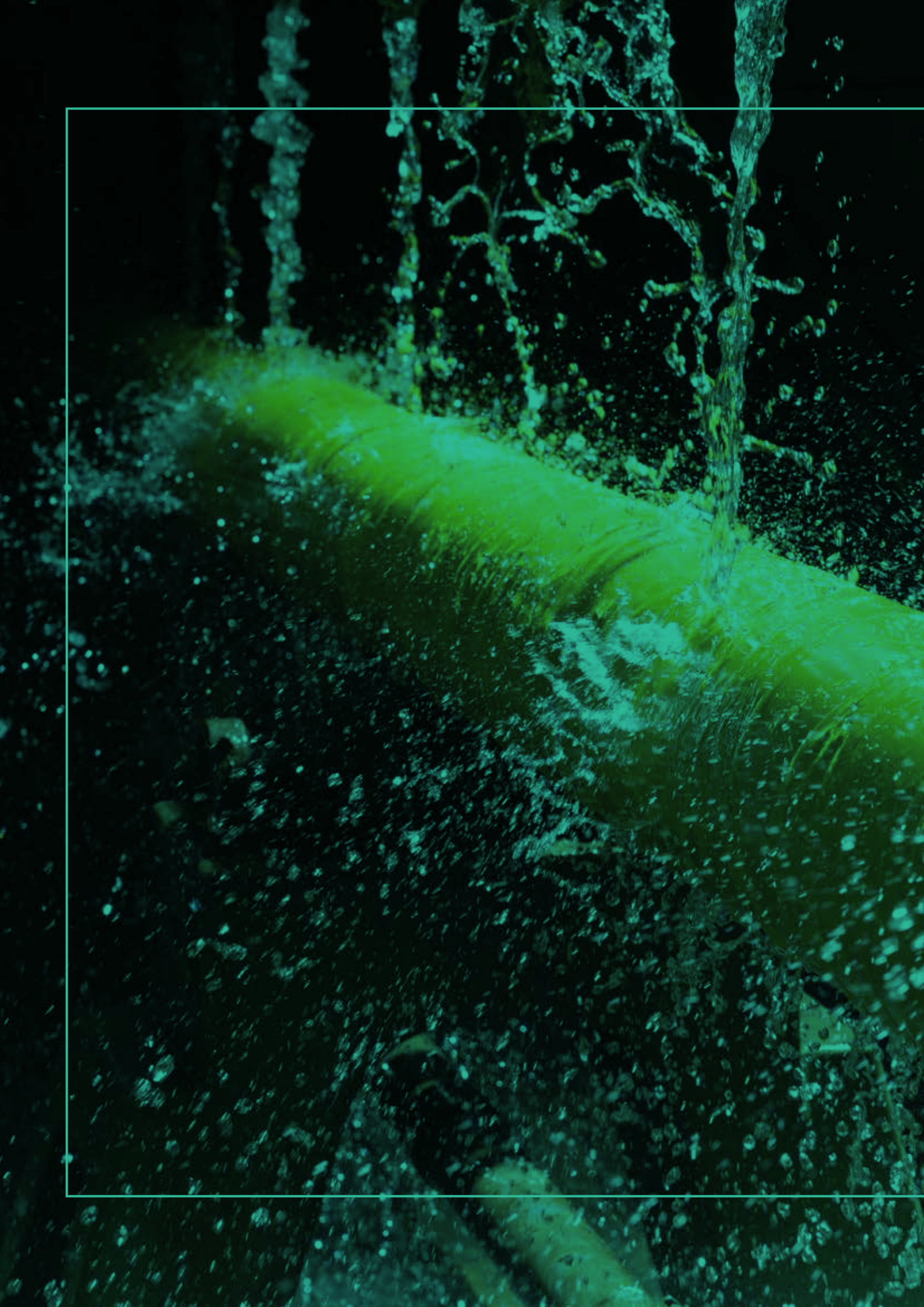
Production Range For Boiler Pipe

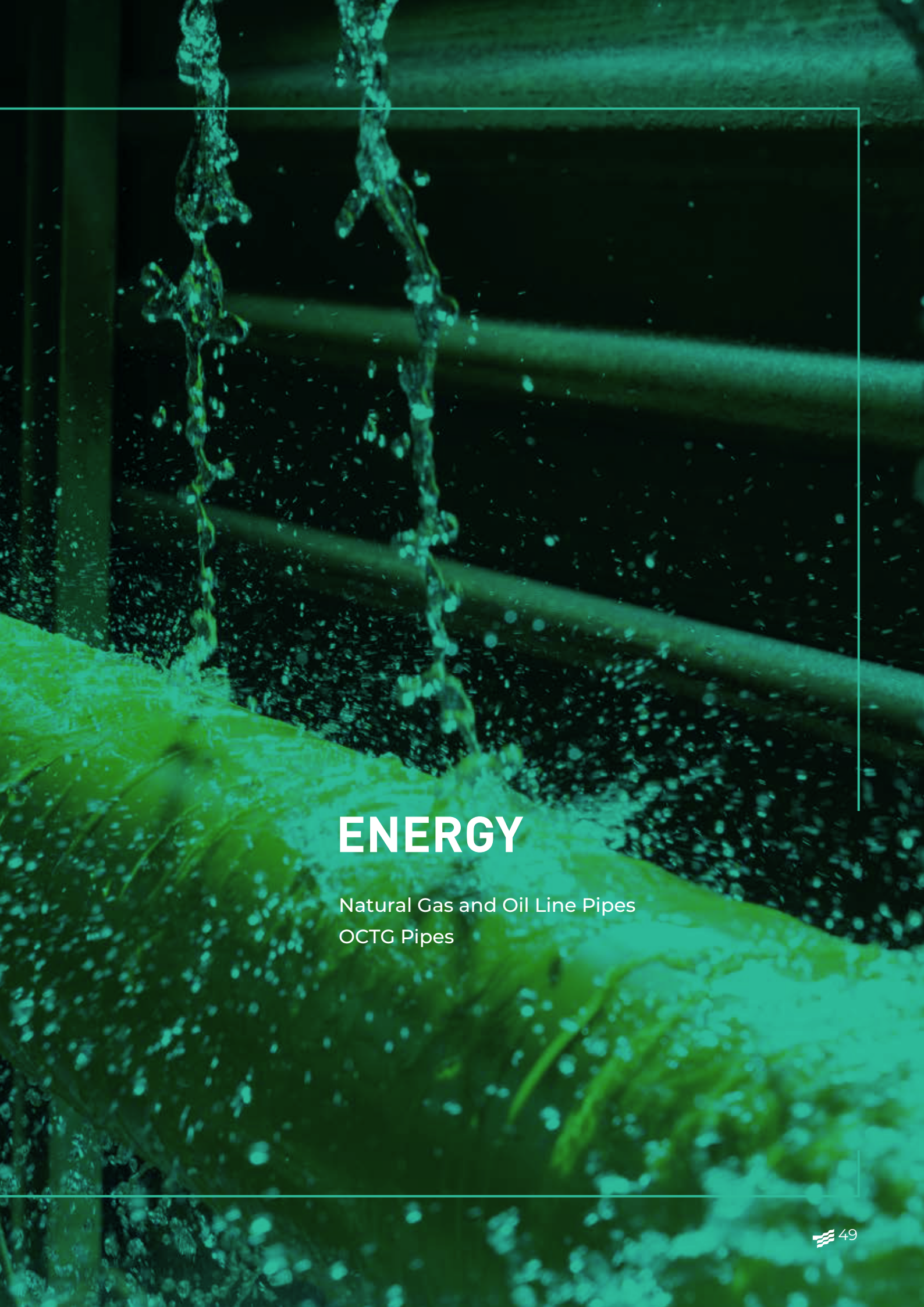
Outside Diameter		Wall Thickness (mm)																				
(mm)	(inch)	2,60	2,90	3,20	3,60	4,00	4,37	4,50	4,78	5,00	5,20	6,00	6,30	6,50	7,10	8,00	8,80	9,00	10,00	11,00	12,50	13,00
		Mass Per Unit Length (kg/m)																				
Ø21,3	1/2	1,20	1,32	1,43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ø26,9	3/4	1,56	1,72	1,87	2,07	2,26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ø33,4	1	1,97	2,18	2,38	2,65	2,90	3,13	3,21	3,37	3,50	3,62	-	-	-	-	-	-	-	-	-	-	-
Ø33,7	1	1,99	2,20	2,41	2,67	2,93	3,16	3,24	3,41	3,54	3,65	-	-	-	-	-	-	-	-	-	-	-
Ø42,2	1 1/4	2,54	2,81	3,08	3,43	3,77	4,08	4,18	4,41	4,59	4,74	5,36	-	-	-	-	-	-	-	-	-	-
Ø42,4	1 1/4	2,55	2,82	3,09	3,44	3,79	4,10	4,21	4,43	4,61	4,77	5,39	-	-	-	-	-	-	-	-	-	-
Ø48,3	1 1/2	2,93	3,25	3,56	3,97	4,37	4,73	4,86	5,13	5,34	5,53	6,26	-	-	-	-	-	-	-	-	-	-
Ø57,0		3,49	3,87	4,25	4,74	5,23	5,67	5,83	6,16	6,41	6,64	7,55	-	-	-	-	-	-	-	-	-	-
Ø60,3	2	3,70	4,10	4,51	5,03	5,55	6,03	6,19	6,54	6,82	7,07	8,03	8,39	8,62	9,31	-	-	-	-	-	-	-
Ø73,0	2 7/8	4,51	5,01	5,51	6,16	6,81	7,40	7,60	8,04	8,38	8,69	9,91	10,36	10,66	11,54	12,82	-	-	-	-	-	-
Ø76,1	2 1/2	4,71	5,23	5,75	6,44	7,11	7,73	7,95	8,41	8,77	9,09	10,37	10,84	11,16	12,08	13,43	-	-	-	-	-	-
Ø88,9	3	5,53	6,15	6,76	7,57	8,37	9,11	9,37	9,92	10,34	10,73	12,27	12,83	13,21	14,32	15,96	-	-	-	-	-	-
Ø114,3	4	-	7,97	8,77	9,83	10,88	11,85	12,18	12,91	13,48	13,99	16,02	16,78	17,28	18,77	20,97	22,89	23,37	25,72	-	-	-
Ø139,7	5	-	9,78	10,77	12,08	13,39	14,58	15,00	15,90	16,61	17,25	19,78	20,72	21,35	23,22	25,98	28,41	29,01	31,98	-	-	-
Ø165,1	6	-	11,60	12,78	14,34	15,89	17,32	17,82	18,90	19,74	20,50	23,54	24,67	25,42	27,66	30,99	33,92	34,64	38,25	-	-	-
Ø168,3	6	-	11,83	13,03	14,62	16,21	17,67	18,18	19,27	20,13	20,91	24,01	25,17	25,93	28,22	31,62	34,61	35,36	39,04	-	-	-
Ø177,8	7	-	12,51	13,78	15,46	17,14	18,69	19,23	20,39	21,31	22,13	25,42	26,64	27,46	29,89	33,50	36,67	37,46	41,38	-	-	-
Ø193,7	7 5/8	-	-	-	16,88	18,71	20,40	21,00	22,27	23,27	24,17	27,77	29,11	30,01	32,67	36,63	40,12	40,99	45,30	49,56	55,85	57,93
Ø219,1	8	-	-	-	19,13	21,22	23,14	23,81	25,26	26,40	27,43	31,53	33,06	34,08	37,12	41,65	45,64	46,63	51,56	56,45	63,68	66,07
Ø244,5	9	-	-	-	-	23,72	25,88	26,63	28,26	29,53	30,69	35,29	37,01	38,15	41,57	46,66	51,15	52,27	57,83	63,34	71,51	74,21
Ø273,0	10	-	-	-	-	26,53	28,95	29,80	31,62	33,04	34,34	39,51	41,43	42,72	46,56	52,28	57,33	58,59	64,86	71,07	80,30	83,35
Ø323,9	12	-	-	-	-	31,55	34,43	35,44	37,62	39,32	40,87	47,04	49,34	50,88	55,47	62,32	68,38	69,89	77,41	84,88	95,99	99,67
Ø339,7	13 3/8	-	-	-	-	33,11	36,14	37,20	39,48	41,27	42,89	49,37	51,80	53,41	58,23	65,44	71,81	73,40	81,30	89,16	100,86	104,73

