

LINE PIPE PRODUCT CATALOGUE

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 **BORUSAN
MANNESMANN**

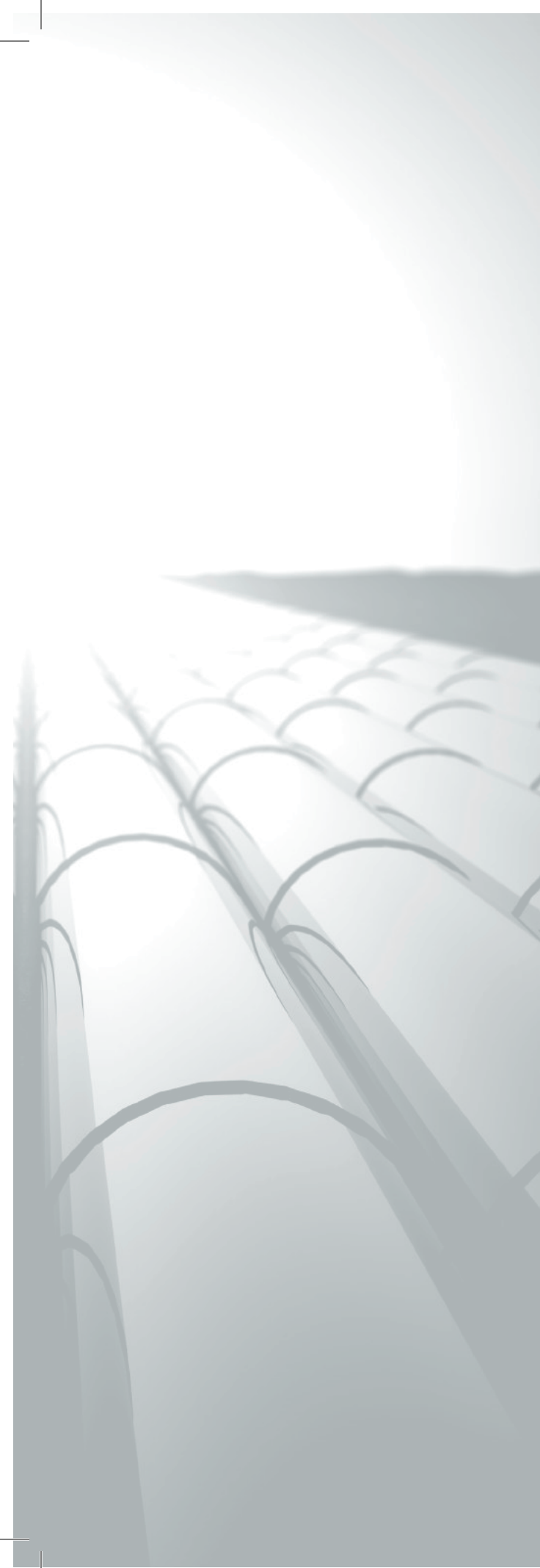


PIPE THAT POWERS THE WORLD





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BORUSAN GROUP AT A GLANCE

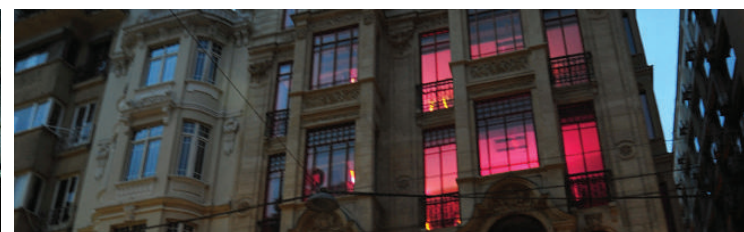
In 4 major business areas, with 9,500 dedicated employees...

Borusan Group has been among the pioneers of industrialization and corporate governance in Turkey throughout its 70 years of history. The group currently operates in four major business areas including steel, distributorship, logistics and energy.

In 2006 Borusan Group signed the United Nations' Global Compact Policy and it supports, adheres by the principles of "good corporate governance" and "sustainability" as a prerequisite of long-term and permanent components of success.



Steel		Distributorship		Logistics	Energy
The Pipe Group	The Flat Steel Group	The Earth Moving Equipments Group	The Automotive Group	Borusan Logistics Borusan Logistics International	Borusan EnBW Energy
Borusan Mannesmann Borusan Engineering Borusan İstikbal Trading	Borçelik Kerim Çelik	Borusan CAT 	Borusan Oto & Otomotiv Supsan Manheim Turkey 		
Partners					
 A Member of the Salzgitter Group			Giwa Holding GmbH 		



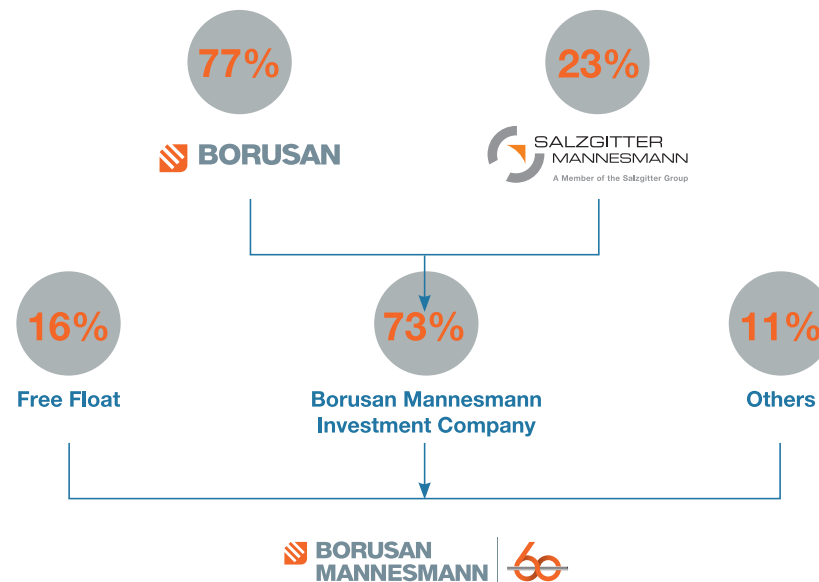
BORUSAN MANNESMANN

- Flagship of Borusan Group with 60 years of pipe manufacturing experience.
- Total annual capacity of 1.4 mn tons.
- Workforce of 1,700 people.
- 20 years of Contract Management competency
- Has its own port (Borusan Port) adjacent to the mill, which brings operational flexibility in terms of logistics inbound and outbound.
- Sole 24.5 m single seam API/ISO/EN large diameter line pipe producer in Europe
- Operates with 5 mills, 3 in Turkey (1 HSAW, 2 ERW), 1 in Italy (ERW), 1 in USA (ERW)



Corporate Structure:

Borusan Group and Europe's leading steel and technology company; Salzgitter Mannesmann GmbH, merged their welded steel pipe investments in Turkey and named that partnership; "Borusan Mannesmann Boru Yatırım Holding" in 1998. The company has 73% shares of Borusan Mannesmann Boru San. ve Tic. A.Ş.



