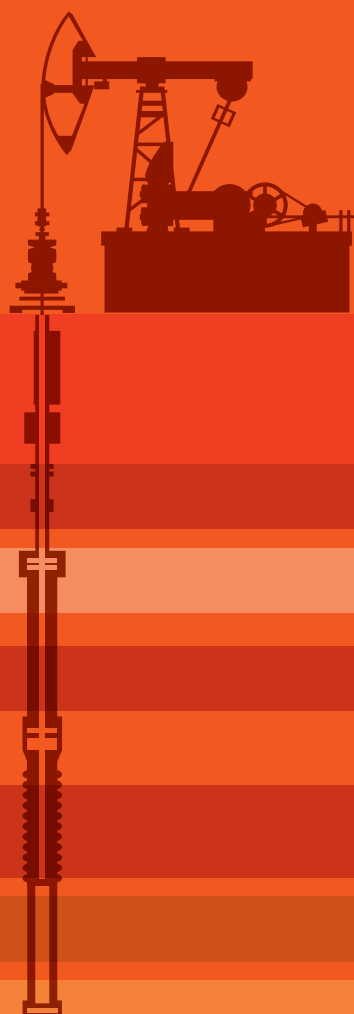




INTERPIPE

EXPERT PIPE SOLUTIONS FOR OIL AND GAS INDUSTRY

CASING, TUBING AND LINE PIPES



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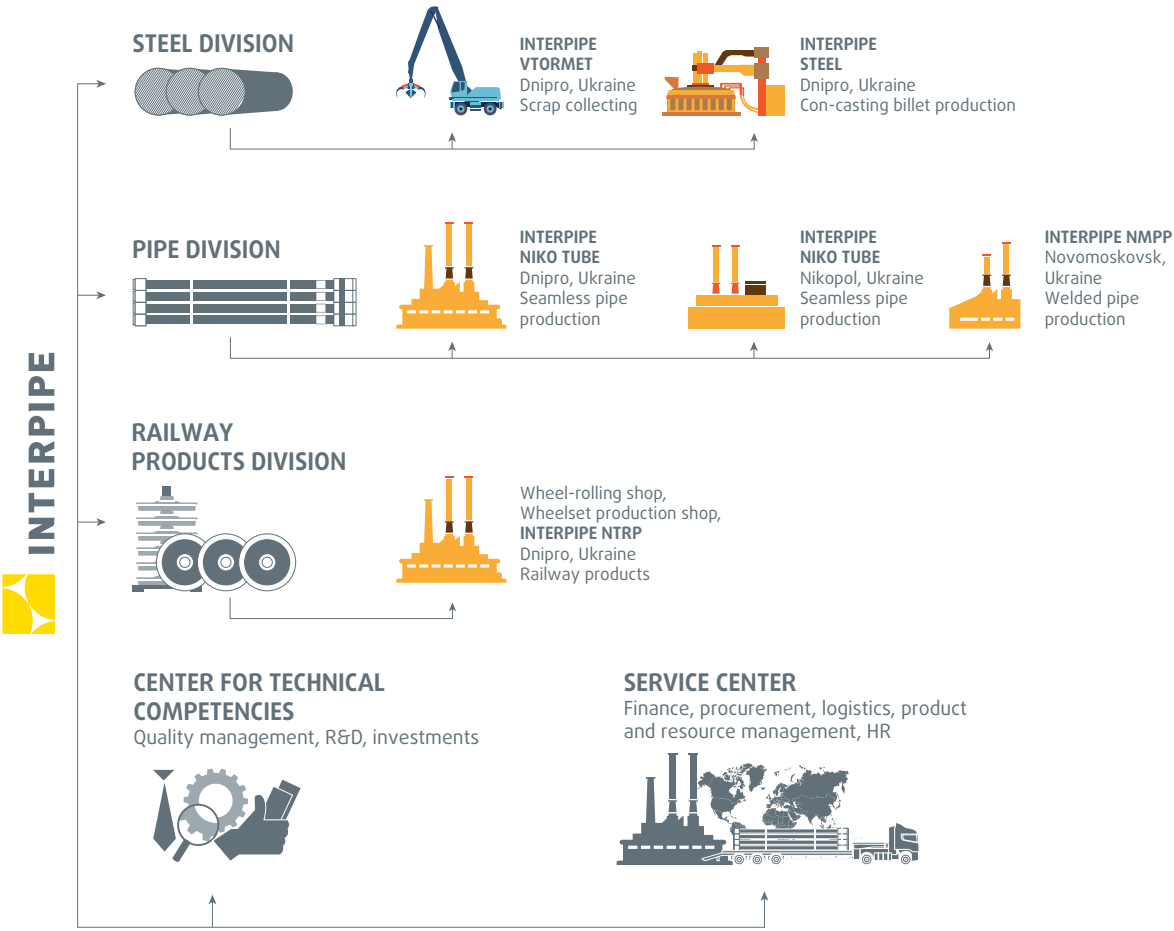
INTERPIPE AT A GLANCE

Interpipe is a global steel pipe producer – oil and gas exploration and transportation, power generation, mechanical and structural use.





The company’s products are supplied to 80 countries all over the world through a chain of commercial offices located in Ukraine, Europe, the USA and the Middle East.

Interpipe structure includes production facilities located in Dnipro region, one of the major industrial centers of Ukraine. The company continues to invest heavily in the development and modernization of its mills.

Interpipe includes 3 operating divisions – Steel, Pipe and Railway Products. The company controls product quality at every stage: from manufacturing of raw materials to delivery of final products to customers.



SELLING TO CUSTOMERS GLOBALLY – KEY MARKETS

 North American Interpipe	 Interpipe Middle East	 Interpipe Ukraine
 Interpipe Europe SA	 Interpipe Central Trade	



INTERPIPE STEEL: IN-HOUSE GREEN STEEL PRODUCTION

Interpipe company needs for steel billets is 100% covered by own facilities – Interpipe Steel plant. Interpipe Steel – is an innovative EAF complex, launched in 2012 with best available technologies from Danieli.

A few years before the European Green Deal emerged, Interpipe made the largest environmental investment in the Ukrainian industry, investing \$1 billion into the construction of the innovative electric steel-making complex Interpipe Steel. It enabled Interpipe to achieve one of the lowest greenhouse gas emission intensity in the global steel industry – lower than 200 kg per ton of steel billets – that reflects low carbon nature of Interpipe production.



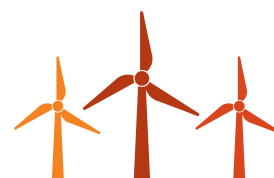
LOW CARBON FOOTPRINT

<110 kg/ton of steel (Scope 1)
<230 kg/ton of steel (Scope 2)



RECYCLING DEVELOPMENT

100% of steel produced from scrap



CLEAN ENERGY USAGE

Over 62% of energy comes from environmentally sustainable sources

INNOVATIVE DANIELI TECHNOLOGIES ON INTERPIPE STEEL ENABLES TO PRODUCE 1,320,000 TONS OF STEEL BILLET ANNUALLY

Electric arc furnace, 160 tons	Twin tank vacuum-degasser
Twin position ladle furnace	Two continuous casting machines

INTERPIPE STEEL IS THE LARGEST “GREEN” INVESTMENT INTO UKRAINIAN STEEL INDUSTRY DURING THE LAST 30 YEARS

State-of-the-art gas collection and purification system allows the efficient collection of gas and dust, generated during the steel-melting process

Completely closed circulating water supply system of the mill, without any industrial wastewater discharge

INTERPIPE STEEL ENSURES 100% NEEDS IN STEEL BILLETS FOR PIPE PRODUCTS MANUFACTURING. THE MILL HAS DEVELOPED WIDE PRODUCT PORTFOLIO OF PIPE STEEL GRADES FOR OUR CUSTOMERS.



QUALITY-FOCUSED OPERATIONS

Interpipe considers quality control as a key part of the activities to manufacture products, exceeding customer needs. Quality control is implemented at all stages of production process – starting from continuous casting at the in-house mini mill and up to nondestructive testing of pipe body and pipe ends and shipping to customers.