Length Range

4,0 - 9,0 m

5,0 - 14,0 m





ENERGY

Natural Gas and Oil Line Pipes

OCTG Pipes

PRODUCTION STANDARD AND STEEL GRADE

API 5L PSL1	A25 (L175), A (L210), B (L245), X42 (L290), X46 (L320), X52 (L360), X56 (L390), X60 (L415), X65 (L450), X70 (L485)
API 5L PSL2	BM (L245M), BN (L245N), X42M (L290M), X42N (L290N), X46M (L320M), X46N (L320N), X52M (L360M), X52N (L360N), X56M (L390M), X56N (L390N), X60M (L415M), X60N (L415N), X65M (L450M)
API 5CT PSL1	H40, J55, K55
ISO 3183 PSL1	A25 (L175), A (L210), B (L245), X42 (L290), X46 (L320), X52 (L360), X56 (L390), X60 (L415), X65 (L450), X70 (L485)
ISO 3183 PSL2	BM (L245M), BN (L245N), X42M (L290M), X42N (L290N), X46M (L320M), X46N (L320N), X52M (L360M), X52N (L360N), X56M (L390M), X56N (L390N), X60M (L415M), X60N (L415N), X65M (L450M)

HEAT TREATMENT

Type	Dimension (mm)			
	Weld Seam & HAZ		Full Body	
	Outside Diameter	Wall Thickness	Outside Diameter	Wall Thickness
Stress Relieving	Ø42,2-339,7	2,00-13,00	Ø21,3-339,7	1,50-13,00
Normalizing	Ø42,2-339,7	2,00-13,00	Ø21,3-339,7	1,50-13,00

SURFACE CONDITION

- ✓ Uncoated
- ✓ Protective Oiled
- ✓ Primer Coated (Ø13,0-339,7 mm/1,00-13,00 mm thickness)
- ✓ Powder Epoxy Coated (Ø21,3-339,7 mm/2,60-13,00 mm thickness)
- ✓ PE-PP Coated (Ø21,3-339,7 mm/2,60-13,00 mm thickness)
- ✓ Internal Epoxy Coated (Ø76,1-339,7 mm/2,60-13,00 mm thickness)

PIPE END

- ✓ Plain End (Square Cut)
- ✓ Bevelled (Chamfered)

QUALITY CONTROL TESTS

MECHANICAL TEST

- ✓ Tensile Test
- ✓ Charpy V Notch Impact Test
- ✓ Flattening Test
- ✓ Expanding Test
- ✓ Bending Test

CHEMICAL ANALYSIS

- ✓ Spectral Analysis

NON-DESTRUCTIVE TEST

- ✓ Eddy Current Test ISO 10893-2
- ✓ Ultrasonic Test (Weld Seam) ISO 10893-11
- ✓ Ultrasonic Test (Full Body, Lamination) ISO 10893-8
- ✓ Hydrostatic Test
- ✓ Control of Residual Magnetism

DIMENSIONAL AND VISUAL INSPECTION

METALLOGRAPHIC EXAMINATION

- ✓ Macro Examination
- ✓ Micro Examination
- ✓ Micro Hardness Test
- ✓ Grain Size Control