Borusan Campus

**Cold
Rolling Mill**

**ERW
Pipe Mill**





Borusan Port

HSAW
Pipe Mill

LINE PIPE PRODUCTION SCOPE

Gemlik 2 Step HSAW Mill

Process	2 Step HSAW
OD	20" - 64" / 508 mm - 1,626 mm
Wall Thickness	Up to 1" / 25.4 mm
Length	80.4' / 24.5 m (Single length)
Grade including	X80 / L555

Gemlik Single Step HSAW Mill

Process	Conventional
OD	28" - 120" / 711 mm - 3,048 mm
Wall Thickness	Up to 1" / 25.4 mm
Length	60' / 18.3 m (50.0 m for pilling)
Grade including	X80 / L555

Gemlik ERW Mill

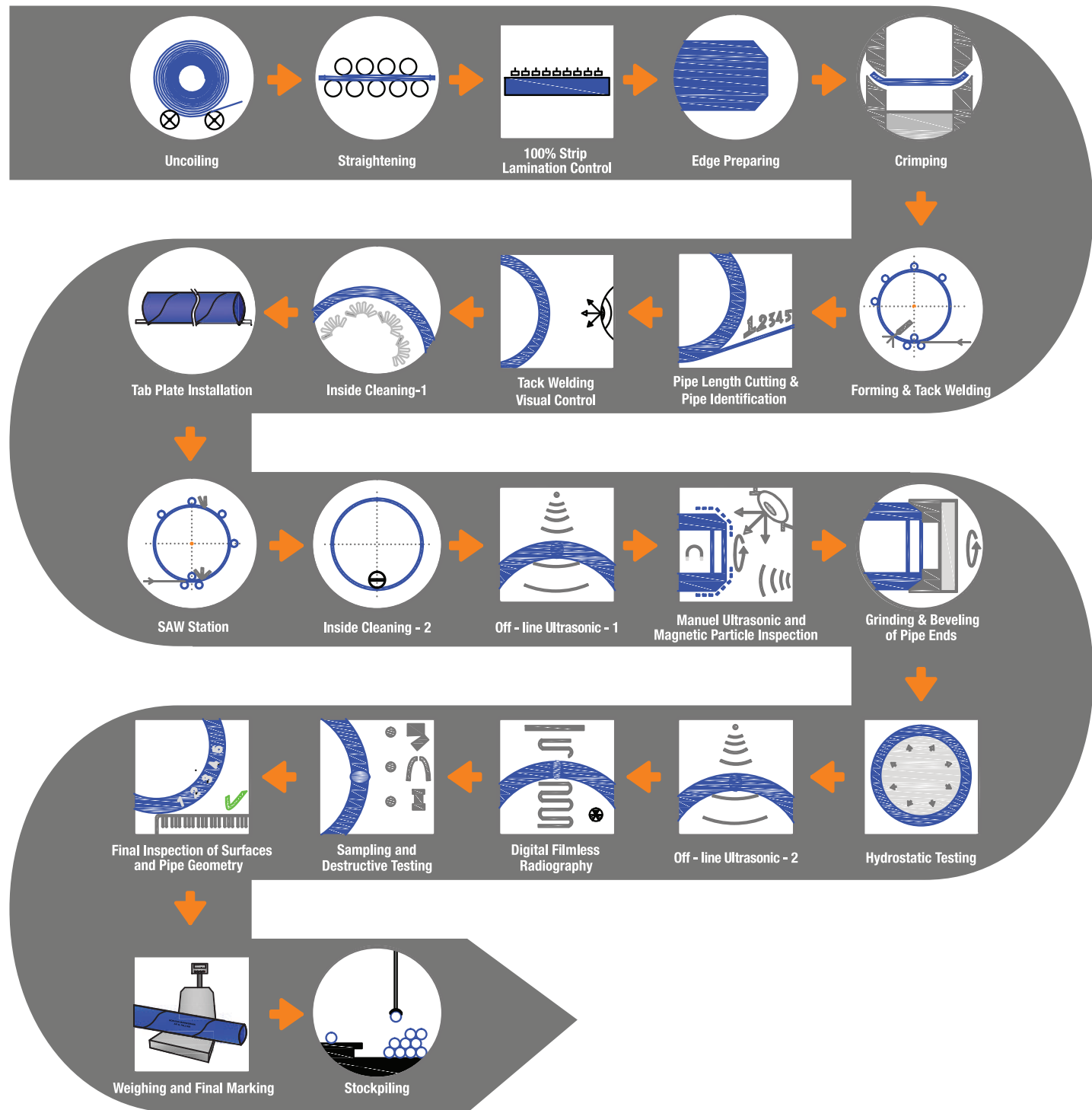
Process	HFI - ERW
OD	1/2" - 13 3/8" / 21.3 mm - 339.7 mm
Wall Thickness	Up to 0.5" / 12.7 mm
Length	60' / 18.3 m
Grade including	X70 / L485

OD&ID Coating

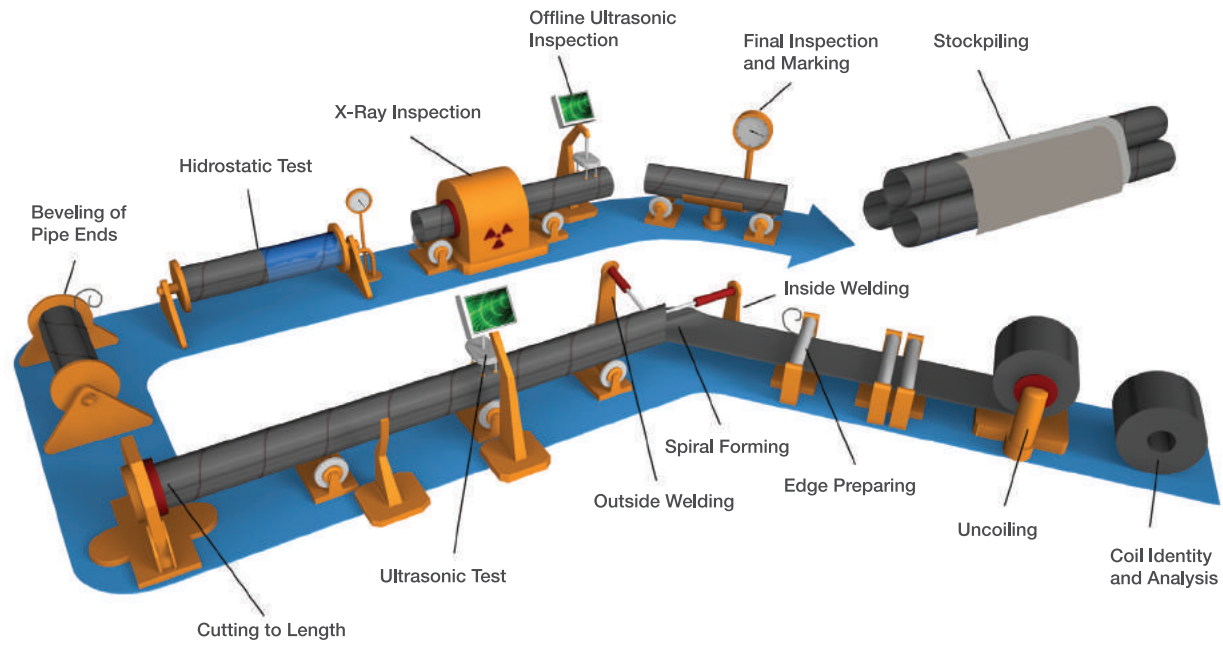
Type of Coating	OD	ID	General Application Area	
			Oil & Gas Line Pipe	Water Line Pipe
Dual-Layer FBE (ARO)	●		●	●
FBE	●		●	●
Epoxy (liquid)	●	●	●	●
Polyethylene (PE)	●		●	●
Polypropylene (PP)	●		●	●
Cement Mortar		●		●

