الأنابيب السعودية

sspipe.com

A Name Built in Steel

نبذة عن الشركة السعودية لأنابيب الصلب
About Saudi Steel Pipes

Saudi Steel Pipe Company, SSP is the leading manufacturer of premium high frequency welded pipes in the Middle East & North African region. SSP offers customers top quality products and services in accordance to the highest international standards with integrated manufacturing units, advanced product testing facilities and excellence of it's people.

Headquartered in Dammam Saudi Arabia, with offices throughout the Kingdom, SSP have service and distribution network in over 20 countries, SSP delivers comprehensive range of products and services to Oil & Gas industry including line pipes, OCTG pipes with threading and coupling, hot induction bending and external coating. The company also supplies a wide range of black and galvanized pipes for construction and various other industry sectors.

By broadening the product availability, streamlining operations and focusing on collaborative relationships, SSP always strive to ensure its customers to have the access to best possible solutions to meet their expectations. Serving the world's leading oil & gas companies and regions major construction projects over the past several decades, SSP brand has come to stands for quality, trust and business leadership.

We manage our portfolio with clearly defined strategies and allocate resources to maximize value creation

Customer focus
Our teams work closely with customers to understand their needs which directs our production, supply chains and delivery activities.

Operational excellence
We sustain our business growth through continues investments on upgrading manufacturing facilities, product enhancement, technology development and streamlining supply chain to further improve performance and competitiveness.

Focus on high value added segments
Our strategic priority is to focus on high value-added and high growth market segments.

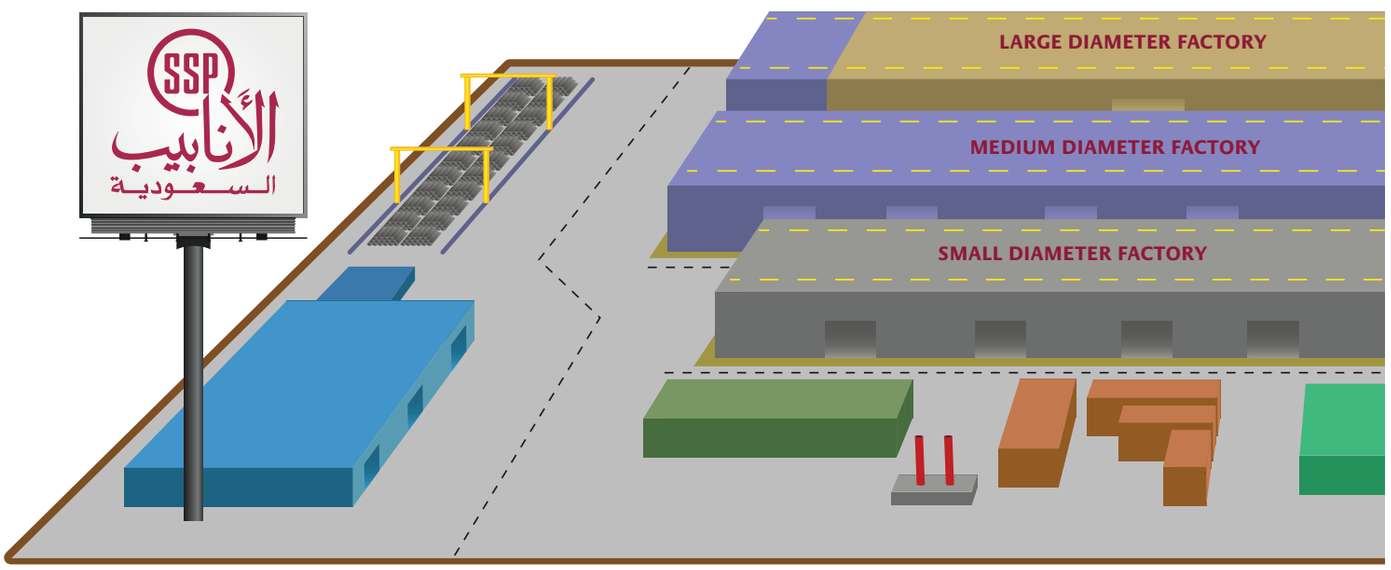
Business Diversity
We integrate our business across the energy sector – sharing skills and competencies, expand the business horizons and strategic partnerships with leading global firms.