COATING TESTS

DRIFT TEST

TEST CERTIFICATES

According to EN 10204, 2.1, 2.2, 3.1, 3.2 certificates

NATURAL GAS AND OIL LINE PIPES

Production Range For Natural Gas and Oil Line Pipe

Outside Diameter		Wall Thickness (mm)																						
(mm)	(inch)	1,65	2,11	2,40	2,60	2,80	2,90	3,20	3,40	3,60	3,70	3,90	4,00	4,37	4,50	5,20	5,50	6,50	7,10	8,00	8,80	9,00	10,00	11,00	13,00
		Mass Per Unit Length (kg/m)																						
Ø21,3	1/2	0,80	1,00	1,12	1,20	1,28	1,32	1,43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ø26,7	3/4	1,02	1,28	1,44	1,55	1,65	1,70	1,85	1,95	2,05	2,10	2,19	2,24	-	-	-	-	-	-	-	-	-	-	-
Ø33,4	1	1,29	1,63	1,83	1,97	2,11	2,18	2,38	2,52	2,65	2,71	2,84	2,90	3,13	3,21	3,62	-	-	-	-	-	-	-	-	-
Ø42,2	1 1/4	1,65	2,09	2,36	2,54	2,72	2,81	3,08	3,25	3,43	3,51	3,68	3,77	4,08	4,18	4,74	4,98	5,72	-	-	-	-	-	-	-
Ø48,3	1 1/2	1,90	2,40	2,72	2,93	3,14	3,25	3,56	3,76	3,97	4,07	4,27	4,37	4,73	4,86	5,53	5,80	6,70	-	-	-	-	-	-	-
Ø60,3	2	2,39	3,03	3,43	3,70	3,97	4,10	4,51	4,77	5,03	5,16	5,42	5,55	6,03	6,19	7,07	7,43	8,62	9,31	-	-	-	-	-	-
Ø73,0	2 1/2	-	-	4,18	4,51	4,85	5,01	5,51	5,84	6,16	6,32	6,65	6,81	7,40	7,60	8,69	9,16	10,66	11,54	12,82	-	-	-	-	-
Ø88,9	3	-	-	-	5,53	5,95	6,15	6,76	7,17	7,57	7,77	8,17	8,37	9,11	9,37	10,73	11,31	13,21	14,32	15,96	-	-	-	-	-
Ø101,6	3 1/2	-	-	-	-	6,82	7,06	7,76	8,23	8,70	8,93	9,40	9,63	10,48	10,78	12,36	13,03	15,24	16,55	18,47	20,14	20,55	-	-	-
Ø114,3	4	-	-	-	-	7,70	7,97	8,77	9,30	9,83	10,09	10,62	10,88	11,85	12,18	13,99	14,76	17,28	18,77	20,97	22,89	23,37	25,72	-	-
Ø141,3	5	-	-	-	-	9,56	9,90	10,90	11,56	12,22	12,55	13,21	13,54	14,76	15,18	17,45	18,42	21,61	23,50	26,30	28,75	29,36	32,38	-	-
Ø168,3	6	-	-	-	-	11,43	11,83	13,03	13,83	14,62	15,02	15,81	16,21	17,67	18,18	20,91	22,08	25,93	28,22	31,62	34,61	35,36	39,04	-	-
Ø219,1	8	-	-	-	-	-	-	-	18,09	19,13	19,65	20,70	21,22	23,14	23,81	27,43	28,97	34,08	37,12	41,65	45,64	46,63	51,56	56,45	66,07
Ø273,0	10	-	-	-	-	-	-	-	-	-	-	-	26,53	28,95	29,80	34,34	36,28	42,72	46,56	52,28	57,33	58,59	64,86	71,07	83,35
Ø323,9	12	-	-	-	-	-	-	-	-	-	-	-	-	-	35,44	40,87	43,18	50,88	55,47	62,32	68,38	69,89	77,41	84,88	99,67

Length Range

5,0 - 8,5 m 5,0 - 14,0 m

Production Range For API 5L/ISO 3183

Outside Diameter			Wall Thickness		Mass Per Unit Length	Test Pressure (bar)							
NPS	(inch)	(mm)	(mm)	(inch)	(kg/m)	A	B	X42	X46	X52	X56	X60	X65
1/2	0,840	Ø21,3	1,65	0,065	0,80	170	170	205	205	205	205	205	205
			2,11	0,083	1,00	170	170	205	205	205	205	205	205
			2,41	0,095	1,12	170	170	205	205	205	205	205	205
			2,77	0,109	1,27	170	170	205	205	205	205	205	205
3/4	1,050	Ø26,7	1,65	0,065	1,02	156	170	205	205	205	205	205	205
			2,11	0,083	1,28	170	170	205	205	205	205	205	205
			2,41	0,095	1,44	170	170	205	205	205	205	205	205
			2,87	0,113	1,69	170	170	205	205	205	205	205	205
			3,91	0,154	2,20	170	170	205	205	205	205	205	205
1	1,315	Ø33,4	1,65	0,065	1,29	124	145	172	190	205	205	205	205
			2,77	0,109	2,09	170	170	205	205	205	205	205	205
			2,90	0,114	2,18	170	170	205	205	205	205	205	205
			3,38	0,133	2,50	170	170	205	205	205	205	205	205
			4,55	0,179	3,24	170	170	205	205	205	205	205	205
1 1/4	1,660	Ø42,2	1,65	0,065	1,65	99	115	136	150	169	183	195	205
			2,77	0,109	2,69	165	170	205	205	205	205	205	205
			2,97	0,117	2,87	170	170	205	205	205	205	205	205
			3,56	0,140	3,39	170	170	205	205	205	205	205	205
			4,85	0,191	4,47	170	170	205	205	205	205	205	205
			6,35	0,250	5,61	170	170	205	205	205	205	205	205
1 1/2	1,900	Ø48,3	1,65	0,065	1,90	86	100	119	131	148	160	170	184
			2,77	0,109	3,11	145	169	200	205	205	205	205	205
			3,18	0,125	3,54	166	170	205	205	205	205	205	205
			3,68	0,145	4,05	170	170	205	205	205	205	205	205
			5,08	0,200	5,41	170	170	205	205	205	205	205	205
			7,14	0,281	7,25	170	170	205	205	205	205	205	205
2	2,375	Ø60,3	1,65	0,065	2,39	69	80	95	105	118	128	136	148
			2,11	0,083	3,03	88	103	122	134	151	164	174	189
			2,77	0,109	3,93	116	135	160	176	198	205	205	205
			3,18	0,125	4,48	133	155	184	203	205	205	205	205
			3,58	0,141	5,01	150	170	205	205	205	205	205	205
			3,91	0,154	5,44	163	170	205	205	205	205	205	205
			4,37	0,172	6,03	170	170	205	205	205	205	205	205
			4,78	0,188	6,54	170	170	205	205	205	205	205	205
			5,54	0,218	7,48	170	170	205	205	205	205	205	205
			6,35	0,250	8,45	170	170	205	205	205	205	205	205

Outside Diameter			Wall Thickness		Mass Per Unit Length	Test Pressure (bar)							
NPS	(inch)	(mm)	(mm)	(inch)	(kg/m)	A	B	X42	X46	X52	X56	X60	X65
2	2,375	Ø60,3	7,14	0,281	9,36	170	170	205	205	205	205	205	205
2 1/2	2,875	Ø73,0	2,77	0,109	4,80	96	112	132	146	164	178	189	205
			3,05	0,120	5,26	105	123	145	160	180	196	205	205
			3,18	0,125	5,48	110	128	152	167	188	204	205	205
			3,58	0,141	6,13	124	144	171	188	205	205	205	205
			3,96	0,156	6,74	137	159	189	205	205	205	205	205
			4,37	0,172	7,40	151	170	205	205	205	205	205	205
			4,78	0,188	8,04	165	170	205	205	205	205	205	205
			5,16	0,203	8,63	170	170	205	205	205	205	205	205
			5,49	0,216	9,14	170	170	205	205	205	205	205	205
			6,35	0,250	10,44	170	170	205	205	205	205	205	205
			7,01	0,276	11,41	170	170	205	205	205	205	205	205
3	3,500	Ø88,9	2,77	0,109	5,88	79	92	108	120	135	146	155	168
			3,05	0,120	6,46	86	101	119	132	148	161	171	185
			3,18	0,125	6,72	90	105	124	137	155	167	178	193
			3,58	0,141	7,53	101	118	140	155	174	188	201	205
			3,96	0,156	8,29	112	131	155	171	192	205	205	205
			4,37	0,172	9,11	124	145	171	189	205	205	205	205
			4,78	0,188	9,92	135	158	187	205	205	205	205	205
			5,49	0,216	11,29	156	170	205	205	205	205	205	205
			6,35	0,250	12,93	170	170	205	205	205	205	205	205
			7,14	0,281	14,40	170	170	205	205	205	205	205	205
			7,62	0,300	15,27	170	170	205	205	205	205	205	205
3 1/2	4,000	Ø101,6	2,77	0,109	6,75	69	80	95	105	118	128	136	147
			3,05	0,120	7,41	76	88	104	115	130	140	149	162
			3,18	0,125	7,72	79	92	109	120	135	146	156	169
			3,58	0,141	8,65	89	104	123	135	152	165	175	190
			3,96	0,156	9,53	98	115	136	150	168	182	194	205
			4,37	0,172	10,48	108	126	150	165	186	201	205	205
			4,78	0,188	11,41	119	138	164	181	203	205	205	205
			5,74	0,226	13,57	142	166	197	205	205	205	205	205
			6,35	0,250	14,92	158	184	205	205	205	205	205	205
			7,14	0,281	16,63	177	190	205	205	205	205	205	205
			8,08	0,318	18,63	190	190	205	205	205	205	205	205
4	4,500	Ø114,3	2,77	0,109	7,62	61	71	84	93	105	113	121	131
			3,05	0,120	8,37	67	78	93	102	115	125	133	144
			3,18	0,125	8,71	70	82	97	107	120	130	139	150
			3,58	0,141	9,77	79	92	109	120	135	147	156	169