2 Step Helical Submerged Arc Welded Pipe

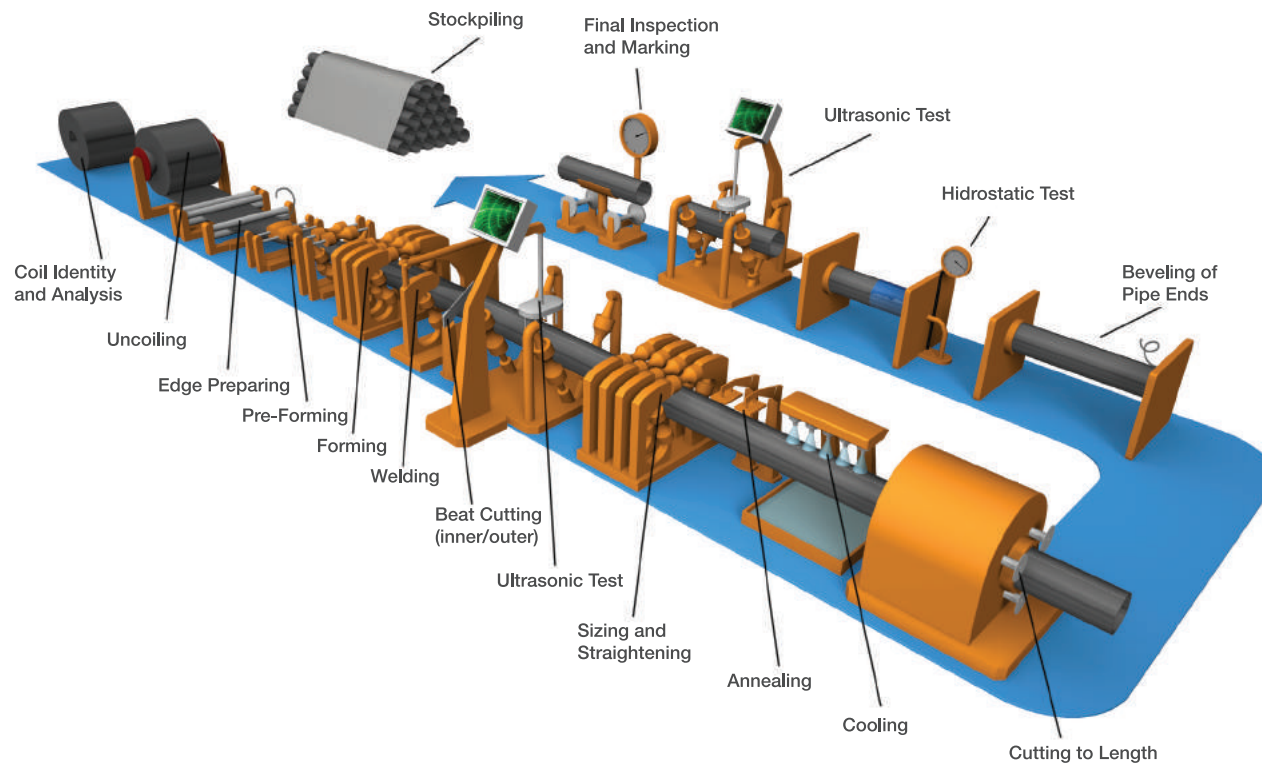
□ Quality Steps ○ Production Steps



Single Step Helical Submerged Arc Welded Pipe



Electric Resistance Welded Pipe



PRODUCTION RANGE



HSAW Line Pipes

OD	Wall Thickness (mm & inch)																								
	mm	4.78	5.16	5.56	6.35	7.14	7.92	8.74	9.52	10.31	11.13	11.91	12.70	13.49	14.27	15.00	16.66	17.48	18.26	19.05	20.62	22.23	23.83	25.40	
mm	inch	0.188	0.203	0.219	0.250	0.281	0.312	0.344	0.375	0.406	0.438	0.469	0.500	0.531	0.562	0.591	0.656	0.688	0.719	0.750	0.812	0.875	0.938	1	
508	20																								
559	22																								
610	24																								
660	26																								
711	28																								
762	30																								
813	32																								
864	34																								
914	36																								
965	38																								
1,016	40																								
1,067	42																								
1,118	44																								
1,168	46																								
1,219	48																								
1,270	50																								
1,321	52																								
1,372	54																								
1,422	56																								
1,524	60																								
1,626	64																								
1,676	66																								
1,727	68																								
1,829	72																								
2,032	80																								
2,083	82																								
2,235	88																								
2,540	100																								
2,794	110																								
3,048	120																								

up to 50.0 meters
 up to 24.5 meters
 Min. length 8 meters

ERW Line Pipes

OD	Wall Thickness (mm & inch)																								
	mm	2.8	3.0	3.2	3.6	3.68	3.7	4.0	4.5	5.1	5.2	6	6.6	7	7.1	8.1	8.4	8.6	9.0	9.5	10.0	11	12	12.7	
mm	inch	0.109	0.113	0.133	0.140	0.145	0.147	0.154	0.179	0.200	0.203	0.237	0.258	0.277	0.280	0.318	0.331	0.337	0.354	0.375	0.394	0.432	0.472	0.500	
21.3	1/2																								
26.9	3/4																								
33.7	1																								
42.4	1 1/4																								
48.3	1 1/2																								
60.3	2 3/8																								
73	2 7/8																								
88.9	3 1/2																								
114.3	4 1/2																								
141.3	5 9/16																								
168.3	6 5/8																								
219.1	8 5/8																								
273.1	10 3/4																								
323.9	12 3/4																								
339.7	13 3/8																								



PRODUCTION STANDARDS & QUALITY SYSTEMS CERTIFICATES

Oil & Gas Line Pipes

API 5L/ISO 3183	: Requirements of PSL 1 & PSL 2 (HSAW & ERW)
Annex G	: Resistance to ductile fracture propagation
Annex H	: For Sour Service
EN 10208	: Requirements of Part 1 & Part 2 (HSAW & ERW)
GOST 20295	: Requirements of Type 1, 2 and 3 (HSAW)

Water Line Pipes

With protective OD and/or ID coating, plain, beveled or sleeve welded joints.