Our commitment to quality is confirmed by:

- Pipe products certification in compliance with major international standards API 5CT, API 5L, EN (DIN), ASTM, JIS, GOST, DNV, Lloyd Register, UDT, Dir 97/23/EC, AD 2000 Merkblatt and customer specifications
 - Quality management system as per ISO 9001 and API Q1
 - Implementation of a continuous improvement system at the company mills
-



ONGOING INVESTMENT PROGRAM

Interpipe regularly invests in development of its production capacities, improvement of the output quality, and expansion of its product range. Interpipe focused on providing the high quality product at short delivery time for each client. Over the last dozen years Interpipe carried out an extensive improvement program, which included commission of in-house steel melting complex Interpipe Steel, installation of various new NDT systems and finishing lines on the mills. Currently, Interpipe conducts a comprehensive project of increasing production capacities for OCTG tubes – construction of brand-new heat treatment floor.

CASING

API 5CT TECHNICAL SPECIFICATIONS FOR CASING

Applicable type of end-finish - SC, LC, BC, UPJ, UPJ-M, UPJ-SP, UPJ-F, UPJ-QR
 Sizes, masses, wall thickness, grade

Size designation	Outside diameter		Weight per length unit				Wall thickness		Inside diameter		Drift diameter		Steel grade	Type of end-finish							
			T&C		PE									SC	LC	BC	UPJ	UPJ-M	UPJ-SP	UPJ-F	UPJ-QR
	in	mm	Lb/ft	Kg/m	Lb/ft	Kg/m	in	mm	in	mm	in	mm									
4 1/2	4.500	114.30	9.50	14.14	9.41	14.02	0.205	5.21	4.090	103.88	3.965	100.70	H40; J55; K55								
			10.50	15.63	10.24	15.24	0.224	5.69	4.052	102.92	3.927	99.74	K55; J55								
			11.60	17.26	11.36	16.91	0.250	6.35	4.000	101.60	3.875	98.43	K55; N80; L80								
			13.50	20.09	13.05	19.44	0.290	7.37	3.920	99.56	3.795	96.38	L80; P110								
			15.10	22.47	15.00	22.32	0.337	8.56	3.826	97.18	3.701	94.00	P110; Q125								
5 1/2	5.500	139.70	14.00	20.83	13.71	20.40	0.244	6.20	5.012	127.30	4.887	124.13	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			15.50	23.07	15.36	22.86	0.275	6.99	4.950	125.73	4.825	122.56	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			17.00	25.30	16.89	25.14	0.304	7.72	4.892	124.26	4.767	121.08	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			20.00	29.76	19.83	29.51	0.361	9.17	4.778	121.36	4.653	118.19	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			23.00	34.23	22.56	33.57	0.415	10.54	4.670	118.62	4.545	115.44	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
6 3/8	6.625	168.30	20.00	29.76	19.51	29.03	0.288	7.32	6.049	153.64	5.924	150.47	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			24.00	35.72	23.60	35.12	0.352	8.94	5.921	150.39	5.796	147.22	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			28.00	41.67	27.67	41.18	0.417	10.59	5.791	147.09	5.666	143.92	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			32.00	47.62	31.23	46.48	0.475	12.07	5.675	144.15	5.550	140.97	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
7	7.000	177.80	17.00	25.30	16.72	24.88	0.231	5.87	6.538	166.07	6.413	162.89	H40; J55; N80; L80; C90; R95; T95; P110; Q125								
			20.00	29.76	19.56	29.11	0.272	6.91	6.456	163.98	6.331	160.81	H40; J55; K55; N80; L80; C90; R95; T95; P110; Q125								
			23.00	34.23	22.65	33.71	0.317	8.05	6.366	161.70	6.241	158.52	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			26.00	38.69	25.69	38.23	0.362	9.19	6.276	159.41	6.151	156.24	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			29.00	43.16	28.75	42.78	0.408	10.36	6.184	157.07	6.059	153.90	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			32.00	47.62	31.70	47.17	0.453	11.51	6.094	154.79	5.969	151.61	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			35.00	52.09	34.61	51.51	0.498	12.65	6.004	152.50	5.879	149.33	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			38.00	56.55	37.29	55.49	0.540	13.72	5.920	150.37	5.795	147.19	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
7 5/8	7.625	193.70	24.00	35.72	23.49	34.96	0.300	7.62	7.025	178.44	6.900	175.26	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			26.40	39.29	25.59	38.08	0.328	8.33	6.969	177.01	6.844	173.84	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			29.70	44.20	29.06	43.25	0.375	9.53	6.875	174.63	6.750	171.45	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			33.70	50.15	33.07	49.21	0.430	10.92	6.765	171.83	6.640	168.66	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			39.00	58.04	38.08	56.67	0.500	12.70	6.625	168.28	6.500	165.10	H40; J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								

Size designation	Outside diameter		Weight per length unit				Wall thickness		Inside diameter		Drift diameter		Steel grade	Type of end-finish							
			T&C		PE									SC	LC	BC	UPJ	UPJ-M	UPJ-SP	UPJ-F	UPJ-OR
	in	mm	Lb/ft	Kg/m	Lb/ft	Kg/m	in	mm	in	mm	in	mm									
7 %	7.625	193.70	42.80	63.69	42.43	63.14	0.562	14.27	6.501	165.13	6.376	161.95	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			45.30	67.41	44.71	66.54	0.595	15.11	6.435	163.45	6.310	160.27	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			47.10	70.09	46.77	69.60	0.625	15.88	6.375	161.93	6.250	158.75	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
8 %	8.625	219.10	24.00	35.72	23.60	35.12	0.264	6.71	8.097	205.66	7.972	202.49	J55, K55, N80, L80, C90, R95, T95, P110, Q125								
			28.00	41.67	27.04	40.24	0.304	7.72	8.017	203.63	7.892	200.46	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			32.00	47.62	31.13	46.33	0.352	8.94	7.921	201.19	7.796	198.02	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			36.00	53.57	35.17	52.34	0.400	10.16	7.825	198.76	7.700	195.58	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			40.00	59.53	39.33	58.53	0.450	11.43	7.725	196.22	7.600	193.04	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			44.00	65.48	43.43	64.63	0.500	12.70	7.625	193.68	7.500	190.50	H40, J55; K55; N80(1); N80(Q); R95; M65; L80(1); C90; T95; P110; Q125								
			49.00	72.92	48.04	71.49	0.557	14.15	7.511	190.78	7.386	187.60	H40, J55; K55; N80(1); N80(Q); R95; M65; L80(1); C90; T95; P110; Q125								
9 %	9.625	244.50	32.30	48.07	31.06	46.22	0.312	7.92	9.001	228.63	8.845	224.66	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			36.00	53.57	34.89	51.92	0.352	8.94	8.921	226.59	8.765	222.63	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			40.00	59.53	38.97	57.99	0.395	10.03	8.835	224.41	8.679	220.45	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			43.50	64.74	42.73	63.59	0.435	11.05	8.755	222.38	8.599	218.41	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			47.00	69.94	46.18	68.72	0.472	11.99	8.681	220.50	8.525	216.54	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			53.50	79.62	52.90	78.72	0.545	13.84	8.535	216.79	8.379	212.83	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			58.40	86.91	57.44	85.48	0.595	15.11	8.435	214.25	8.279	210.29	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
10 ¼	10.750	273.00	32.75	48.74	31.23	46.48	0.279	7.09	10.192	258.88	10.036	254.91	H40, J55, N80, L80, C90, R95, T95, P110, Q125								
			40.50	60.27	38.91	57.90	0.350	8.89	10.050	255.27	9.894	251.31	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			45.50	67.71	44.26	65.87	0.400	10.16	9.950	252.73	9.794	248.77	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			51.00	75.90	49.55	73.74	0.450	11.43	9.850	250.19	9.694	246.23	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			55.50	82.59	54.26	80.75	0.495	12.57	9.760	247.90	9.604	243.94	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			60.70	90.33	59.45	88.47	0.545	13.84	9.660	245.4	9.504	241.40	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			65.70	97.77	64.59	96.12	0.595	15.11	9.560	242.8	9.404	238.86	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
11 ¼	11.750	298.40	42.00	62.50	40.64	60.48	0.333	8.46	11.084	281.53	10.928	277.57	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			47.00	69.94	45.60	67.86	0.375	9.53	11.000	279.40	10.844	275.44	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			54.00	80.36	52.62	78.31	0.435	11.05	10.880	276.35	10.724	272.39	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			60.00	89.29	58.87	87.61	0.489	12.42	10.772	273.61	10.616	269.65	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			65.00	96.73	64.03	95.29	0.534	13.56	10.682	271.32	10.526	267.36	J55; N80 (1); N80, L80, C90, R95, T95, P110, Q125								
			71.00	105.66	69.48	103.40	0.582	14.78	10.586	268.88	10.430	264.92	J55; N80 (1); N80, L80, C90, R95, T95, P110, Q125								
13 ¼	13.375	339.70	48.00	71.43	46.02	68.49	0.330	8.38	12.715	322.96	12.559	319.00	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			54.50	81.10	52.79	78.56	0.380	9.65	12.615	320.42	12.459	316.46	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			61.00	90.78	59.50	88.55	0.430	10.92	12.515	317.88	12.359	313.92	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			68.00	101.19	66.17	98.47	0.480	12.19	12.415	315.34	12.259	311.38	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								
			70.69	107.15	70.67	105.17	0.514	13.06	12.347	313.61	12.191	309.65	H40, J55; K55; N80(1); N80(Q); R95; L80(1); C90; T95; P110; Q125								