Production Range For API 5L/ISO 3183

Outside Diameter			Wall Thickness		Mass Per Unit Length	Test Pressure (bar)							
NPS	(inch)	(mm)	(mm)	(inch)	(kg/m)	A	B	X42	X46	X52	X56	X60	X65
4	4,500	Ø114,3	3,96	0,156	10,78	87	102	121	133	150	162	173	187
			4,37	0,172	11,85	96	112	133	147	165	179	190	205
			4,78	0,188	12,91	105	123	146	161	181	196	205	205
			5,16	0,203	13,89	114	133	157	173	195	205	205	205
			5,56	0,219	14,91	123	143	169	187	205	205	205	205
			6,02	0,237	16,07	133	155	183	202	205	205	205	205
			6,35	0,250	16,90	140	163	193	205	205	205	205	205
			7,14	0,281	18,87	157	184	205	205	205	205	205	205
			7,92	0,312	20,78	175	190	205	205	205	205	205	205
			8,56	0,337	22,32	189	190	205	205	205	205	205	205
5	5,563	Ø141,3	2,77	0,109	9,46	49	58	68	75	85	92	98	106
			3,18	0,125	10,83	57	66	78	86	97	105	112	122
			3,40	0,134	11,56	61	71	84	92	104	113	120	130
			3,96	0,156	13,41	71	82	98	108	121	131	140	151
			4,78	0,188	16,09	85	99	118	130	146	158	168	183
			5,56	0,219	18,61	99	116	137	151	170	184	196	205
			6,55	0,258	21,77	117	136	161	178	200	205	205	205
			7,14	0,281	23,62	127	149	176	194	205	205	205	205
			7,92	0,312	26,05	141	165	195	205	205	205	205	205
			8,74	0,344	28,57	156	182	205	205	205	205	205	205
			9,53	0,375	30,97	170	190	205	205	205	205	205	205
6	6,625	Ø168,3	2,77	0,109	11,31	41	48	72	79	89	96	102	111
			3,18	0,125	12,95	48	56	82	91	102	111	118	128
			3,40	0,134	13,83	51	59	88	97	109	118	126	136
			3,58	0,141	14,54	54	63	93	102	115	124	132	144
			3,96	0,156	16,05	59	69	102	113	127	138	146	159
			4,37	0,172	17,67	65	76	113	125	140	152	162	175
			4,78	0,188	19,27	72	84	124	136	153	166	177	192
			5,16	0,203	20,76	77	90	133	147	166	179	191	205
			5,56	0,219	22,31	83	97	144	159	178	193	205	205
			6,35	0,250	25,36	95	111	164	181	204	205	205	205
			7,11	0,280	28,26	106	124	184	203	205	205	205	205
			7,92	0,312	31,32	119	138	205	205	205	205	205	205
			8,74	0,344	34,39	131	153	205	205	205	205	205	205
			9,53	0,375	37,31	143	166	205	205	205	205	205	205
			10,97	0,432	42,56	164	190	205	205	205	205	205	205
			12,70	0,500	48,73	190	190	205	205	205	205	205	205
8	8,625	Ø219,1	3,18	0,125	16,93	37	43	63	70	78	85	90	98
			3,76	0,148	19,97	43	50	75	82	93	100	107	116

Outside Diameter			Wall Thickness		Mass Per Unit Length	Test Pressure (bar)							
NPS	(inch)	(mm)	(mm)	(inch)	(kg/m)	A	B	X42	X46	X52	X56	X60	X65
8	8,625	Ø219,1	3,96	0,156	21,01	46	53	79	87	98	106	113	122
			4,78	0,188	25,26	55	64	95	105	118	128	136	147
			5,16	0,203	27,22	59	69	102	113	127	138	147	159
			5,56	0,219	29,28	64	75	110	122	137	148	158	171
			6,35	0,250	33,31	73	85	126	139	157	170	180	196
			7,04	0,277	36,81	81	94	140	154	174	188	200	205
			7,92	0,312	41,24	91	106	157	174	195	205	205	205
			8,18	0,322	42,55	94	110	162	179	202	205	205	205
			8,74	0,344	45,34	101	117	174	191	205	205	205	205
			9,53	0,375	49,25	110	128	189	205	205	205	205	205
			10,31	0,406	53,08	119	138	205	205	205	205	205	205
			11,13	0,438	57,08	128	149	205	205	205	205	205	205
			12,70	0,500	64,64	146	170	205	205	205	205	205	205
10	10,750	Ø273,0	3,96	0,156	26,27	37	43	72	79	89	96	102	111
			4,19	0,165	27,77	39	45	76	83	94	102	108	117
			4,78	0,188	31,62	44	51	86	95	107	116	124	134
			5,16	0,203	34,08	48	56	93	103	116	125	133	145
			5,56	0,219	36,67	51	60	100	111	125	135	144	156
			6,35	0,250	41,75	59	68	115	127	142	154	164	178
			7,09	0,279	46,49	65	76	128	141	159	172	183	199
			7,80	0,307	51,01	72	84	141	155	175	189	202	205
			8,74	0,344	56,96	81	94	158	174	196	205	205	205
			9,27	0,365	60,29	86	100	167	185	205	205	205	205
			11,13	0,438	71,87	103	120	201	205	205	205	205	205
			12,70	0,500	81,52	117	137	205	205	205	205	205	205
12	12,750	Ø323,9	3,96	0,156	31,24	31	36	60	67	75	81	86	94
			4,37	0,172	34,43	34	40	67	73	83	89	95	103
			4,57	0,180	35,99	36	41	70	77	86	94	100	108
			4,78	0,188	37,62	37	43	73	80	90	98	104	113
			5,16	0,203	40,56	40	47	79	87	97	106	112	122
			5,56	0,219	43,65	43	50	85	93	105	114	121	131
			6,35	0,250	49,73	49	58	97	107	120	130	138	150
			7,14	0,281	55,77	56	65	109	120	135	146	156	169
			7,92	0,312	61,71	62	72	121	133	150	162	173	187
			8,38	0,330	65,20	65	76	128	141	158	172	183	198
			8,74	0,344	67,93	68	79	133	147	165	179	190	205
			9,53	0,375	73,88	74	87	145	160	180	195	205	205
			10,31	0,406	79,73	80	94	157	173	195	205	205	205
			11,13	0,438	85,84	87	101	169	187	205	205	205	205
			12,70	0,500	97,46	99	115	193	205	205	205	205	205

Production Range For Casing Pipe

Outside Diameter		Wall Thickness		Mass Per Unit Length	Test Pressure (bar)		
(mm)	(inch)	(inch)	(mm)	(kg/m)	H40	J55	K55
4 1/2	Ø114,3	0,205	5,21	14,38	201	276	276
		0,224	5,69	15,73	220	302	302
		0,250	6,35	17,38	245	337	337
		0,290	7,37	19,87	285	391	391
		0,337	8,56	22,69	331	454	454
5	Ø127,0	0,220	5,59	17,19	194	267	267
		0,253	6,43	19,69	224	307	307
		0,296	7,52	22,69	261	359	359
		0,362	9,19	27,19	320	439	439
5 1/2	Ø139,7	0,244	6,20	20,91	196	269	269
		0,275	6,98	23,48	221	303	303
		0,304	7,72	25,72	244	335	335
		0,361	9,17	30,05	290	398	398
6 5/8	Ø168,28	0,288	7,32	29,76	192	264	264
		0,352	8,94	35,72	235	322	322
		0,417	10,59	41,67	278	382	382
		0,475	12,06	47,62	316	435	435
7	Ø177,8	0,231	5,87	25,60	146	200	200
		0,272	6,91	29,91	172	236	236
		0,317	8,05	34,67	200	275	275
		0,362	9,19	39,14	228	313	313
		0,408	10,36	43,60	257	353	353
		0,453	11,51	47,92	286	393	393
		0,498	12,65	52,09	314	431	431
7 5/8	Ø193,68	0,300	7,62	35,72	174	239	239
		0,328	8,33	39,29	190	261	261
		0,375	9,52	44,20	217	298	298
		0,430	10,92	50,15	249	342	342
		0,500	12,70	58,04	290	398	398
8 5/8	Ø219,08	0,264	6,71	35,72	135	186	186
		0,304	7,72	41,67	156	214	214
		0,352	8,94	47,62	180	247	247
		0,400	10,16	53,57	205	281	281
		0,450	11,43	59,53	230	316	316
		0,500	12,70	65,48	256	351	351
9 5/8	Ø244,48	0,312	7,92	48,07	143	196	196
		0,352	8,94	53,57	161	222	222
		0,395	10,03	59,53	181	249	249
		0,435	11,05	64,73	200	274	274
		0,472	11,99	69,94	217	297	297
10 3/4	Ø273,05	0,279	7,09	48,74	86	118	118
		0,350	8,89	60,27	108	148	148
		0,400	10,16	67,71	123	169	169
		0,450	11,43	75,90	139	190	190
		0,495	12,57	82,59	152	209	209
13 3/8	Ø339,72	0,330	8,38	71,43	82	112	112
		0,380	9,65	81,10	94	129	129
		0,430	10,92	90,78	106	146	146
		0,480	12,19	101,19	119	163	163
		0,514	13,06	107,15	127	175	175