EN 10217-1	: HSAW & ERW
EN 10224	: HSAW & ERW
AWWA C 200	: HSAW & ERW
BS 534	: HSAW & ERW

General Purpose Pipes

EN 10217-3	: HSAW - Alloy, fine grain Service condition: max 400°C, min -50°C
EN 10217-5	: HSAW - Alloy or non-alloy, Service condition: max 400°C,
EN 10217-6	: HSAW - Non-alloy, Service condition: - 40°C
ASTM A139	: HSAW

Piling & Construction Pipes

ASTM A 252	: HSAW & ERW
EN 10219	: HSAW & ERW
EN 10210	: HSAW & ERW

Pipe Length: any desired length between 8 - 24.5 m

These are our general production standards and specifications.

We can meet other production standards and specifications upon request.

Certificates

ISO 9001	UNE	API 5L	DNV Certified
ISO 14001	PED 97/23 EC	API 5CT	DVGW 7101-2
ISO 10002	B-MARK	API QR	DIN 30670
ISO 29001	NSF Certified	API Q1	EN 10208-2
ISO 31000	FM Certified	AD 2000HP0	EN 10217-1
EN ISO/IEC 17025	UL/CUL Listed	AD 2000 W0	EN ISO 3834-2
OHSAS 18001	CE Certified	ÜHP	ISO 3183





**PROTECTIVE
OD&ID COATING**

Abrasion Resistant Overlay (ARO) OD Coating: ARO provides a perfect abrasion and impact resistance, also maintains an excellent protection for oil & gas line pipes. (API 5L7, CSA Z 245-20, NACE RP 0394, AWWA C213)

FBE (Fusion Bonded Epoxy) OD Coating: Fusion bonded powder epoxy coating provides high protection of oil & gas line pipes. (API 5L7, CSA Z 245-20, NACE RP 0394, AWWA C213)

Polyethylene (PE) OD Coating: Excellent protection of buried line pipes. High mechanical strength and corrosion resistance are achieved by 3-layer coating method. (DIN 30670, TS 5139, NF A 49-710, UNI 9099, EN ISO 21809-1)

Polypropylene (PP) OD Coating: Excellent protection of buried line pipes. High mechanical strength and corrosion resistance are achieved by 3-layer coating method. (DIN 30678, NF A 49-711, EN ISO 21809-1)

Flow Efficiency ID Coating: For gas transmission lines, flow-coat ID epoxy coating is applied in order to reduce pipe wall roughness thus increasing throughput. (API RP 5L2)

Solvent Free Epoxy (SFE) ID Coating: Various epoxy coatings applied internally are enabling hygienic inner surface for potable water transportation. (AWWA C 210)



JUST IN TIME ON-SITE DELIVERY







INTEGRATED LOGISTICS EXPERIENCES

The care devoted to proper storage and shipment of products is part of Borusan Mannesmann's commitment to customer satisfaction.

Borusan Mannesmann plants and Borusan Port in Turkey are located on the eastern coast of Marmara Sea in the vicinity of many piers that are expert in pipe loading equipped by mobile cranes, forklifts and other machinery necessary for international shipment.

Borusan Mannesmann is able to deliver with high versatility for every international project from Saharan desert to Rocky mountains.

We deliver

- By railway
- By barge transportation
- By IACS class vessels (sous-palan unloading)
- By truck and trailers
- By containers

In many of our projects, we have been in charge of customs clearance, sous-palan operations, leasing and management of stockyards, on-site delivery; providing complete integrated logistics solutions to meet even the most stringent client delivery terms.



ATLANTIC SUNRISE PIPELINE PROJECT USA - 2017

Operational Highlights

Project Details

OD	: 30'' – 42'' / 762 mm – 1067 mm
Wall Thickness	: 0.344'' – 0.888'' / 8.74 mm – 22.56 mm
Total Length	: 198 miles / 318 km
Production Standard	: API 5L 45 th Edition PSL2 and Client's Specifications
Material Grade	: X70 PSL2
OD Coating	: Fusion Bonded Epoxy (FBE) + Abrasion Resistant Overlay (ARO)
ID Coating	: Flow Coat Epoxy
Project Owner	: Williams
Pipe Length	: 40 feet / 12 meters DRL - 60 feet / 18 meters TRL
Scope of Logistics	: DDP basis delivery to 4 pipe yards located in Pennsylvania / USA

Transportation Methods : Vessels & Trucks



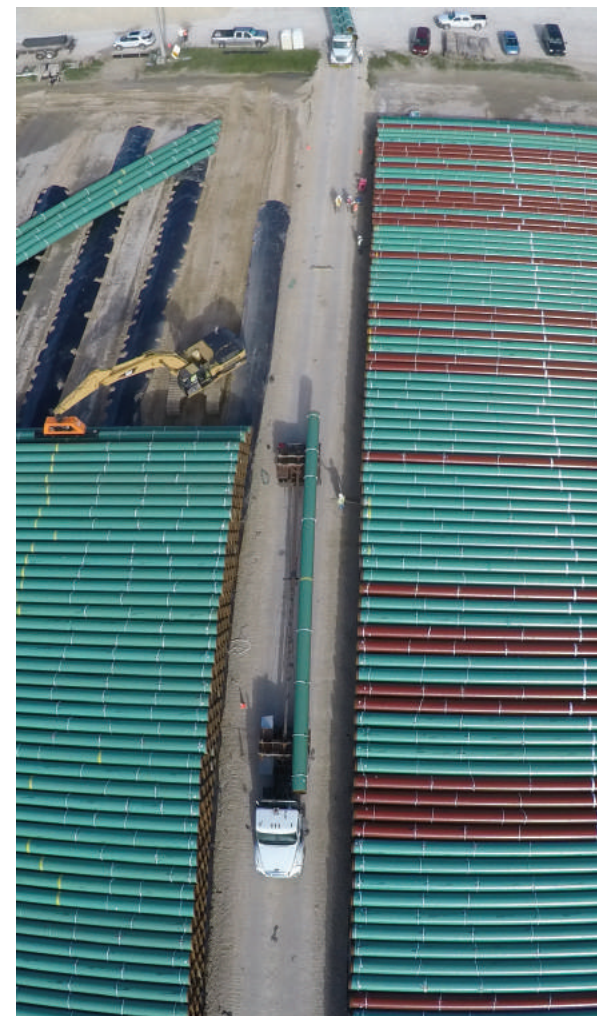
LONE STAR EXPRESS NGL PROJECT USA - 2015