API 5CT TECHNICAL SPECIFICATIONS FOR ERW CASING

Sizes, masses, wall thickness, grade and applicable end-finish

Size designation	Outside diameter		Wall thickness		Weight per length unit			Strength group H40	Strength group J55	Product specification level	Type of end-finish			
					PE		T&C				SC	LC	BC	
	in	mm	in	mm	lb/ft	kg/m	kg/m							
8 ⁵ / ₈	8.6	219.08	0.264	6.71	77.16	35.15	35.72	-	+	PSL-1	+			
			0.304	7.72	88.18	40.24	41.67	+	-		+			
			0.352	8.94	101.41	46.33	47.62	+	+		+	+	+	
			0.395	10.16	114.64	52.35	53.57	-	+		+	+	+	
10 ³ / ₄	10.8	273.05	0.279	7.09	101.41	46.50	48.74	+	-		+			
			0.350	8.89	125.66	57.91	60.27	+	+		+	+	+	
			0.400	10.16	143.30	65.87	67.71	-	+		+	+	+	
16	16.0	406.4	0.375	9.53	205.03	93.27	-	+	-		plain ends			
			0.438	11.13	238.10	108.49	-	-	+					
20	20.0	508.0	0.438	11.13	299.83	136.38	-	+	+					



TUBING

API 5CT TECHNICAL SPECIFICATIONS FOR TUBING

Sizes, masses, wall thickness, grade and applicable end-finish

Size designation	Outside diameter		Wall thickness		Weight per length unit				Steel grade	Type of end-finish
	in	mm	in	mm	Non-upset T&C		Ext. upset T&C			
					lb/ft	kg/m	lb/ft	kg/m		
2 3/8	2.375	60.32	0.190	4.83	4.60	6.85	4.70	6.99	H40, J55, N80, L80-1, P110	NU, EU, UPJ, UPJ-M
			0.254	6.45	9.20	13.63	9.30	13.84	H40, J55, N80, L80-1, P110, R95	NU, EU, UPJ-M
2 7/8	2.875	73.02	0.217	5.51	6.40	9.52	6.50	9.67	H40, J55, N80, L80-1, P110, R95	NU, EU, UPJ, UPJ-M
			0.276	7.01	7.80	11.61	7.90	11.76	N80, L80-1, P110, R95	NU, EU, UPJ, UPJ-M
3 1/2	3.500	88.90	0.216	5.49	7.70	11.46			H40, J55, N80, L80-1, R95	NU, UPJ, UPJ-M
			0.254	6.45	9.20	13.69	9.30	13.84	H40, J55, N80, L80-1, P110, R95	NU, EU, UPJ, UPJ-M
			0.289	7.34	10.20	15.18			H40, J55, N80, L80-1, R95	NU, UPJ, UPJ-M
4	4.000	101.60	0.226	5.74	9.50	14.14			H40, J55, N80, L80-1, P110, R95	NU, UPJ, UPJ-M
4 1/2	4.500	114.30	0.271	6.88	12.60	18.75			H40, J55, N80, L80-1, P110, R95	NU, UPJ, UPJ-M, UPJ-SP, UPJ-F

NU - non-upset threaded ends

EU - upset threaded ends

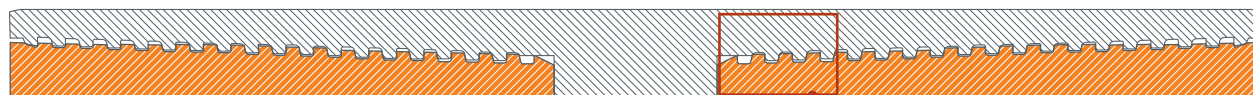
NON-UPSET PLAIN-END TUBING (TYPE P):

Sizes, masses, wall thickness and grade

Size designation	Outside diameter		Wall thickness		Weight per length unit		Steel grade
	in	mm	in	mm	lb/ft	kg/m	
1 1/2	1.900	48.26	0.145	3.68	2.72	4.05	H40, J55, N80, L80-1, P110, R95
2 3/8	2.375	60.32	0.167	4.24	3.94	5.86	H40, J55, N80, L80-1, P110, R95
			0.190	4.83	4.44	6.61	H40, J55, N80, L80-1, P110, R95
2 7/8	2.875	73.02	0.217	5.51	6.17	9.17	H40, J55, N80, L80-1, P110, R95
			0.276	7.01	7.67	11.41	N80, L80-1, P110, R95
3 1/2	3.500	88.9	0.216	5.49	7.58	11.29	H40, J55, N80, L80-1, P110, R95
			0.254	6.45	8.81	13.12	H40, J55, N80, L80-1, P110, R95
			0.289	7.34	9.92	14.76	H40, J55, N80, L80-1, P110, R95
4	4.000	101.6	0.226	5.74	9.12	13.57	H40, J55, N80, L80-1, P110, R95
			0.262	6.65	10.47	15.57	H40, J55, N80, L80-1, P110, R95
4 1/2	4.500	114.3	0.271	6.88	12.25	18.23	H40, J55, N80, L80-1, P110, R95

PREMIUM AND SEMI-PREMIUM CONNECTIONS

UPJ-SP SEMI-PREMIUM CONNECTION

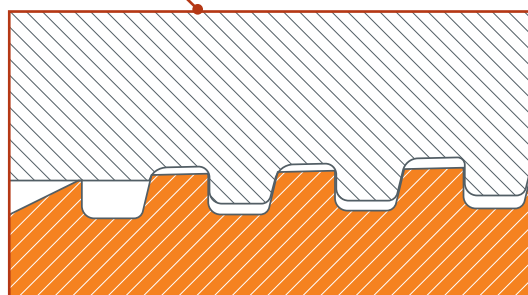


APPLICATIONS:

- Unconventional / Horizontal wells wells
- Vertical wells

THREAD GEOMETRY:

- "Pin-to-shoulder" design
- Interchangeable with API Buttress
- True ID



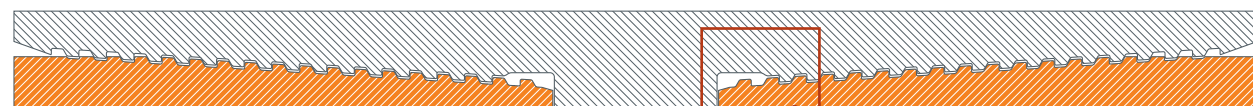
Size range		
	mm	in
Casing	114,30 - 339,72	4-1/2" - 13-3/8"
Tubing	114,30	4-1/2"

UPJ-SP is a proven semi-premium connection developed to face customer challenges.

Proven, cost-effective connection with high torque, 100% tension, compression and pressure capacities. Allows to combine drilling with casing assuring high torque resistance.

The connection is compatible with API BUTTRESS casing and accessories. Allows dogleg severity up to 56° / 30 m.

UPJ-QR PREMIUM CONNECTION



APPLICATIONS:

- Unconventional / Horizontal wells wells
- Vertical wells

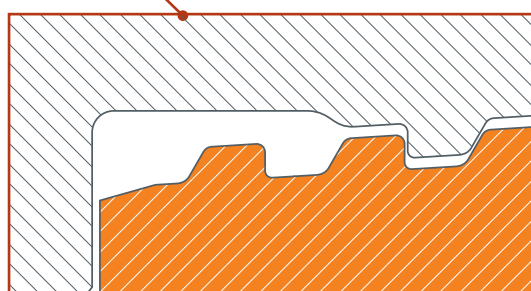
THREAD GEOMETRY:

- Robust "Hook" thread profile
- Special shouldered coupling

Size range		
	mm	in
Casing	244,48 - 339,72	9-5/8" - 13-3/8"

UPJ-QR Quick-Run connection has been especially designed for surface and intermediate casing.