Length Range

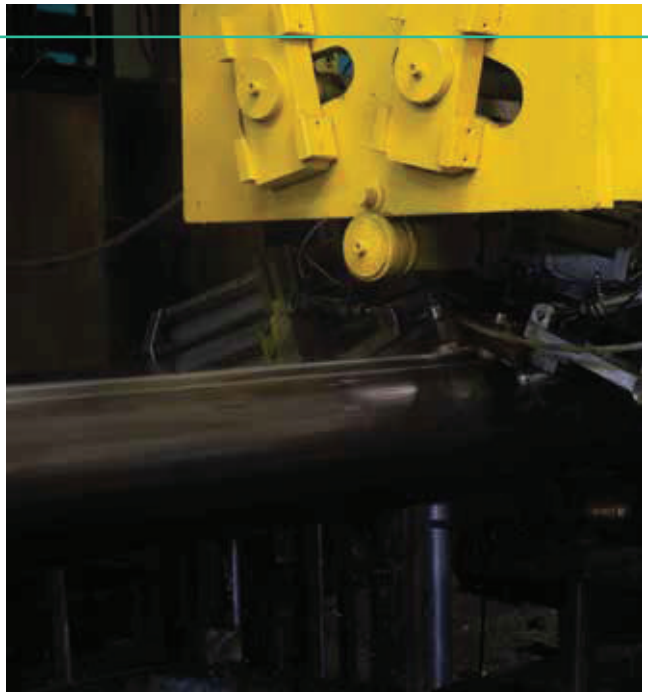
5,0 - 14,0 m

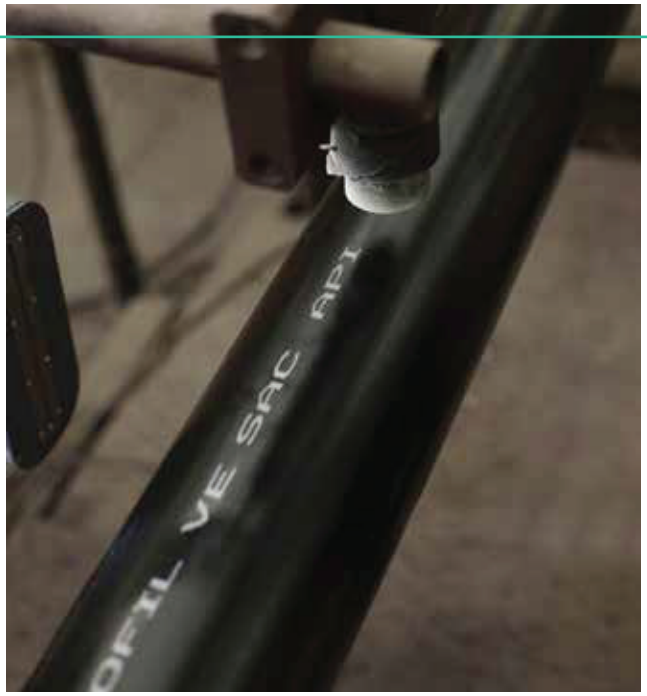
Production Range For Tubing Pipe

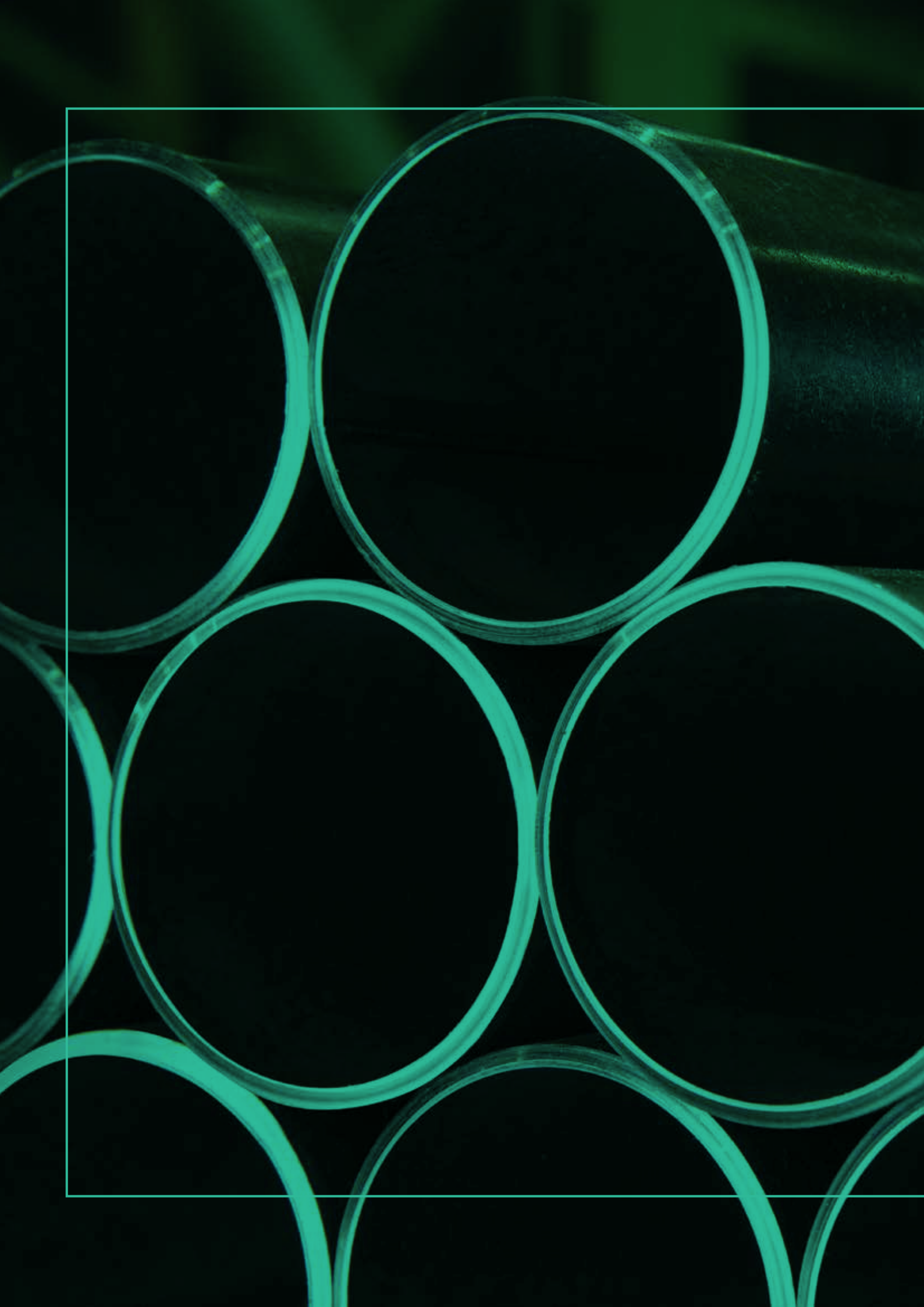
Outside Diameter		Wall Thickness		Mass Per Unit Length	Test Pressure (bar)		
(mm)	(inch)	(inch)	(mm)	(kg/m)	H40	J55	K55
1.050	Ø26,67	0,113	2,87	1,70	475	-	-
1.315	Ø33,4	0,133	3,38	2,53	447	-	-
1.660	Ø42,16	0,125	3,18	3,06	333	457	457
		0,140	3,56	3,42	373	-	-
1.900	Ø48,26	0,125	3,18	3,54	291	400	400
		0,145	3,68	4,09	337	462	462
		0,200	5,08	5,43	465	-	-
2 3/8	Ø60,32	0,167	4,24	5,95	310	426	426
		0,190	4,83	6,85	354	486	486
		0,254	6,45	8,63	472	-	-
2 7/8	Ø73,02	0,217	5,51	9,52	333	458	458
		0,276	7,01	11,61	424	-	-
		0,308	7,82	12,80	473	-	-
3 1/2	Ø88,9	0,216	5,49	11,46	273	374	374
		0,254	6,45	13,69	320	440	440
		0,289	7,34	15,18	365	-	-
4	Ø101,6	0,226	5,74	14,14	249	343	343
		0,262	6,65	15,57	289	397	397
		0,330	8,38	19,64	364	500	500
4 1/2	Ø114,3	0,271	6,88	18,75	266	365	365
		0,337	8,56	22,62	331	454	454
		0,380	9,65	25,30	373	-	-

Length Range

4,5 - 8,5 m 5,0 - 14,0 m







COATING AND APPLICATIONS

Galvanizing
Polyethylene and Polypropylene Coating
Powder Epoxy Coating
Internal Epoxy Coating
Primer Coating
Heat Treatment