Operational Highlights

Project Details

OD	: 30" / 762 mm
Wall Thickness	: 0.441" – 0.635" / 11.20 mm – 16.13 mm
Total Length	: 275 miles / 443 km
Production Standard	: API 5L 45 th Edition PSL2 and Client's Specifications
Material Grade	: X70 PSL2
OD Coating	: Fusion Bonded Epoxy (FBE) + Abrasion Resistant Overlay (ARO)
ID Coating	: Bare
Project Owner	: Energy Transfer
Pipe Length	: 80 feet / 24 meters QRL
Scope of Logistics	: DDP basis delivery to 3 pipe yards located in Texas / USA. The logistics scope includes unloading and stacking.

Transportation Methods : Vessels & Trucks





OHIO PIPELINE ENERGY NETWORK PROJECT

USA - 2014

Operational Highlights

Project Details

OD	: 30" / 762 mm
Wall Thickness	: 0.329" – 0.515" / 8.36 mm – 13.08 mm
Total Length	: 79 miles / 127 km
Production Standard	: API 5L 45 th Edition PSL2 and Client's Specifications
Material Grade	: X70 PSL2
OD Coating	: Fusion Bonded Epoxy
ID Coating	: Bare
Project Owner	: Spectra
Pipe Length	: 40 feet / 12 meters DRL
Scope of Logistics	: DDP basis delivery to 1 pipe yard located in Ohio.

Transportation Methods : Vessels & Trucks



ELBA EXPRESS EXPANSION GAS PIPELINE PROJECT

USA - 2008

Operational Highlights

Project Details

OD	: 36"-42" / 914 mm – 1067 mm
Wall Thickness	: 0.521" – 0.750" / 13.23 mm – 19.05 mm
Total Length	: 195 miles / 313 km
Production Standard	: API 5L PSL2 and Client's Specifications
Material Grade	: X70M PSL2
OD Coating	: Fusion Bonded Epoxy
ID Coating	: Bare
Project Owner	: Southern Natural Gas Pipeline Group
Pipe Length	: 80 feet / 24 meters QRL (Double Jointed)
Scope of Logistics	: DDP basis delivery to 5 pipe yards. The logistics scope includes unloading, double jointing, girth weld coating, sand berms preparations and stacking.

Transportation Methods : 22 shipments via A class vessels

On this prestigious project Borusan Mannesmann produced FBE coated 36"-42" pipes according to the client's requirements. The pipes were double jointed on site to 80 ft (24 m) pipe length. 80 ft pipes were transported with special trucks to 4 other designated pipe yards.





TRANS ANATOLIAN PIPELINE (TANAP) PROJECT TURKEY - 2017

Operational Highlights

Project Details

OD	: 48" - 56" / 1219 mm – 1422 mm
Wall Thickness	: 0.656" – 0.765" / 16.67 mm – 19.45 mm
Total Length	: 134 miles / 215 km
Production Standard	: API 5L 45 th Edition PSL2 and Client's Specifications
Material Grade	: X70 PSL2
OD Coating	: 3 Layers of HDPE
ID Coating	: Flow Coat Epoxy
Project Owner	: TANAP Doğalgaz İletişim A.Ş.
Pipe Length	: 40 feet / 12 meters DRL
Scope of Logistics	: DDP basis delivery to 4 pipe yards located in Turkey

Transportation Methods : Vessels & Trucks & Trains



BAKU - TBILISI - CEYHAN (BTC) CRUDE OIL PIPELINE PROJECT TURKEY - 2005

Operational Highlights

Project Details

OD	: 34" - 42" / 864 mm – 1067 mm
Wall Thickness	: 0.406" – 0.469" / 10.31 mm – 11.91 mm
Total Length	: 120 miles / 194 km
Production Standard	: API 5L PSL 2 and Client's Specifications
Material Grade	: X65MS PSL2
OD Coating	: 3 Layers of HDPE
ID Coating	: Bare
Project Owner	: Botaş, BTC Directorate
Pipe Length	: 40 feet / 12 meters DRL
Scope of Logistics	: DDP basis delivery to the pipe yards located at 4 different locations in Turkey, including unloading and stockpiling of the pipes.

The following transportation methods have been used simultaneously because of the tight delivery schedule:

Transportation Methods : Trucks (15% of the total quantity)
Trains & Trucks (85% of the total quantity)

The project has been completed within a period of 12 months. Global energy conglomerates, along with the world's top engineering groups took part in this major infrastructure investment, where highest technical, operational and HSE standards were applied.





R-GZ3 GAS PIPELINE PROJECT ALGERIA - 2014

Operational Highlights

Project Details

OD	: 42" / 1067 mm
Wall Thickness	: 0.811" / 20.60 mm
Total Length	: 16 miles / 25 km
Production Standard	: API 5L 45 th Edition PSL2 and Client's Specifications
Material Grade	: X70M
OD Coating	: 3 Layers of HDPE
ID Coating	: Flow Coat Epoxy
Project Owner	: SONATRACH
Pipe Length	: 40 feet / 12 meters DRL
Scope of Logistics	: CFR basis delivery to Algeria Port in Algeria

Transportation Methods : Vessels



IN SALAH GAS SOUTHERN FIELDS DEVELOPMENT ALGERIA - 2012

Operational Highlights

Project Details

OD	: 24" – 32" / 610 mm – 810 mm
Wall Thickness	: 0.343"– 0.752" / 8.70 mm – 19.10 mm
Total Length	: 83 miles / 133 km
Production Standard	: API 5L 44 th Edition PSL2 and Client's Specifications
Material Grade	: X70M PSL2
OD Coating	: 3 Layers of HDPE
ID Coating	: Flow Coat Epoxy
Contractor	: Petrofac Engineering and Construction - Sharjah
Project Owner	: BP - Statoil - Sonatrach (JV)
Pipe Length	: 40 feet / 12 meters DRL
Scope of Logistics	: CFR basic delivery to Djen Djen Port in Algeria. The logistics scope includes unloading to the trucks in the port.

Transportation Methods : Vessels & Trucks





ARC DE DIERREY GAS PIPELINE PROJECT FRANCE - 2013

Operational Highlights

Project Details

OD	: 48" / 1219 mm
Wall Thickness	: 0.511" - 0.606" / 13.00 mm - 15.40 mm
Total Length	: 37 miles / 61 km
Production Standard	: EN 10208-2 & Client's Specifications
Material Grade	: L485MB
OD Coating	: 3 Layers of HDPE
ID Coating	: Flow Coat Epoxy
Project Owner	: GRTgaz S.A.
Pipe Length	: 60 feet / 18 meters R4 (EN 10208-2)
Scope of Logistics	: DDP bases delivery to different pipe yards located in France.