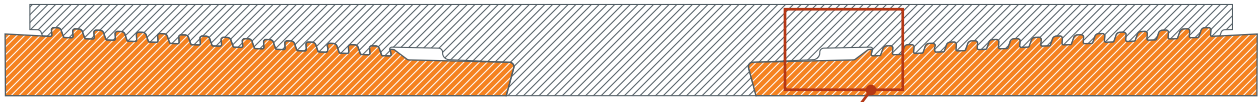
Robust thread geometry and steep taper makes the connection faster and more reliable than a BTC,



improving running efficiency in large diameter casing. UPJ-QR contains a fewer number of threads compared to API Buttress to ensure quick and easy stabbing, make-up with minimized cross threading risk.

The connection design enables to reach an angle of deviation up to 15°/30 m.

UPJ-M PREMIUM CONNECTION

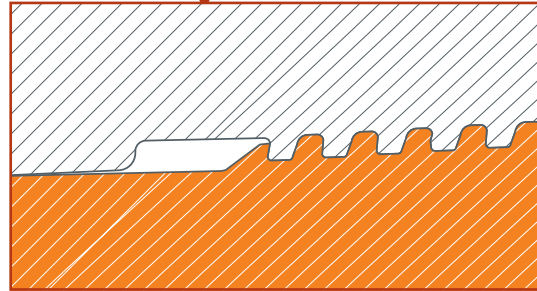


APPLICATIONS:

- Vertical wells
- Unconventional / Horizontal wells

THREAD GEOMETRY:

- "Hook" thread profile
- "Metal-to-metal" seal
- True ID
- Dope pocket



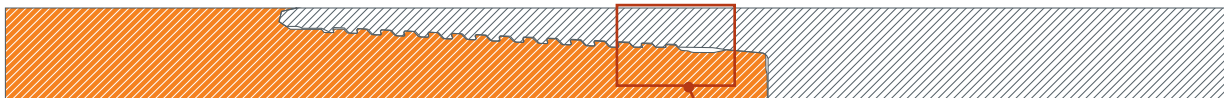
Size range		
	mm	in
Casing	114,30 - 339,72	4-1/2" - 13-3/8"
Tubing	60,32 - 114,30	2-3/8" - 4-1/2"

Interpipe UPJ-M is a proprietary premium solution certified according to ISO 13679 CAL IV.

UPJ-M has stable high performance characteristics while operating within high pressures and temperatures. The connection withstands up to 100% of tension, internal and external pressure, and compression. UPJ-M seal design enables to reach an angle of deviation up to 40°/30 m.

Along with corrosion-resistant alloys and sour service materials, the premium product can be used in hydrogen sulfide and carbon dioxide environments.

UPJ-F PREMIUM CONNECTION

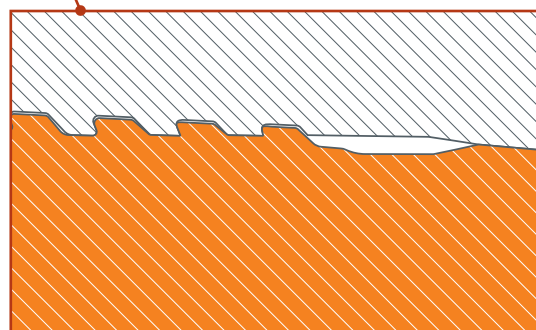


APPLICATIONS:

- Vertical wells
- Unconventional / Horizontal wells

THREAD GEOMETRY:

- "Hook" thread profile
- Double "metal-to-metal" seal
- Dope pocket
- True flush OD&ID



Size range		
	mm	in
Casing	114,30 - 193,68	4-1/2" - 7-5/8"
Tubing	114,30	4-1/2"

UPJ-F - a CAL IV certified gas-tight flush joint.

UPJ-F is a proprietary gas-tight true flush premium connection certified in accordance with ISO 13679 for CAL IV requirement level.

This design allows the connection usage in clearance applications where T&C connection cannot be used.

LINE PIPES

SPECIFICATION FOR LINE PIPES – API 5L/ISO 3183

Application: gas, water and oil transportation
 Welded highest steel grade X70/Service Annex H
 Seamless highest steel grade X80/Service Annex H, J
 Pipe dimensions and weight

Nominal size	Outside diameter		Wall thickness		Weight per length unit		Wweight class	Schedule	Pipe type	
	in	mm	in	mm	lb/ft	kg/m			Seamless	Welded
1	1.315	33.4	0.109	2.77	1.41	2.09		10	.	
			0.114	2.90	1.46	2.18		30	.	
			0.133	3.38	1.68	2.50	STD	40	.	
			0.179	4.55	2.17	3.24	XS	80	.	
1¼	1.660	42.2	0.109	2.77	1.81	2.69		10	.	
			0.117	2.97	1.93	2.87		30	.	
			0.140	3.56	2.27	3.39	STD	40	.	
			0.191	4.85	3.00	4.47	XS	80	.	
1½	1.900	48.3	0.109	2.77	2.09	3.11		10	.	
			0.125	3.18	2.37	3.53		30	.	
			0.145	3.68	2.72	4.05	STD	40	.	
			0.200	5.08	3.63	5.41	XS	80	.	
2	2.375	60.3	0.109	2.77	2.64	3.93		10	.	
			0.125	3.18	3.01	4.48		30	.	
			0.141	3.58	3.36	5.01		.	.	
			0.154	3.91	3.66	5.44	STD	40	.	
			0.172	4.37	4.05	6.03		.	.	
			0.188	4.78	4.39	6.54		.	.	
			0.218	5.54	5.03	7.48	XS	80	.	
			0.250	6.35	5.68	8.45		.	.	
2½	2.875	73.0	0.120	3.05	3.53	5.26		10	.	
			0.156	3.96	4.53	6.74		.	.	
			0.172	4.37	4.97	7.40		.	.	
			0.188	4.78	5.40	8.04		30	.	
			0.203	5.16	5.80	8.63	STD	40	.	
			0.216	5.49	6.13	9.14		.	.	
			0.250	6.35	7.01	10.44		.	.	
			0.276	7.01	7.67	11.41	XS	80	.	
3	3.500	88.9	0.375	9.53	10.02	14.92		160	.	
			0.141	3.58	5.06	7.53		.	.	
			0.156	3.96	5.58	8.29		.	.	
			0.172	4.37	6.11	9.11		.	.	
			0.188	4.78	6.66	9.92		30	.	
			0.216	5.49	7.58	11.29	STD	40	.	
			0.250	6.35	8.69	12.93		.	.	
			0.281	7.14	9.67	14.40		.	.	
			0.300	7.62	10.26	15.27	XS	80	.	
0.438	11.13	14.34	21.35		160	.				
3 1/2	4.000	101.6	0.600	15.24*	16.60	27.68	XXS		.	
			0.156	3.96	6.41	9.53		.	.	
			0.172	4.37	7.03	10.48		.	.	
			0.188	4.78	7.66	11.41		30	.	
			0.226	5.74	9.12	13.57	STD	40	.	
			0.250	6.35	10.02	14.92		.	.	
			0.281	7.14	11.17	16.63		.	.	
0.318	8.08	12.52	18.63	XS	80	.				
4	4.500	114.3	0.156	3.96	7.24	10.88		.	.	
			0.172	4.37	7.96	11.92		.	.	
			0.188	4.78	8.67	12.96		30	.	
			0.203	5.16	9.32	13.99		.	.	
			0.219	5.56	10.02	15.01		.	.	
			0.237	6.02	10.80	16.02	STD	40	.	
			0.250	6.35	11.36	17.03		.	.	
			0.281	7.14	12.67	18.77		.	.	
			0.312	7.92	13.97	20.78		.	.	
			0.337	8.56	15.00	22.32	XS	80	.	
			0.438	11.13	19.00	28.32		120	.	
5	5.563	141.3	0.258	6.55	14.63	21.92	STD	40	.	
			0.281	7.14	15.87	23.50		.	.	
			0.312	7.92	17.51	25.99		.	.	
			0.344	8.74	19.19	28.45		.	.	
			0.375	9.53	20.80	30.88	XS	80	.	
			0.500	12.70	27.06	40.28		120	.	