Partners

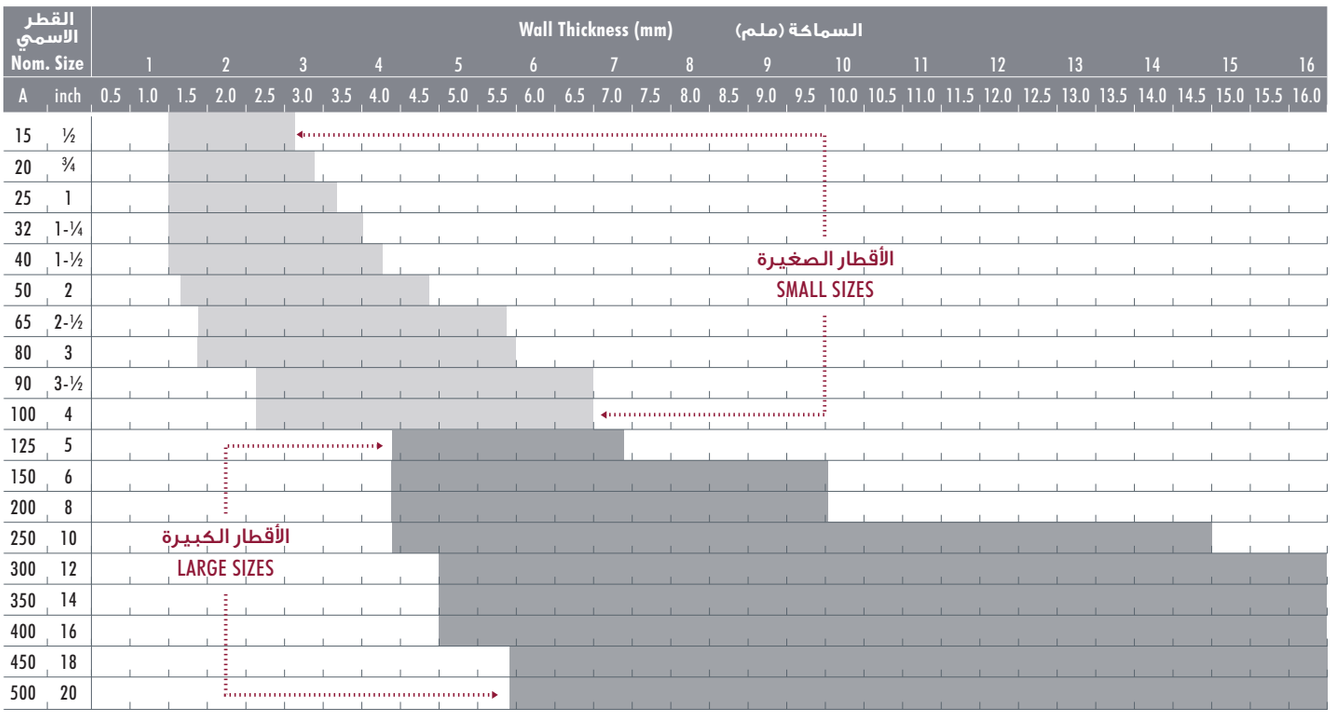
TSM ARABIA

Titanium and Steel Manufacturing Company
(TSM ARABIA) is a Process Equipment manufacturer for heat exchangers, pressure vessels and reactors, fully owned by Saudi Steel Pipe Company and commercial production started in 2014.

Global Pipe Company
Global Pipe Company (GPC) is a Saudi – German joint venture Limited Liability Company producing LSAW pipes, partnership between Erndtebruecker Eisenwerk, Germany (EEW), Saudi Steel Pipe Co. (SSP), Mr. Ahmed Al Khonaini and Pan Gulf Holding (PGH)