Transportation Methods : Vessels & Trucks



GAZ-SYSTEM GAS PIPELINE PROJECTS POLAND - 2013

Operational Highlights

Project Details

OD	: 28" - 32" / 711 mm - 813 mm
Wall Thickness	: 0.433" - 0.689" / 11.00 mm - 17.50 mm
Total Length	: 162 miles / 262 km
Production Standard	: EN 10208-2 & Client's Specifications
Material Grade	: L485MB & L555MB
OD Coating	: 3 Layers of HDPE & PP
ID Coating	: Flow Coat Epoxy
Project Owner	: GAZ-SYSTEM S.A.
Pipe Length	: 40 feet / 14 meters R3 (EN 10208-2)
Scope of Logistics	: DDP bases delivery to different pipe yards located in Poland.

Transportation Methods : Vessels & Trucks & Trains





ELLUND EGTVED PIPELINE PROJECT DENMARK - 2012

Operational Highlights

Project Details

OD	: 24" – 40" / 610 mm – 1016 mm
Wall Thickness	: 0.394" – 0.689" / 10 mm – 17.5 mm
Total Length	: 59 miles / 95 km
Production Standard	: EN10208-2 and Client's Specifications
Material Grade	: L485MB
OD Coating	: 3 Layers of HDPE
ID Coating	: Flow Coat Epoxy
Project Owner	: Energinet.dk
Pipe Length	: 60 feet / 18 meters R4 (EN 10208-2)
Scope of Logistics	: DDP basis delivery to Egtved, Denmark

Transportation Methods : Vessels & Trucks



MOL NATURAL GAS TRANSMISSION PROJECT HUNGARY - 2007

Operational Highlights

Project Details

OD	: 40" / 1016 mm
Wall Thickness	: 0.492" - 12.5 mm / 0.787" - 20.00 mm
Total Length	: 127 miles / 205 km
Production Standard	: EN 10208-2 and Client's Specifications
Material Grade	: L485MB
OD Coating	: 3 Layer PE acc. to DIN 30670
ID Coating	: Flow Coat Epoxy acc. to API RP 5L2
Project Owner	: MOL
Pipe Length	: 40 feet / 12 meters R2 (EN 10208-2)
Scope of Logistics	: DDP basis delivery to 14 different pipe yards along the pipeline route in Hungary. The logistics scope includes unloading, stockpiling and safe guarding during entire delivery operation

Transportation Methods : Vessels & Barges (45% of the total quantity)
Trains (55% of the total quantity)
Complete handover of the project to the Client was realized in 10 months.





NAWARA & SOUTH TUNISIA GAS DEVELOPMENT PROJECT

TUNISIA - 2015

Operational Highlights

Project Details

OD	: 6" / 168.3 mm
Wall Thickness	: 0.280" - 0.311" / 7.11 mm - 7.92 mm
Total Length	: 69 miles / 112 km
Production Standard	: API 5L 45 th Edition PSL2 and Client's Specifications
Material Grade	: X52M PSL2
OD Coating	: 3 Layers of PP
ID Coating	: Bare
Project Owner	: OMV
Pipe Length	: 40 feet / 12 meters DRL
Scope of Logistics	: CFR basis delivery to Gabes Port in Tunisia

Transportation Methods : Vessels

BOTAŞ PROJECTS

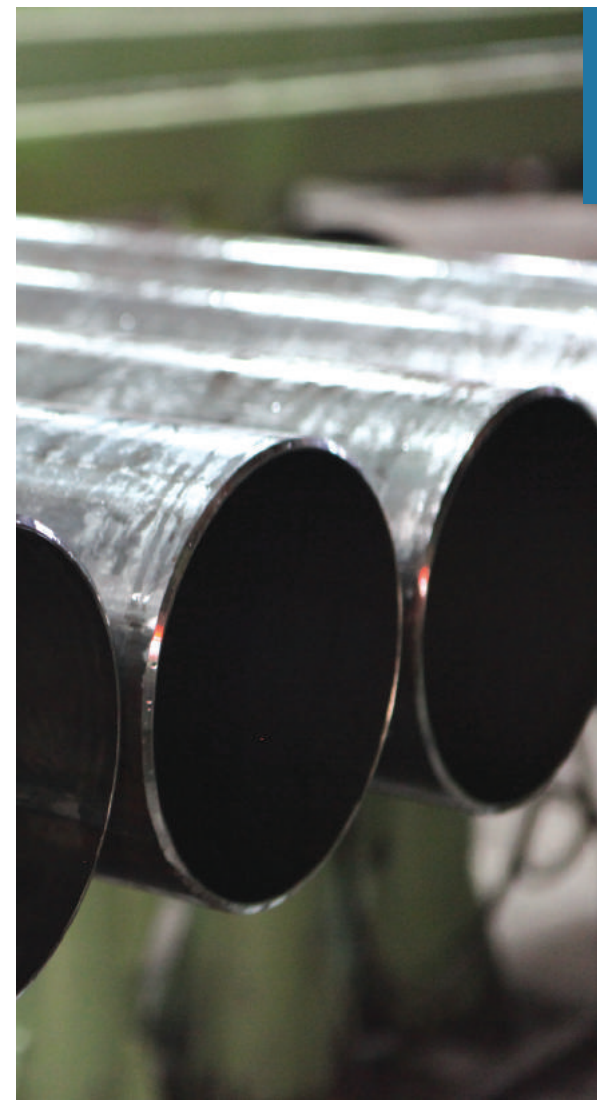
TURKEY - 2015

Operational Highlights

Project Details

OD	: 6'' - 8'' / 168.3 mm - 219.1 mm
Wall Thickness	: 0.204'' - 0.251'' - 0.279'' - 0.322'' / 5.2 mm - 6.4 mm - 7.1 mm - 8.2 mm
Total Length	: 153 miles / 247.6 km
Production Standard	: API 5L 45 th Edition PSL2, and Client's Specifications
Material Grade	: X42N & Grade B PSL2
OD Coating	: 3 Layers of HDPE
ID Coating	: Bare
Project Owner	: BORU HATLARI İLE PETROL TAŞIMA A.Ş. (BOTAŞ)
Pipe Length	: 40 feet / 12 meters DRL
Scope of Logistics	: CPT basis delivery to BOTAŞ pipe yards in Oltu Osmançık, İskilip, Alaca and Çekerek.