Pipe dimensions and weight

Nominal size	Outside diameter		Wall thickness		Weight per length unit		Wheight class	Schedule	Pipe type			
	in	mm	in	mm	lb/ft	kg/m			Seamless	Welded		
6	6.625	168.3	0.280	7.11	18.99	28.22	STD	40	-	-		
			0.312	7.92	21.06	31.25			-	-		
			0.344	8.74	23.10	34.24			-	-		
			0.375	9.53	25.05	37.20	XS	80	-	-		
			0.432	10.97	28.60	42.67			-	-		
			0.500	12.70	32.74	48.73			-	-		
			0.562	14.27	36.43	54.31	120	-	-			
			0.625	15.88	40.09	59.76		-	-			
			0.719	18.26	45.39	67.69		160	-	-		
			0.750	19.05	47.10	70.27	-		-			
			0.864	21.95	53.21	79.22	XXS		-	-		
			0.875	22.23	53.78	80.08		-	-			
0.219	5.56	19.68	29.48	30	-	-						
0.250	6.35	22.38	33.57		-	-						
0.277	7.04	24.72	36.61		STD	40	-	-				
0.312	7.92	27.73	41.14	-			-					
0.322	8.18	28.58	42.65	-			-					
8	8.625	219.1	0.344	8.74	30.45	45.14	60	-	-			
			0.375	9.53	33.07	49.10		-	-			
			0.406	10.31	35.67	53.09		XS	80	-	-	
			0.438	11.13	38.33	56.94	-			-		
			0.500	12.70	43.43	64.64	-			-		
			0.562	14.27	48.44	72.22	120	-	-			
			0.625	15.88	53.45	79.67		-	-			
			0.719	18.26	60.77	90.62		140	-	-		
			0.750	19.05	63.14	94.20	-		-			
			0.812	20.62	67.82	100.84	XXS		160	-	-	
			0.875	22.23	72.49	107.79		-		-		
			0.906	23.01	74.69	111.27		-		-		
			10	10.750	273.0	0.203	5.16	22.89	34.35	20	-	-
						0.219	5.56	24.65	36.94		-	-
						0.250	6.35	28.06	42.09		-	-
						0.279	7.09	31.23	46.57	30	-	-
0.307	7.80	34.27				51.03	-	-				
0.344	8.74	38.27				56.72	STD	40	-		-	
0.365	9.27	40.52				60.50			-	-		
0.406	10.31	44.90				66.79			-	-		
0.438	11.13	48.28				71.72	XS	60	-	-		
0.500	12.70	54.79				81.55			-	-		
0.562	14.27	61.21				91.26			-	-		
0.625	15.88	67.65				100.85	100	-	-			
0.719	18.26	77.10				114.99		-	-			
0.812	20.62	86.26				128.27		-	-			
0.875	22.23	92.37				137.36	-	-				
0.938	23.83	98.39				146.32	-	-				
12	12.750	323.8				0.219	5.56	29.34	43.96	20	-	-
			0.250	6.35	33.41	50.11	-	-				
			0.281	7.14	37.46	55.47	-	-				
			0.312	7.92	41.48	61.56	30	-	-			
			0.330	8.38	43.81	65.35		-	-			
			0.344	8.74	45.62	67.62		STD	40	-	-	
			0.375	9.53	49.61	73.65	-			-		
			0.406	10.31	53.57	79.65	-			-		
			0.438	11.13	57.65	85.62	XS	60	-	-		
			0.500	12.70	65.48	97.46			-	-		
			0.562	14.27	73.22	109.18			-	-		
			0.625	15.88	81.01	120.76	80	-	-			
			0.688	17.48	88.71	132.23		-	-			
			0.750	19.05	96.21	143.56		-	-			
			0.812	20.62	103.63	154.08	-	-				
0.938	23.83	118.44	176.13	-	-							
14	14.000	355.6	0.219	5.56	32.26	48.33	10	-	-			
			0.250	6.35	36.75	55.11		-	-			
			0.281	7.14	41.21	61.02		20	-	-		
			0.312	7.92	45.65	67.74	-		-			
			0.344	8.74	50.22	74.42	STD		30	-	-	
			0.375	9.53	54.62	81.08		-		-		
			0.406	10.31	59.00	87.71		-		-		
16	16.000	406.4	0.250	6.35	42.09	63.13	20	-	-			
			0.281	7.14	47.22	69.91		-	-			
			0.312	7.92	52.32	77.63		STD	30	-	-	
			0.344	8.74	57.57	85.32	-			-		
			0.375	9.53	62.64	92.98	-			-		
			0.406	10.31	67.60	100.60	10	-	-			
			0.438	11.10	72.70	108.20		-	-			
0.250	6.35	52.78	79.16	-	-							
20	20.000	508.0	0.281	7.14	59.23	87.70	-	-				
			0.312	7.92	65.66	97.43	-	-				
			0.344	8.74	72.28	107.12	STD	20	-	-		
			0.375	9.53	78.67	116.78			-	-		
			0.406	10.31	85.04	126.41			-	-		
			0.438	11.10	91.39	136.01	-	-				

SPECIFICATION FOR LINE PIPES – EN 10208-1, 2

Application: gas, water and oil transportation

Seamless line pipes

Pipe dimensions and weight

Outside diameter, mm	Weight per length unit, kg/m, wall thickness, mm																	Steel grade	
	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0	8.8	10.0	11.0	12.5	14.2	16.0	17.5	20.0	22.2	EN 10208-1	EN 10208-2
33.7	2.67																	L210GA-L415GA	L245NB-L415NB
42.4	3.44																		
48.3	3.97																		
60.3	5.03	5.55	6.19	6.82	7.55														
73.0		6.81	7.60	8.38	9.31	10.36	11.54												
88.9		8.38	9.37	10.35	11.50	12.83	14.32	15.96											
101.6		9.63	10.78	11.91	13.26	14.81	16.55	18.47											
114.3		10.88	12.19	13.48	15.01	16.78	18.77	20.97	22.90	25.72	28.02								
168.3							28.23	31.63	34.61	39.04	42.67	48.03	53.96	60.10	65.08	73.15			
219.1						33.06	37.12	41.65	45.64	51.57	56.45	63.69	71.75	80.14	87.01	98.20	107.80		
273.0							46.56	52.28	57.34	64.86	71.07	80.30	90.63	101.41	110.27	124.79	137.31		
323.9								62.32	68.38	77.41	84.88	95.99	108.45	121.49	132.23	149.89	165.18		

POLYETHYLENE COATED PIPES

DIN 30670

POLYETHYLENE COATING ON STEEL PIPES AND FITTINGS EXTERNAL

Coating execution:

N - normal execution (at temperature of from -20°C up to +60°C);
S - special execution (at temperature of from -40°C up to +80°C).

Coating thickness:

Pipe nominal outside diameter, mm	Coating thickness, at least, mm	
	Normal thickness (n)	Reinforced thickness (v)
From 114 to 250 inclusive	2.0	2.7
From 250 to 500 inclusive	2.2	2.9
From 500 to 530 inclusive	2.5	3.2

Pipe length: 10-12 m

Coating requirements:

Coating characteristics	Norm	
	Execution type	
	Normal	Special
Dielectric continuity, kV, no less than	Lack of electric current in 25 kV	
Impact strength of (23±2)°C, J/mm	no less than 5	no less than 7
Adherence of coating to steel N/cm, no less than temperature: 23°C 50°C	100 20	150 30

EN ISO 21809

EXTERNAL THREE-LAYER POLYETHYLENE AND POLYPROPYLENE COATING

Coating thickness:

Weight of 1 meter of pipe Pm/m (kg/m)	Total coating thickness, at least, mm					
	Class B1	Class B2	Class B3	Class C1	Class C2	Class C3
Pm ≤ 15	1.3	1.8	2.3	1.3	1.7	2.1
15 < Pm ≤ 50	1.5	2.1	2.7	1.5	1.9	2.4
50 < Pm ≤ 130	1.8	2.5	3.1	1.8	2.3	2.8
130 < Pm ≤ 200	2,2	2,8	3,5	2,2	2,5	3,2

Coating type:

Coating classes:

Class B – used for application at pipeline service temperatures from minus 20 °C to plus 60 °C.

Class C – used for application at pipeline service temperatures from minus 40 °C to plus 80 °C.

Acceptance testing of pipes with coating:

- external appearance of coating check;
- length measuring of bare ends;
- taper angle measuring coating to the pipe's body;
- dielectric coating integrity testing;
- thickness of coating testing;
- strength test of coating with the impact up to (23±3) °C;

Peel force control:

Class B – at temperatures of plus 23 °C and plus 60 °C;

Class C – at temperatures of plus 23 °C and plus 80 °C;

- cathodic disbondment test;
- hot water coating test.