مجموعة المنتجات
Production Range



PRODUCTS INFORMATION
معلومات عن المنتجات

البيان Description	نطاق الأحجام Size Range	المواصفات Specifications	الطول Length	أطوال خاصة Special Length	الأطراف End Finish	حالة السطح Surface Condition
الأقطار الكبيرة Large Diameter	5" ~ 16"	• API 5L Grade -B • API 5L X42 ~ X70 • API 5L 5CT J55 and K55 • ASTM A53 Grade A and B • SASO 1011 (H) • ASTM A252 • BS 1387 (H)	Single and Double Random Length (6 to 16 meters)	Max : 18 m	• Threaded End (**TE**) • Threaded with Coupling (**TC**) • Bevelled end (**BV**) • Plain End (**PE**)	Natural Finish Varnish Coated / Oil Coated Galvanized for Coating • Fusion bonded epoxy coating (**FBE**) • Three Layer Polyethylene (**3LPE**) • Three Layer Polypropelene (**3LPP**)
الأقطار متوسطة Medium Diameter	2" ~ 8"	• 01- SAMSS 333 CLASS B Gr. X42 ~ X70 • 01- SAMSS 333 CLASS C Gr. X42 ~ X70 • SHELL DEP 31.40.20.37 • SHELL DEP 31.40.20.35 • ISO 3183 • FM • UL 6 • UL 852		Max : 16 m		
الأقطار الصغيرة Small Diameter	½" ~ 4"	• ASTM A53 Grade A • ASTM A500 (Scaffolding) • BS 1387 L, M (Blue & Green) • EN-10255 (L1, L2 ,M) • SASO 1011 (L, M, H) • ANSI C80.1 • EN 39 • EN-10219 • BS 4568 • BS 1139 • UL 852 • UL 6 • BSC • SBS • FM • UL 6	6m	3m-7.3m Shorter than 3m with special arrangement		

النظام الالكتروني المستمر لضبط العمليات
Continuous Electronic Process Control

Saudi Steel Pipe Company's commitment to product reliability begins with precise documentation of raw materials & continues through each step of manufacturing to a finished product stage for shipment. Each and every size, grade for different wall thickness of the pipe is tracked electronically through 12 stages of production. Within the system exists a wide range of reports as part of conformants to API, ISO documentation requirements & individual customer's needs.

SEAM ANNEALING WITH AUTOMATIC SEAM TRACKING:

The weld area and heat affected zone (HAZ) are normalised by reheating followed by cooling in a still air to ensure homogenous metallographic structure and eliminate residual stresses formed by forming and welding. This imparts good metallurgical and mechanical properties to the welded area. The weld seam is continually adjusted to center of weld line to ensure full penetration of heat treatment in the weld line and HAZ.

The essential seam annealing variables (temperature and power) are monitored and controlled in a continual basis by the CEPC system.

يبدأ تعهد وإلتزام **الشركة السعودية لأنابيب الصلب** تجاه موثوقية المنتج بضمان التوثيق الدقيق للمواد الخام والإستمرار في ذلك في كل خطوة من خطوات مرحلة التصنيع حتى مرحلة المنتج النهائي الجاهز للشحن. يمكن تتبع كل أنبوب إلكترونياً من حيث الحجم والدرجة والسماكة عبر ١٢ مرحلة مختلفة من مراحل الإنتاج. ويشتمل النظام القائم حالياً على مجموعة واسعة من التقارير التي تصدر كجزء من المطابقة لمتطلبات توثيق معهد البترول الأمريكي والآيزو والمتطلبات الخاصة للعميل .

نظام تتبع عملية اللحام آلياً

يتم ضبط منطقة اللحام والمنطقة المتأثرة بالحرارة من خلال إعادة التسخين ثم التبريد في الهواء لضمان هيكل معدني متجانس والقضاء على الإجهاد المتبقى بسبب عمليات التشكيل واللحام. هذا يؤدي إلى خلق خصائص معدنية وميكانيكية جيدة للمنطقة الملحومة. ويتم ضبط اللحام بشكل مستمر إلى مركز خط اللحام لضمان وصول المعالجة الحرارية بالكامل إلى خط اللحام والمنطقة المتأثرة بالحرارة.

ويتم تتبع العناصر الأساسية مثل درجة الحرارة والطاقة والتحكم فيها بشكل مستمر من خلال نظام CEPC.