Transportation Methods : Trucks





SOCAR GAS PIPELINE PROJECT AZERBAIJAN - 2015

Operational Highlights

Project Details

OD	: 12'' / 323.9 mm
Wall Thickness	: 0.314'' / 8.00 mm
Total Length	: 13 miles / 21 km
Production Standard	: API 5L 45 th Edition PSL2 and Client's Specifications
Material Grade	: X56
OD Coating	: 3 Layers of HDPE
ID Coating	: Bare
Project Owner	: SOCAR
Pipe Length	: 40 feet / 12 meters DRL
Scope of Logistics	: CPT basis delivery to different pipe yard in Azerbaijan

Transportation Methods : Trucks



PERENCO OIL & GAS PIPELINE PROJECTS AFRICA & LATIN AMERICA 2009 - 2018


Operational Highlights

Project Details

OD	: 2" – 12" / 60.3 mm – 323.9 mm
Wall Thickness	: 0.157" – 0.500" / 4 mm – 12.7 mm
Total Length	: 904 miles / 1454 km
Production Standard	: API 5L and Client's Specifications
Material Grade	: Grade B – X52
OD Coating	: 3 Layers of HDPE
ID Coating	: Epoxy coating and bare
Project Owner	: PERENCO
Pipe Length	: 42 feet / 13 meters
Scope of Logistics	: DAP basis delivery to different pipe yards in Africa and Latin America

Transportation Methods : Trucks & Vessels



A photograph showing a large stack of heavy-duty steel pipes. The pipes are arranged in a grid-like pattern, with their circular ends facing the camera. The interior of the pipes is dark, and the exterior shows some rust and wear. The lighting is bright, creating strong highlights on the edges of the pipes. The text is overlaid on the left side of the image.

MAJOR LARGE DIAMETER HSAW AND ERW REFERENCE LISTS



Major Projects Reference List for HSAW Pipes

COUNTRY	PROJECT OWNER	USAGE	PROJECT DESCRIPTION	QUANTITY	YEAR
ITALY	SNAM RETE GAS	GAS	MAM16/005C "Tubi di linea 900 / 1400" Project 36" & 48" & 56" L450MB OD PE Coated, ID Epoxy Coated	11 KM	2017
USA	KINDER MORGAN INC	GAS	Orion Project 36" X70 OD FBE + ARO COATED, ID EPOXY COATED	22	2017
USA	EQM GATHERING OPCO, LLC	GAS	MAKO PROJECT 30" X70, OD BARE ID BARE	26 KM	2016
USA	WILLIAMS	GAS	ATLANTIC SUNRISE PROJECT 30",36", 42" X70 OD FBE + ARO COATED, ID EPOXY COATED	320 KM	2017
TURKEY	TANAP	GAS	TRANS ANATOLIAN PIPELINE PROJECT 48" & 56" X70 OD PE COATED, ID EPOXY COATED	215 KM	2017
FRANCE	GRTGAZ S.A.	GAS	VAL DE SAÔNE PROJECT 48" L485ME OD PE COATED, ID EPOXY COATED	25 KM	2016
USA	WILLIAMS	GAS	GULF TRACE PIPELINE PROJECT 36" X70 OD FBE COATED, ID EPOXY COATED	12 KM	2016
USA	ENERGY TRANSFER	GAS	LONESTAR EXPRESS NGL PROJECT 30" X70 OD FBE + ARO COATED, ID BARE	443 KM	2015
USA	WILLIAMS	GAS	LEIDY SOUTHEAST PROJECT 42" X70 OD FBE + ARO COATED, ID EPOXY COATED	51 KM	2015
USA	SPECTRA	GAS	OHIO PIPELINE ENERGY NETWORK PROJECT 30" X70 OD FBE COATED, ID BARE	126 KM	2014
ALGERIA	ALFAPIPE	GAS	RGZ3 SC5 KENANDA TA-ARZEW PIPELINE 42" X70M OD PE COATED, ID EPOXY COATED	25 KM	2014
LITHUANIA	AMBER GRID	GAS	KLAIPEDA - KURSENAI PROJECT 32" L415ME OD PE COATED, ID BARE	37 KM	2015
ALGERIA	CAMEG	GAS	GAS PIPELINE PROJECT 28" X70M OD PE COATED, ID EPOXY COATED	99 KM	2013
MEXICO	TRANSCANADA LLC	GAS	TAMAZUNCHALE EXTENSION PIPELINE 36" X70M OD FBE COATED, ID BARE	12 KM	2013
TURKEY	BOTAŞ	GAS	KESAN GAS PIPELINE PROJECT 36" X65M OD PE COATED, ID BARE	100 KM	2012
USA	KINDER MORGAN INC	GAS	NORTHEAST UPGRADE PROJECT 30" X70M OD FBE COATED, ID EPOXY COATED	77 KM	2012
FRANCE	GRTGAZ S.A.	GAS	ARC DE DIERREY GAS PIPELINE PROJECT 48" L485MB OD PE COATED, ID EPOXY COATED	61 KM	2013
SLOVAKIA	EUSTREAM	GAS	SLOVAKIA - HUNGARY INTERCONNECTOR GAS PIPELINE PROJECT 32" L485MB OD PE COATED, ID EPOXY COATED	26 KM	2012
FRANCE	GRTGAZ	GAS	HAUTS DE FRANCE II GAS PIPELINE PROJECT 48" L485MB OD PE COATED, ID EPOXY COATED	17 KM	2012
POLAND	GAZ-SYSTEM S.A.	GAS	VARIOUS GAS PIPELINE PROJECTS 28" & 32" L485MB & L555MB OD PE & PP COATED ID EPOXY COATED	262 KM	2013
LITHUANIA	AB LIETUVOS DUJOS	GAS	JURBARKAS TAURAGE PROJECT 16" L360 OD PE COATED, ID BARE	35 KM	2012
USA	ELPASO GROUP - TENNESSEE GAS PIPELINE	GAS	NORTHEAST SUPPLY DIVERSIFICATION 30" X70M OD FBE COATED, ID EPOXY COATED	12 KM	2011