EN 10288

EXTERNAL TWO-LAYER POLYETHYLENE COATING

Coating thickness:

Composition of the coating	Tube nominal outside diameter, mm	Coating thickness class, mm, at least		
		1	2	3
Two-layer polyethylene coating	From 114 to 273 inclusive	1.8	2.0	2.7
	From 273 to 508 inclusive	2.0	2.2	2.9
	From 508 to 530 inclusive	2.2	2.5	3.2

Coating type:

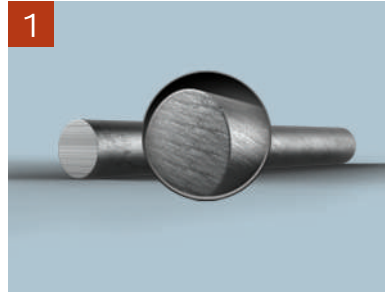
Type 1 – at service temperatures up to plus 60 °C;

Type 2 – at service temperatures up to plus 30 °C;

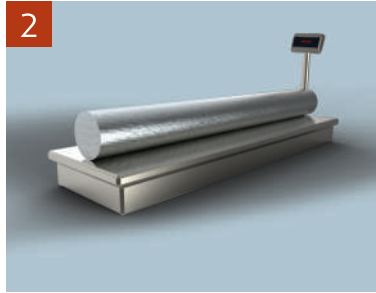
Acceptance testing of pipes with coating:

- external appearance of coating check;
- length measuring of bare ends;
- taper angle measuring coating to the pipe's body;
- dielectric coating integrity testing;
- thickness of coating testing;
- strength test of coating with the impact up to (20±5) °C;
- peel force control at temperatures of plus (23±2) °C and plus (60±2) °C.

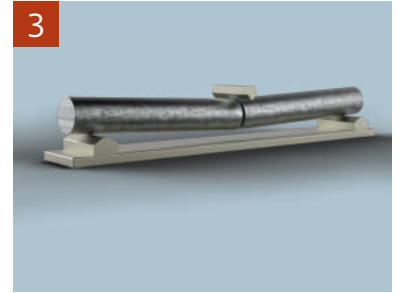
MANUFACTURING OF SEAMLESS PIPES



1
Billet incoming inspection



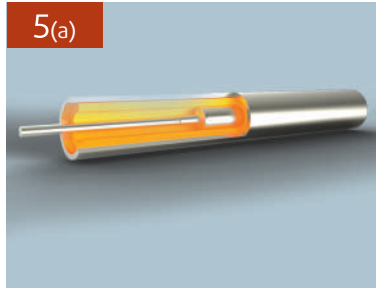
2
Billet weighing



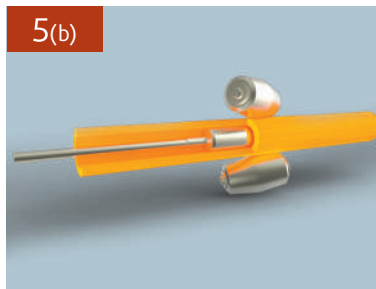
3
Billet cutting



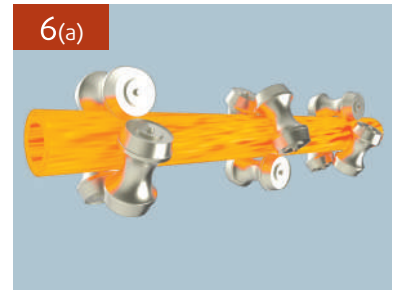
4
Heating of billet in rotary furnace



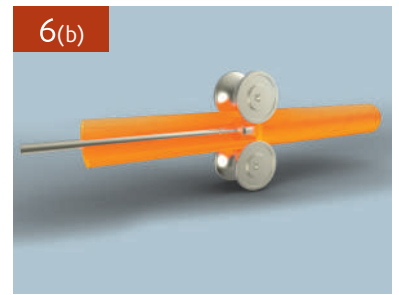
5(a)
Piercing of billet at piercing press



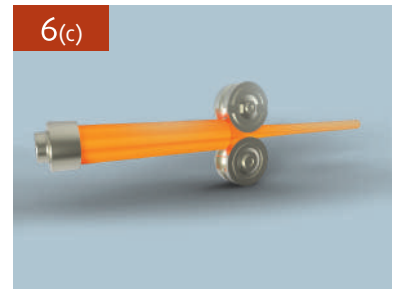
5(b)
Piercing of billet at cross-roll piercer



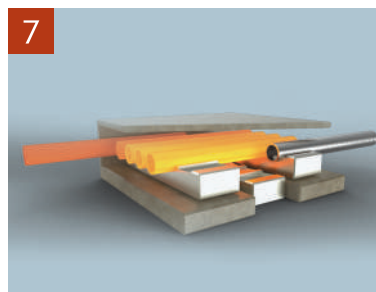
6(a)
Shell rolling at continuous rolling mill