GALVANIZING

HOT DIP GALVANIZING

Galvanizing Class	
Class 1	Si =max %0,03 and %P*2,5 + %Si=max 0,090
Class 3	Si =% 0,14 - %0,25 and %P =max 0,035

Galvanizing Standards
EN 10240, ASTM A53

EN 10240 COATING QUALITY

Minimum Coating Thickness for Inside	Coating Quality (Micron)		
	A1	A2	A3
	55	55	45

Minimum Coating Thickness for Outside	Coating Quality (Micron)		
	B1	B2	B3
	55	40	25

PRE GALVANIZING

Galvanized Sheet Standard	Steel Grade
ASTM A653	CS TYPE B
EN 10346	DX51D+Z
EN 10346	DX52D+Z
EN 10346	DX53D+Z
EN 10346	DX54D+Z
EN 10346	DX56D+Z
EN 10346	HCT590X
EN 10346	HX260LAD+Z
EN 10346	HX300LAD+Z
EN 10346	HX340LAD+Z
EN 10346	HX380LAD+Z
EN 10346	HX420LAD+Z
EN 10346	S220GD+Z
EN 10346	S250GD+Z
EN 10346	S280GD+Z
EN 10346	S320GD+Z
EN 10346	S350GD+Z
EN 10346	S420GD+Z

Galvanized steel sheet coating thickness 40-350 gr/m^2

TESTS

CHEMICAL ANALYSIS OF ZINC
✓ Chemical Analysis

COATING THICKNESS TESTS
✓ Stripping Test
✓ Magnetic Method
✓ Copper Sulphate Test

COATING ADHERENCE CONTROL
✓ Flattening Test
✓ Bending Test

POLYETHYLENE AND POLYPROPYLENE COATING

COATING STANDARDS

DIN 30670, ISO 21809-1

3-LAYER COATING

Layer 1	Powder Epoxy
Layer 2	Adhesive
Layer 3	Polyethylene or Polypropylene

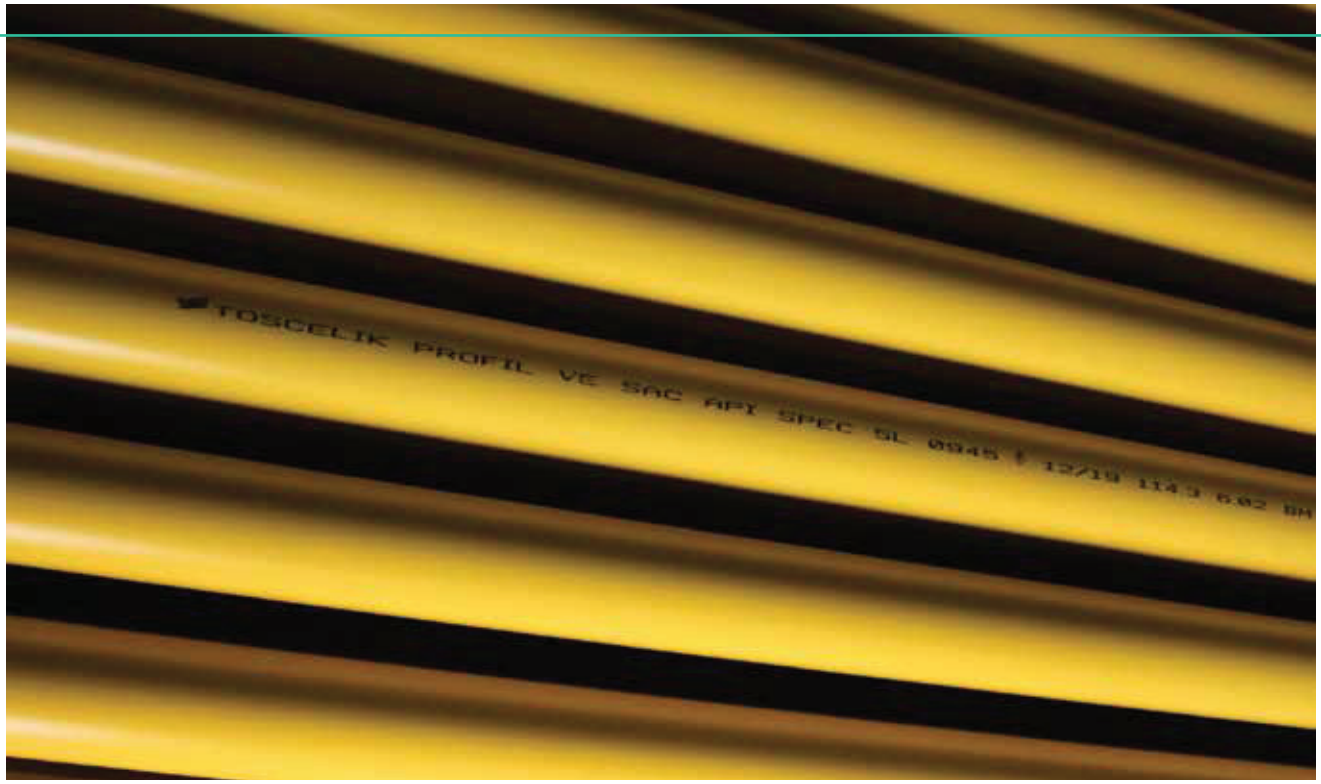
TESTS

SURFACE CONTROL AFTER BLASTING

- ✓ Surface Quality Visual Control
- ✓ Dust Content Test
- ✓ Roughness Test
- ✓ Measurement of Weather Conditions Test
- ✓ Measurement of Salt Contaminant Test

3-LAYER POLYETHYLENE AND POLYPROPYLENE COATING TESTS

- ✓ Measurement of Coating Thickness
- ✓ Holiday Test
- ✓ Indentation Hardness Test
- ✓ Percentage Elongation Test
- ✓ Peel Strength Test
- ✓ Impact Strength Test
- ✓ Electrical Resistivity Test
- ✓ Cathodic Disbonding Test
- ✓ Brittleness Test
- ✓ MFR Test
- ✓ Vicat Test
- ✓ Shore D Test