COUNTRY	PROJECT OWNER	USAGE	PROJECT DESCRIPTION	QUANTITY	YEAR
AUSTRIA	EVN	GAS	EVN WESTRAIL PROJECT 32" L485MB OD PE COATED, ID EPOXY COATED	57 KM	2011
BELGIUM	FLUXYS	GAS	BEN AHIN BRAS PIPELINE PROJECT 20" L415MB OD PE COATED, ID EPOXY COATED	49KM	2011
DENMARK	ENERGINET.DK	GAS	ELLUND EGTVED PROJECT 32" L485MB OD PE & PP COATED, ID EPOXY COATED	95 KM	2012
ALGERIA	PETROFAC BP-STATOIL SONATRACH (JV) (END USER)	GAS	IN-SALAH GAS SOUTHERN FIELD DEVELOPMENT PROJECT 24" - 32" X70 OD PE COATED, ID EPOXY COATED	134 KM	2011
TURKEY	CHINA TIANCHEN ENGINEERING CORP.	GAS	BOTAS SALT LAKE UNDERGROUND GAS STORAGE 36" X65M OD PE COATED, ID EPOXY COATED	24 KM	2010
TURKEY	OMV	GAS	OMV SAMSUN GAS PIPELINE PROJECT 24" X65M OD PE COATED, ID EPOXY COATED	53 KM	2010
USA	ELPASO GROUP - TENNESSEE GAS PIPELINE	GAS	300 LINES PIPELINE PROJECT 30" X70M OD FBE COATED, ID EPOXY COATED	212 KM	2009
FRANCE	GRTGAZ	GAS	F72 LE MANS PIPELINE PROJECT 36" L485MB OD PE COATED, ID EPOXY COATED	2 KM	2009
HUNGARY	MOL GROUP	GAS	CROATIAN TRANSIT PIPELINE 32" L485MB OD PE COATED, ID EPOXY COATED	209 KM	2009
ALGERIA	SONATRACH	GAS	GR4 PIPELINE PROJECT 48" X70 OD PE COATED, ID EPOXY COATED	305 KM	2009
TURKEY	BOTAŞ BORU HATLARI İLE PETROL TAŞIMA A.Ş.	GAS	MUGLA DGBH PROJECT 16" X52 OD PE COATED, ID BARE	21 KM	2009
ALGERIA	CAMEG	GAS	GAS PIPELINE PROJECTS 20" - 28" X70M OD PE COATED, ID EPOXY COATED	171 KM	2008
HUNGARY	FGSZ	GAS	FGSZ PIPELINE PROJECT 28" L450MB OD PE COATED, ID EPOXY COATED	49 KM	2008
USA	SOUTHERN NATURAL GAS PIPELINE GROUP	GAS	ELBA EXPRESS PIPELINE PROJECT 36" - 42" X70M OD FBE COATED, ID BARE	313 KM	2007
HUNGARY	MOL GROUP	GAS	GAS PIPELINE PROJECT 32" & 40" L485MB OD PE COATED, ID EPOXY COATED	260 KM	2007
ALGERIA	SNAMPROGETTI	GAS	LZ2 HASSI R'MEL - ARZEW PIPELINE 24" X60M OD PE COATED, ID BARE	476 KM	2007
ALGERIA	SONATRACH	GAS	GZ1 HASSI R'MEL - MEDAREG PIPELINE 40"X60M OD PE COATED, ID EPOXY COATED	234 KM	2006
TURKEY	BOTAŞ	GAS	TURKEY GREECE PIPELINE 36" X65M OD PE COATED, ID BARE	180 KM	2005
ALGERIA	SONATRACH	OIL	NK1 PIPELINE PROJECT 30" X60M OD PE COATED, ID BARE	665 KM	2005
TURKEY	BOTAŞ, BTC DIRECTORATE	OIL	BAKU - TBILISI - CEYHAN PIPELINE 34" - 42" X65MS OD PE COATED, ID BARE	194 KM	2004

Major Projects Reference List for ERW Pipes

COUNTRY	PROJECT OWNER	USAGE	PROJECT DESCRIPTION	QUANTITY	YEAR
COLOMBIA CONGO, GABON CAMEROON	PERENCO	GAS - OIL	2" - 12" HFI WELDED (ERW) STEEL PIPES VARIOUS OIL AND GAS PIPELINE PROJECTS GRB - X52, PE - PP COATED, ZAP-LOK END	1.454 KM	2009 - 2018
TURKEY	TPAO, BOTAS AND PRIVATE GAS DISTRIBUTION COMPANIES	GAS - OIL	2" - 12" HFI WELDED (ERW) STEEL PIPES GAS DISTRIBUTION PROJECTS GRB - X42 - X52, PE COATED, API5L, BEVELED END	1.399 KM	2009 - 2018
TUNISIA	MAX STREICHER BOUCHAMAOUJI JV	GAS	6" HFI WELDED (ERW) STEEL PIPES OMV NAWARA AND SOUTH TUNISIA GAS DEVELOPMENT PROJECT X52M, PP COATED, BEVELED END	112 KM	2015
AZERBAIJAN	SOCAR (PROJECT OWNER) TTI LLC (CONTRACTOR)	GAS	12" HFI WELDED (ERW) STEEL PIPES SOCAR GAS PIPELINE X56, PE COATED, API5L, BEVELED END	21 KM	2014
AUSTRIA	NETZ NIEDEROSTERREICH GMBH EVN GROUP	GAS	3" - 12" HFI WELDED (ERW) STEEL PIPES GAS PIPELINE PROJECTS L290NB - X42 - L45NB - L360NB, PE COATED, EN ISO 3183 BEVELED END	31 KM	2010 - 2014
LIBYA	ENKA	GAS	12" HFI WELDED (ERW) STEEL PIPES 4X160MV GAS TURBINE POWER PLANT SECTION 1-2 GRB, PE COATED, BEVELED END	50 KM	2012 - 2014
EGYPT	WASCO, FAYUM, TAQA GROUP EGYPT GAS, QUARUN, PPC	GAS	6" - 12" HFI WELDED (ERW) STEEL PIPES GAS PIPELINE PROJECTS X52, PE COATED, API5L, BEVELED END	314 KM	2009 - 2018
TUNISIA	STEG	GAS	4" - 8" HFI WELDED (ERW) STEEL PIPES GAS PIPELINE PROJECTS X42 - X60, PE COATED, BEVELED END	125 KM	2013
ROMANIA	OMV PETROM	GAS	3" - 10" HFI WELDED (ERW) STEEL PIPES GAS DISTRIBUTION LINES L245NB - X52M, PE COATED, BEVELED END	223 KM	2010 - 2013
IRAQ	TOVI COMPANY	GAS	10" HFI WELDED (ERW) STEEL PIPES GAS PIPELINE PROJECTS X52, PE COATED, BEVELED END	32 KM	2012
CAMEROON	SNH CAMEROON (END USER) SOGEA-SATOM (MAIN CONTRACTOR) DENYS (PIPELINE CONTRACTOR)	GAS	12" HFI WELDED (ERW) STEEL PIPES BIPAGA-MPOLONGWE NATURAL GAS PIPELINE X60, PE COATED, BEVELED END	19 KM	2012
CROATIA	EVN CROATIA	GAS	8" - 12" HFI WELDED (ERW) STEEL PIPES GAS PIPELINE FOR SPLITSKO- DALMANTISKA AND SIBENSKO - KNINSKA L290NB-L360NB - X42M, PE COATED, BEVELED END	32 KM	2010 - 2012
NIGERIA	OILSERVE LTD	GAS	12" HFI WELDED (ERW) STEEL PIPES OWAZA - OSISIOMA GAS TRANSMISSION PIPELINE X65, PE COATED, ZAPLOK END	28 KM	2011