6(b)
Shell rolling at plug mill

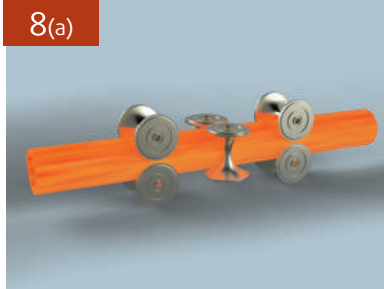


6(c)
Shell rolling at pilger mill

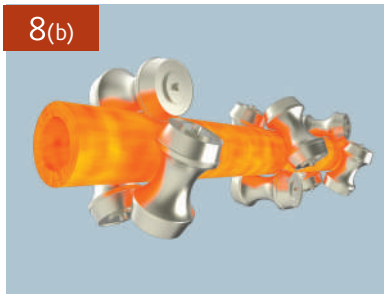


7
Heating of pipes

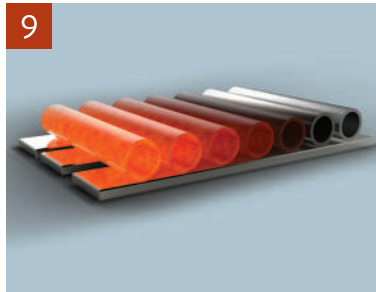
MANUFACTURING OF SEAMLESS PIPES



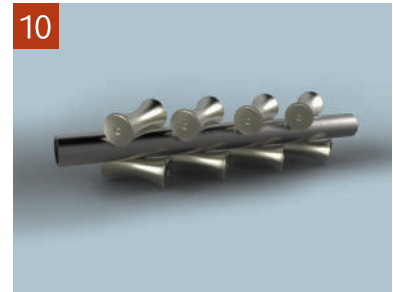
Sizing



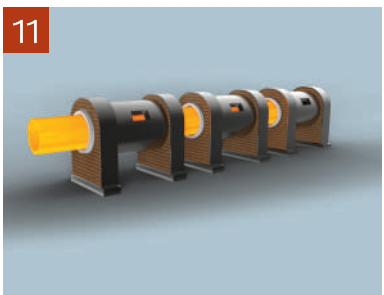
Stretch reducing



Pipes cooling



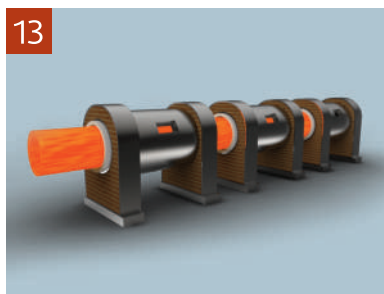
Straightening of pipes



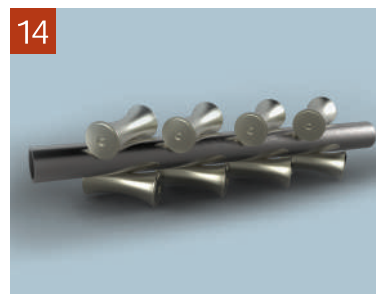
Heating of pipes for quenching



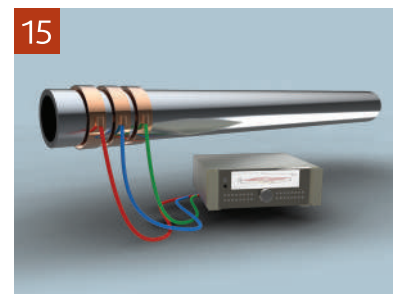
Quenching



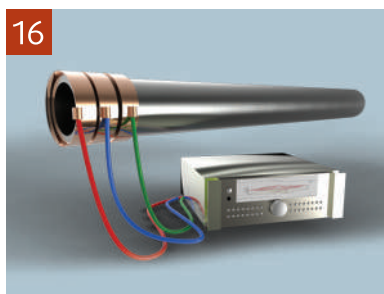
Tempering



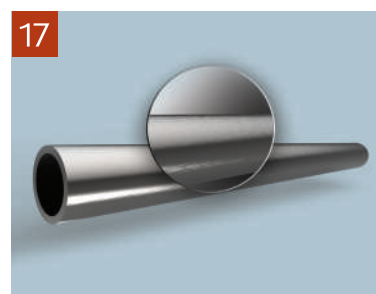
Warm straightening



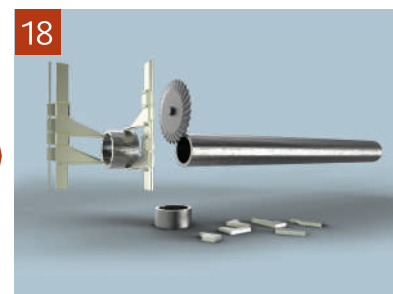
Nondestructive control of pipe body



NDT of pipe ends

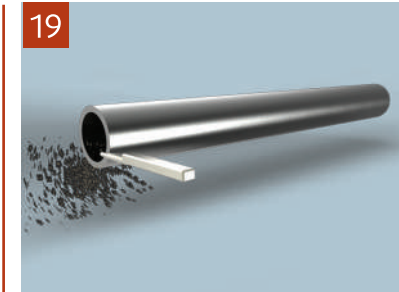


Visual inspection

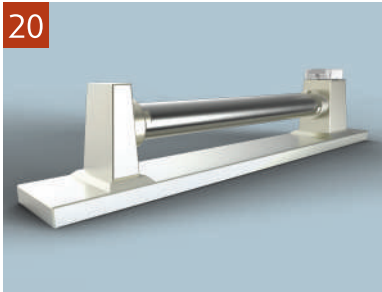


Sampling for mechanical tests and chemical composition analysis

FINISHING OF PLAIN END PIPES



19 Beveling



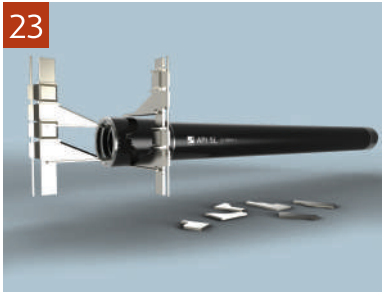
20 Hydraulic pressure test



21 Painting of pipes



22 Marking



23 Final inspection



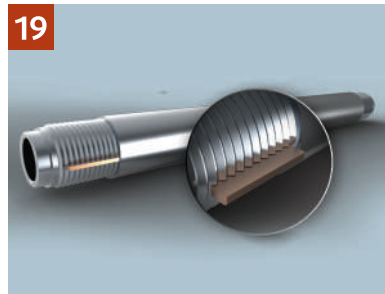
24 Bevel protection



25 Bundling

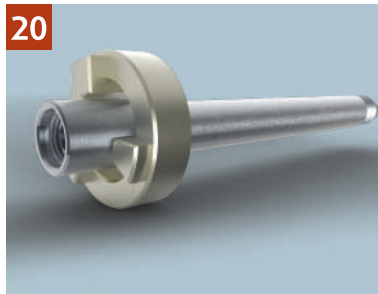
OCTG FINISHING

19



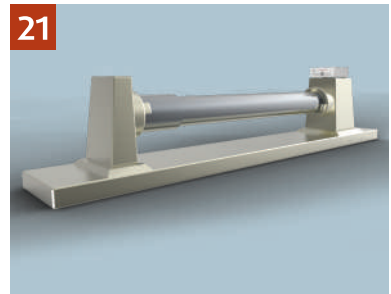
Threading and inspection of threads

20



Coupling

21



Hydraulic pressure test

22



Drifting

23



Painting/protective coat

24



Marking

25



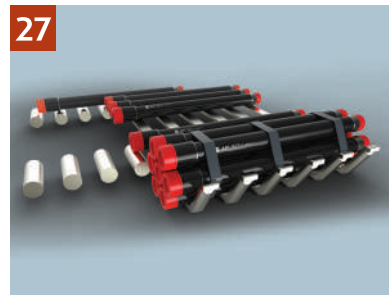
Final inspection

26



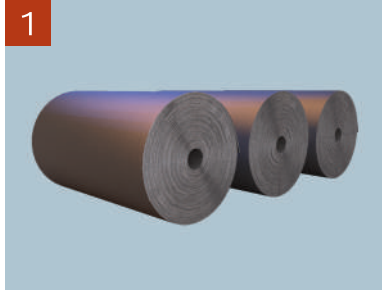
Bevel protection

27

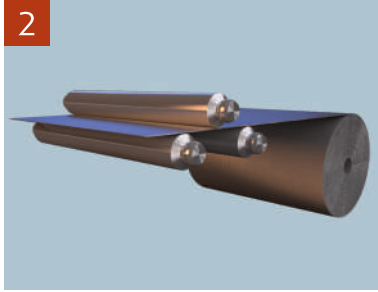


Bundling

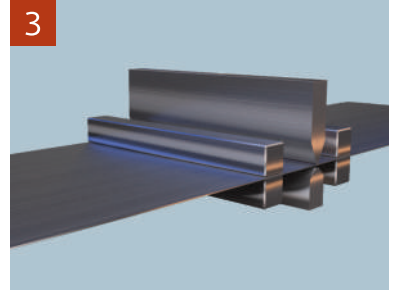
WELDED PIPES PRODUCTION



1
Coil storage



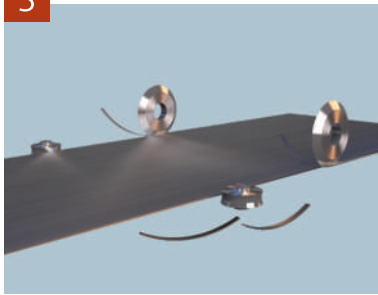
2
Uncoiling



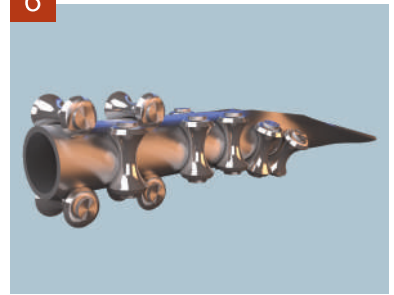
3
Coil ends cutting&welding



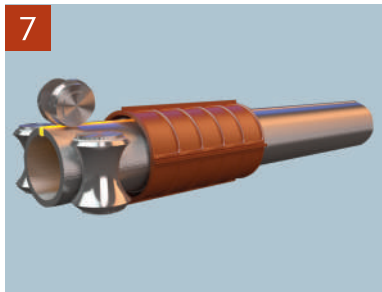
4
Accumulating



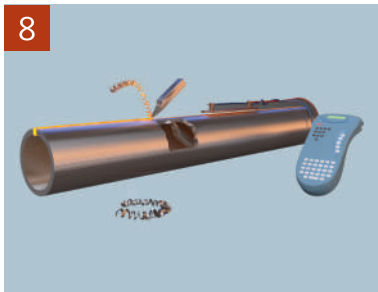
5
Edge trimming and edge milling



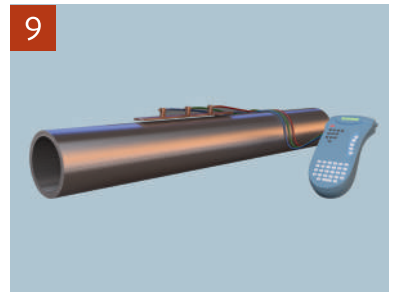
6
Forming



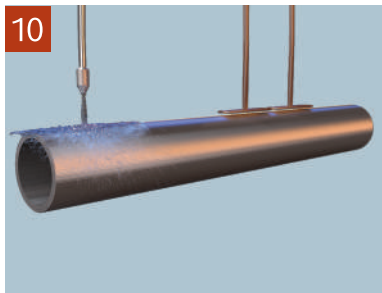
7
ERW/HFI welding



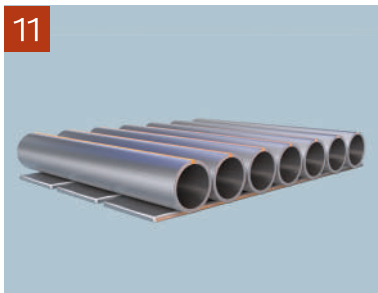
8
OD/ID scarfing



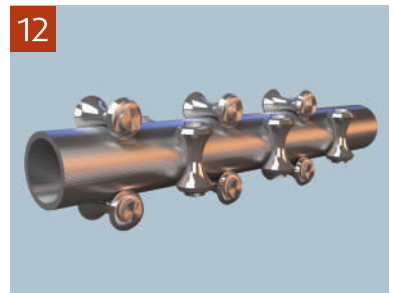
9
On line seam UST



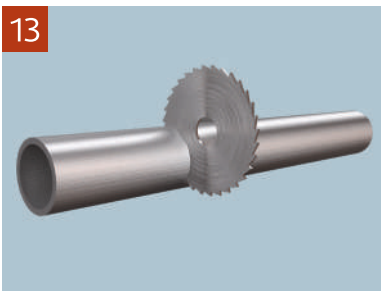
10
Seam annealing



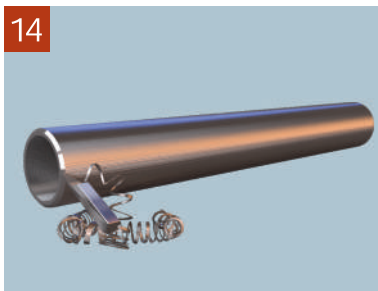