POWDER EPOXY COATING

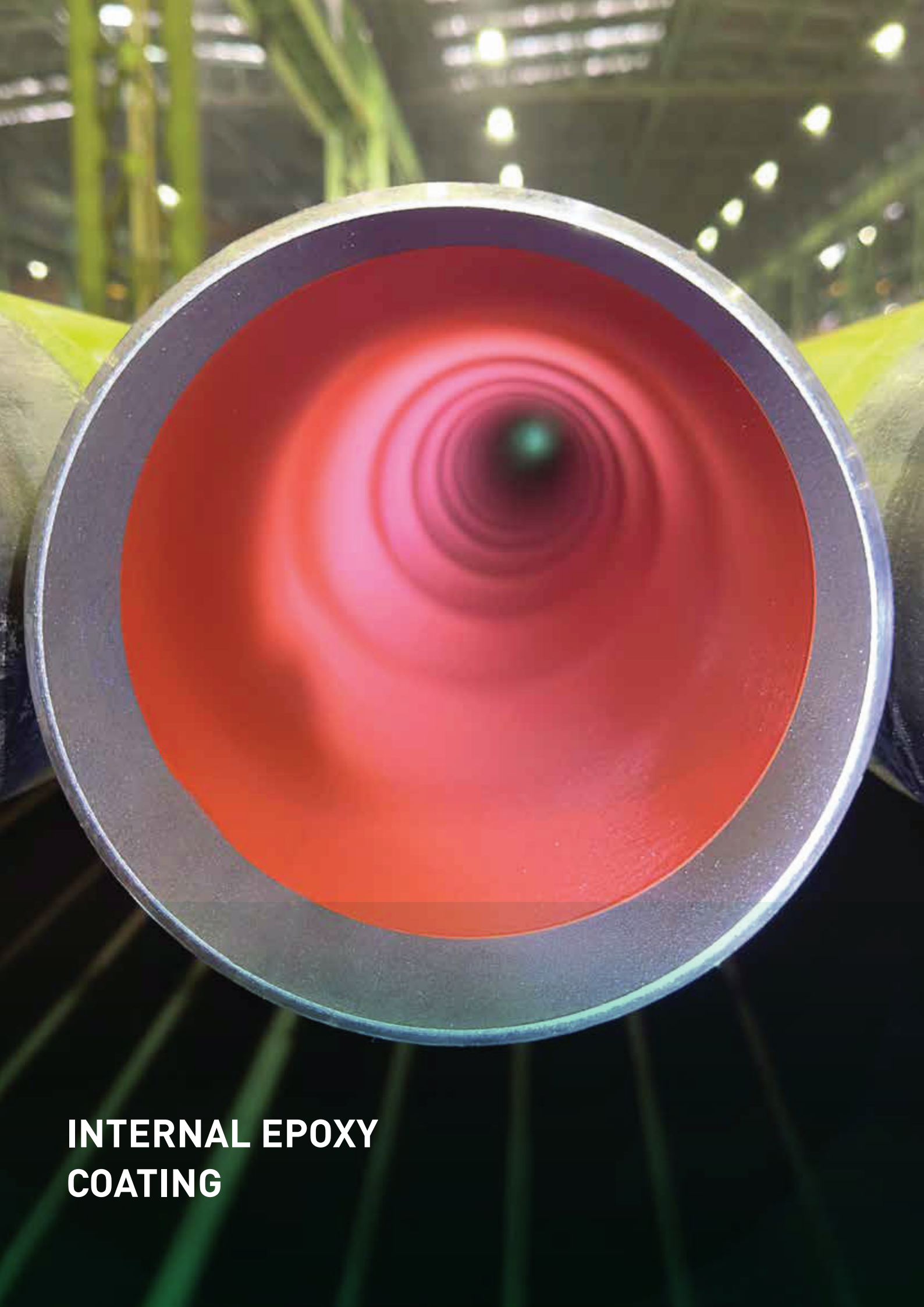
TESTS

SURFACE CONTROL AFTER BLASTING

- ✓ Surface Quality Visual Control
- ✓ Dust Content Test
- ✓ Roughness Test
- ✓ Measurement of Weather Conditions Test
- ✓ Measurement of Salt Contaminant Test

POWDER EPOXY COATING TESTS

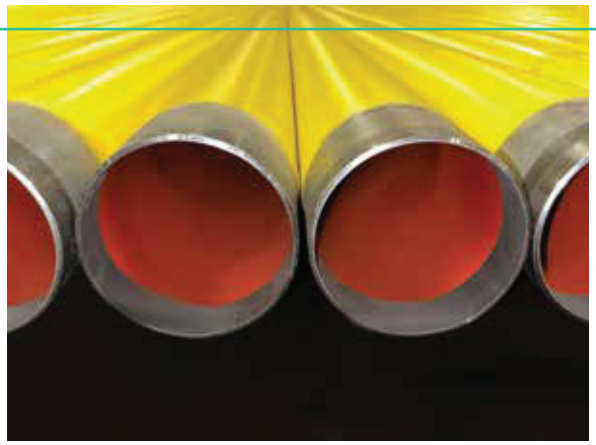
- ✓ Measurement of Coating Thickness
- ✓ Cross-Cut Test
- ✓ Curing Test



INTERNAL EPOXY COATING

COATING STANDARD

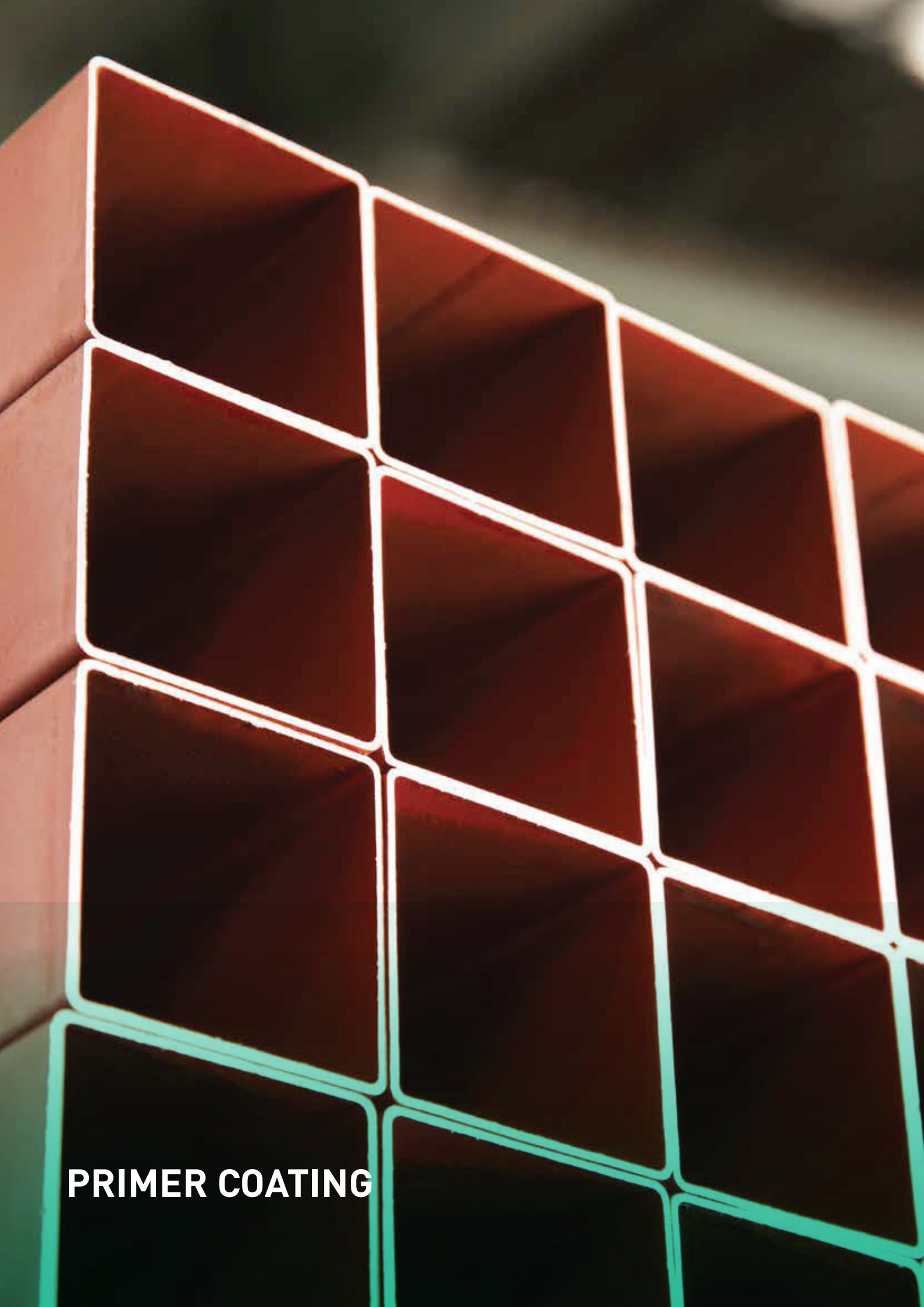
AWWA C210, API RP 5L2



TESTS

EPOXY COATING TESTS

- ✓ Measurement of Coating Thickness
- ✓ Holiday Test
- ✓ Cross-Cut Bond Strength Test
- ✓ Curing Test
- ✓ Pinhole Test
- ✓ Water Test
- ✓ Disbonding Test
- ✓ Buchholz Hardness Test
- ✓ Conical Mandrel Bending Test