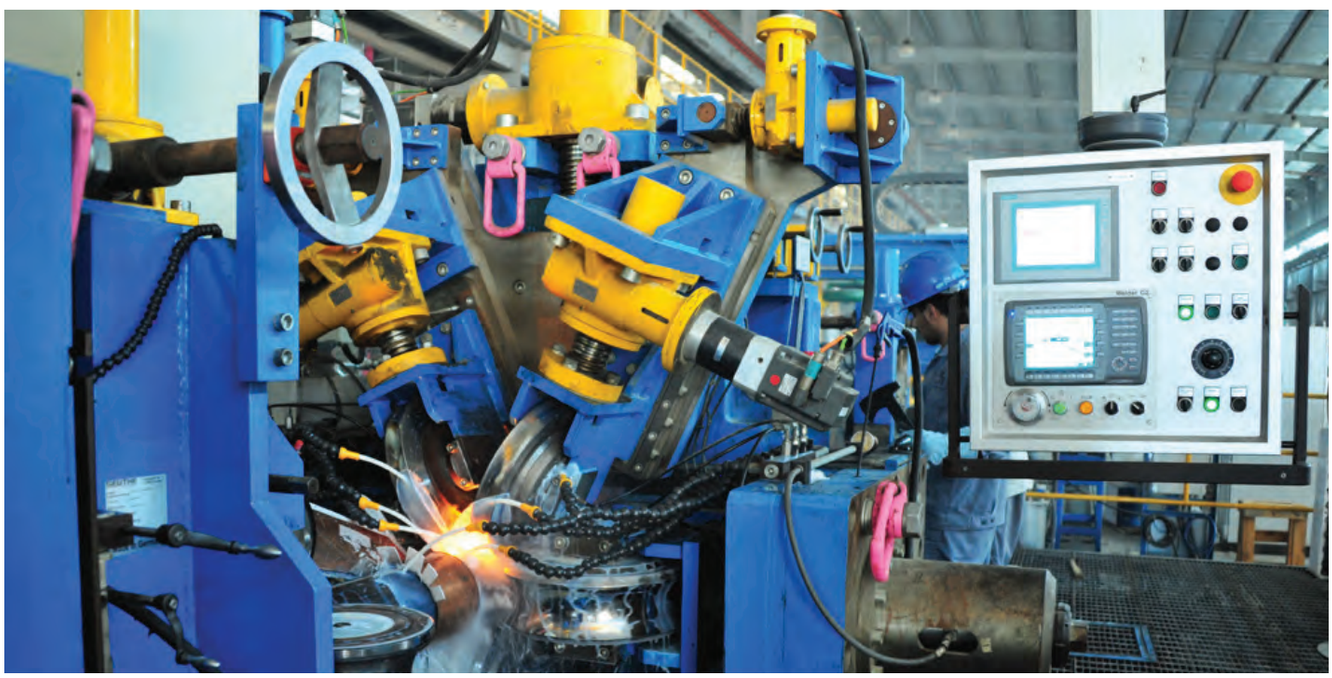
النظام الالكتروني المستمر لضبط العمليات
Continuous Electronic Process Control

WELDING VARIABLES CONTROL:

Beyond material traceability, another vital element of process control is monitoring and controlling critical variables in the welding process itself through Continuous Electronic process Control (CEPC) It is well recognized that the key to consistent weld quality is the maintenance of proper welding current. line speed, welding power and welding temperature. These variables are monitored and controlled on continual basis.

نظام التحكم في متغيرات عملية اللحام:

بالإضافة إلى نظام تتبع المواد، يبرز عنصر هام آخر للتحكم في العمليات التشغيلية ويركز هذا العنصر على تتبع وضبط المتغيرات الهامة التي تنطوي عليها عملية اللحام نفسها، وذلك من خلال النظام الإلكتروني المستمر للتحكم في العمليات. فمن المعروف أن أهم العناصر الأساسية التي تساهم في تحقيق الجودة والتناسق لعمليات اللحام تتركز في توفر تيار كهربائي سليم للحام، وسرعة خط الإنتاج، وقوة اللحام، ودرجة حرارة اللحام. ويتم تتبع هذه المتغيرات والتحكم فيها وضبطها بشكل مستمر.