11
Cooling



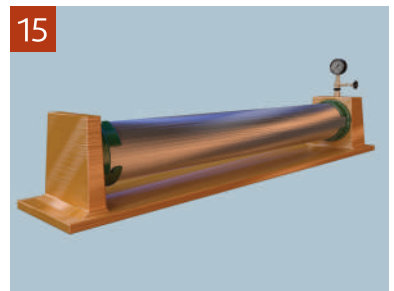
12
Sizing



13
Cut to length



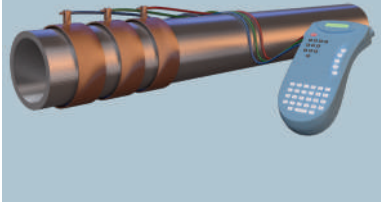
14
Ends beveling



15
Hydrotesting

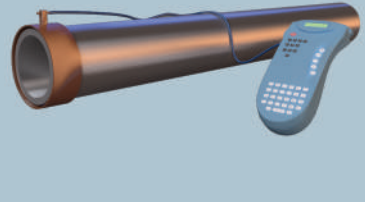
WELDED PIPES PRODUCTION

16



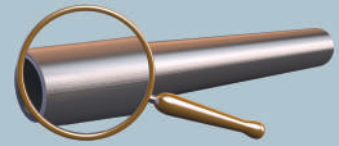
Final ultrasonic inspection

17



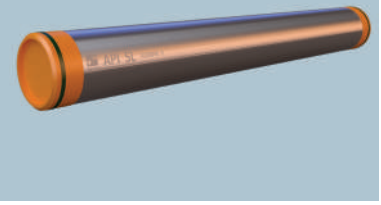
Wet MPI on pipe ends

18



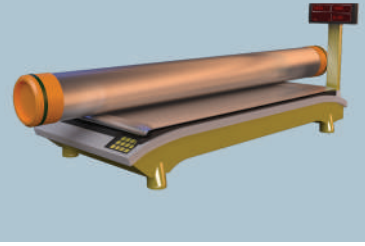
Final visual inspection

19



WMS bevel protect

20



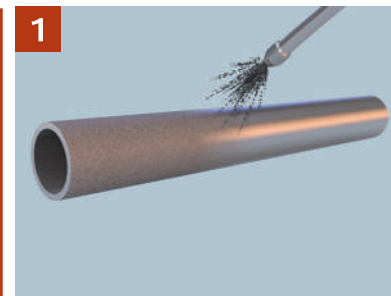
Weighing

21

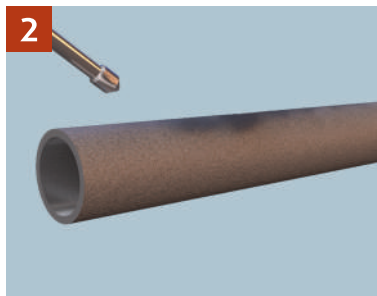


Pipes storing

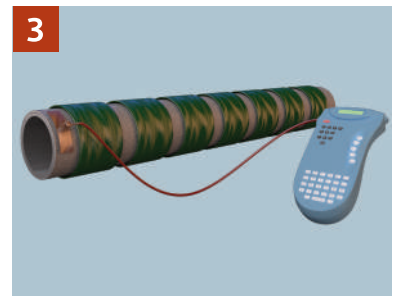
3-LAYER POLYETHYLENE/POLYPROPYLENE COATING FUSION BONDED EPOXY COATING



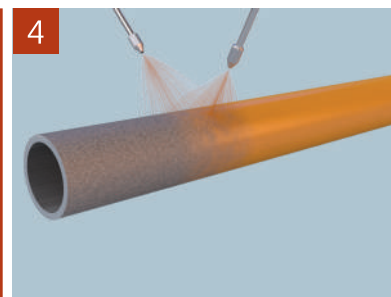
1 Shot blasting



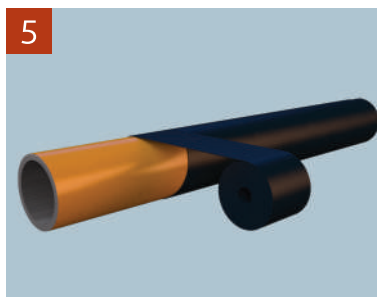
2 Dust removal



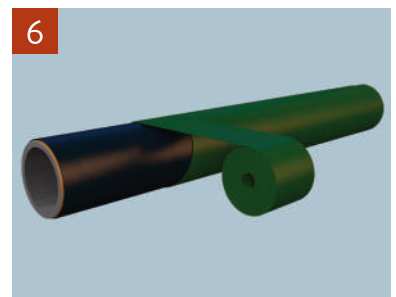
3 Induction heating



4 Epoxy powder application



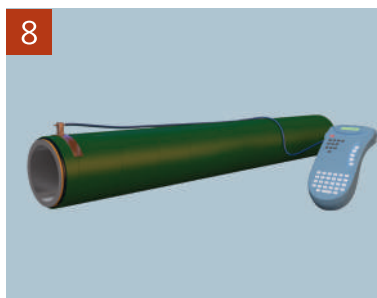
5 Adhesive application



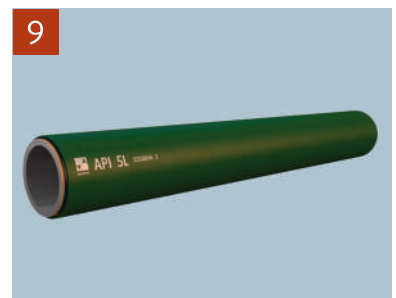
6 Polyethylen application



7 Pipe cooling



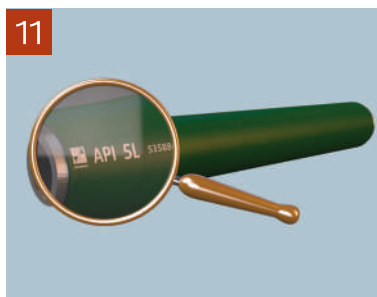
8 On-line holiday test



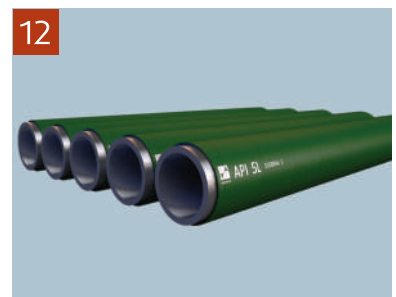
9 Pipe marking



10 Pipe ends processing



11 Final visual inspection marking ends protect



12 Storing

LIST OF ACTIVE NORMATIVE AND TECHNICAL DOCUMENTATION

GOST 632-80	Casing pipes with couplings. Technical conditions
GOST 633-80	Tubing pipes and couplings for them. Specifications
GOST 8731-74	Seamless hot-deformed steel pipes. Specifications
GOST 8732-78	Seamless hot-deformed steel pipes. Range
GOST 10705-80	Electrically welded steel tubes. Specifications
GOST 10704-91	Electrically welded steel line-weld tubes. Range
GOST 20295-85	Steel welded pipes for gas-and-oil transmission pipelines. Specifications
GOST 31447-2012	Steel welded pipes for trunk gas pipelines, oil pipelines and oil products pipelines. Specifications
GOST 31448-2012	Steel pipes with defensive covering for main gas and oil pipelines. Specifications
GOST 6238-77	Casing and coring pipes for geology-exploring drilling and nipples for them. Specifications
GOST 631-75	Internal-external upset drill pipes with couplings. Specifications
GOST 7909-56	Drill prospecting pipes and sockets for them. Specifications



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