PRIMER COATING

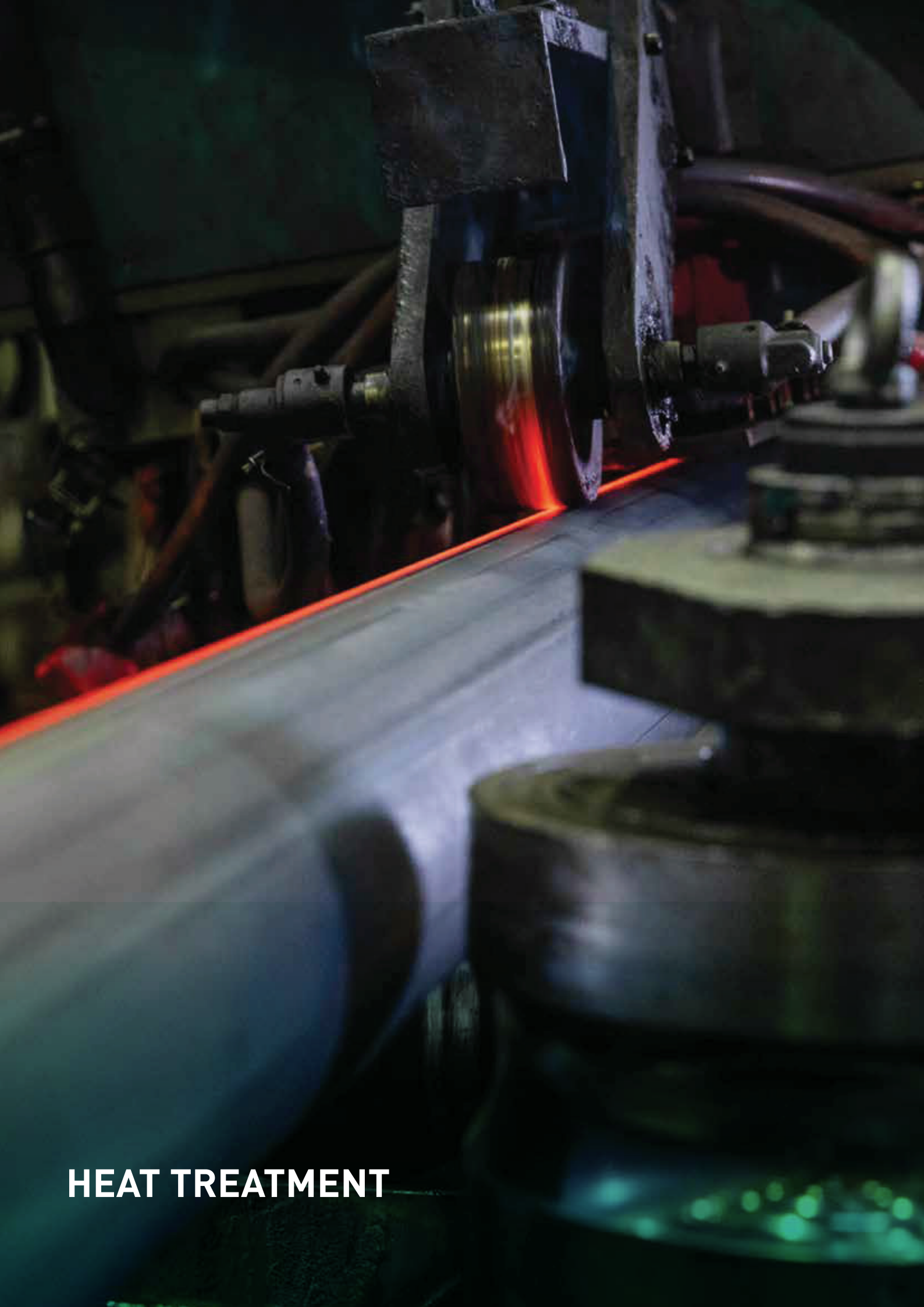
TESTS

MEASUREMENT OF COATING THICKNESS

✓ Magnetic Method

COATING ADHERENCE CONTROL

✓ Cross-Cut Test



HEAT TREATMENT

HEAT TREATMENT TYPE

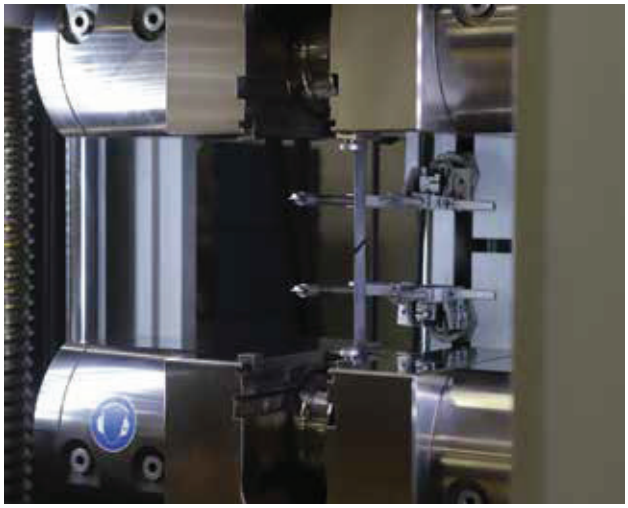
Stress Relieving

Normalizing

HEAT TREATMENT ZONE

Weld Seam + HAZ (Heat Affected Zone)

Full Body



As Tosyalı, our vision is to contribute to building a sustainable world via ensuring environmentally production in our facilities, with the help of technology, innovation and renewable energy usage. Within our responsible ecosystem management approach, we produce green steel products in every category of the steel. We produce **less carbon emission, consume less water, focus on renewable energy resources, produce with highest efficiency and recycle all our wastes.**

We believe that a sustainable world is possible with the green transformation of the steel industry.

Fuat Tosyalı
Chairman of the Board
of Directors of Tosyalı Holding

Tosyalı proudly presents a new umbrella brand to represent its green steel vision in every touch point of its operations.

Tosyalı V-Green

This is not just a brand, it is also the strongest indicator of sustainability actions those have been taking place for many years at Tosyalı and will continue by highest determination.

In all our production facilities, we focus on new generation green steel production and under the umbrella of V-Green, we introduce environment friendly products for our suppliers.

How do we make this vision live in Tosyalı?

We produce green steel with the help of;

- technology usage,
- innovation,
- renewable energy resources,
- recycling in every touch point production and
- operating with highest efficiency.

We aim to be the world's leading sustainable green steel producer with the lowest carbon footprint.

"V" are ready to be "Green"!

V-Green.
Vision Green.

TOSYALI V-GREEN® VISIONGREEN

OUR CERTIFICATES

CERTIFICATES OF MANAGEMENT SYSTEM

- ✓ ISO 9001 Quality Management System Certificate
- ✓ API Spec Q1 Quality Management System Certificate
- ✓ ISO 14001 Environmental Management System Certificate
- ✓ ISO 45001 Occupational Health and Safety Management System Certificate
- ✓ ISO 10002 Handling Complaints Management System Certificate
- ✓ ISO 50001 Energy Management System Certificate

CERTIFICATES OF PRODUCTS

- ✓ CE Certificates (EN 10219, EN 10255, EN 10210)
- ✓ TSE Certificates of Conformity (EN 10219, EN 10255, EN 10217-1, EN 10217-2, TS 8481 EN 39, ISO 3183)
- ✓ API Spec 5L and API Spec 5CT Monogram Certificates
- ✓ UKCA Certificate of Conformity (EN 10219, EN 10217-1, EN 10210)
- ✓ Standards Institute of Israel Certificates of Conformity (SII 530, SII 1458-1, SII 4314, SII 10255)
- ✓ PED Certificate of Conformity (EN 10217-1, EN 10217-2)
- ✓ Epoxy Coating Certificate of Conformity (AWWA C210)
- ✓ PE Coating Certificate of Conformity (DIN 30670, EN ISO 21809-1)
- ✓ FM Approval Fire Protection Pipes Monogram Certificate (ASTM A53, ASTM A795, EN 10255)
- ✓ UL Fire Protection Pipes Monogram Certificate (ASTM A53, ASTM A795)
- ✓ EN 10224 Certificate of Conformity
- ✓ Poland EN 10217-1 Certificate of Conformity
- ✓ DVGW (German Technical and Scientific Association for Gas and Water) Approval Galvanized Drinking Water Pipes (DVGW 7101)
- ✓ KIWA EN 10255 Certificate of Conformity (for Water Pipes)
- ✓ GASTAC QA EN 10255 Certificate of Conformity (for Gas Pipes)
- ✓ ASME B31.12 Certificate of Conformity

EPD CERTIFICATES

(Environmental Product Declaration)

- ✓ Bare ERW Steel Pipes
- ✓ Hot Dip Galvanized ERW Steel Pipes
- ✓ Powder Epoxy Coated ERW Steel Pipes
- ✓ Shop Primer Painted ERW Steel Pipes
- ✓ 3-Layer Polyethylene & Liquid Epoxy Coated
- ✓ 3-Layer Polyethylene Coated ERW Steel Pipes
- ✓ 3-Layer Polypropylene & Liquid Epoxy Coated
- ✓ 3-Layer Polypropylene Coated ERW Steel Pipes
- ✓ Bare Steel ERW Hollow Sections
- ✓ Shop Primer Painted Steel ERW Hollow Sections
- ✓ Bare ERW Steel Pipes for Natural Gas
- ✓ Coated ERW Steel Pipes for Natural Gas

GOST-R CERTIFICATE OF CONFORMITY

- ✓ Natural Gas Pipes
- ✓ Water and Gas Pipe
- ✓ Industrial Pipes
- ✓ Scaffolding Pipes
- ✓ Casing Pipes
- ✓ Galvanized Steel Pipes
- ✓ Galvanized Steel Hollow Sections
- ✓ Electric Welded Steel Pipes

DOP-DECLARATION OF PERFORMANCE

- ✓ UKCA EN 10219-1 Declaration of Performance
- ✓ UKCA EN 10210-1 Declaration of Performance
- ✓ EN 10219-1 Declaration of Performance
- ✓ EN 10210-1 Declaration of Performance
- ✓ EN 10255 Declaration of Performance
- ✓ EN 10224 Declaration of Performance
- ✓ EN 10217-1 EU Declaration of Conformity
- ✓ EN 10217-2 EU Declaration of Conformity
- ✓ POLAND EN 10217-1 Declaration of Performance

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