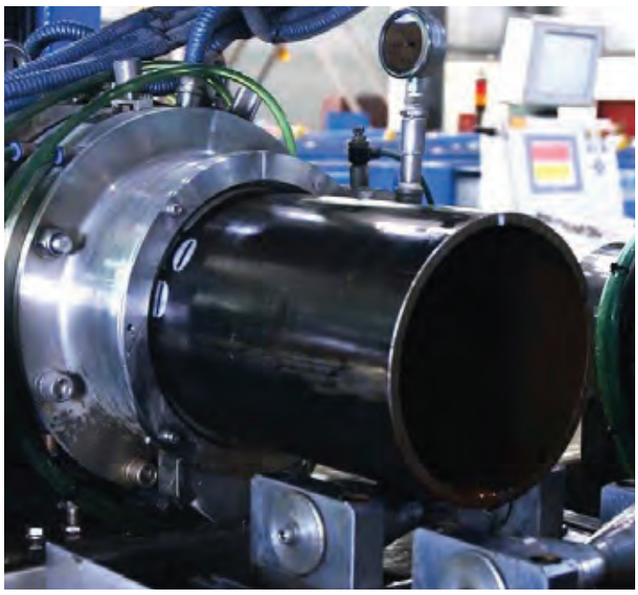
تتبع وضبط أهم متغيرات عملية اللحام:
MONITORED AND CONTROLLED CRITICAL WELDING VARIABLES:

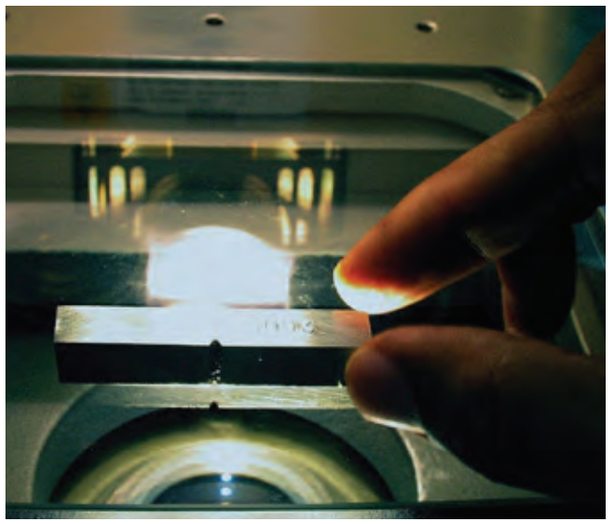
Power	✓	الطاقة
Current	✓	التيار
Temperature	✓	درجة الحرارة
Line speed	✓	سرعة الخط
Efficiency K-Factor*	✓	كفاءة عامل K*
Squeeze roll force	✓	قوة أسطوانات الكبس
Inside & outside weld profile	✓	مقاطع اللحام الداخلية والخارجية
Seam annealing temperature	✓	درجة حرارة منطقة اللحام

ضمان الجودة
Quality Assurance

Beyond the commitment to product reliability through process control, SSP has invested heavily onto building a world-class metallurgical laboratory with all the tools essential for both innovative product development efforts and comprehensive product quality testing & evaluation.

A team of experienced engineers and technicians are on hand to provide technical support to both our customers and SSP's production group.
Among the tools at their disposal is a full range spectrometer for chemical analysis of raw materials and pipe products. In addition, a state-of-the-art universal testing machine will allow for an array of bending, tensile, elongation and flattening test. The laboratory performs charpy impact tests, micro-hardness test, metallurgiacal examinations and assortment of other tsts, including Hydrogen Induced Cracking (HIC) and Sulfide Stress Cracking (SSC) evaluations, in accordance with industry or customer specifications.





بالإضافة إلى الالتزام بجودة المنتجات وموثوقيتها من خلال التحكم في العمليات التشغيلية، حرصت الشركة السعودية لأنابيب الصلب على الاستثمار بمبالغ كبيرة في تجهيز مختبر المعادن وفق أعلى المستويات العالمية. وقد تم تزويده بأحدث التجهيزات والأدوات اللازمة لإجراء أبحاث تطوير المنتجات المبتكرة، والاختبارات والفحوصات الشاملة التي تضمن جودة المنتجات.

ويضم المختبر نخبة من المهندسين والفنيين من ذوي الخبرة والكفاءة العالية المؤهلين لتقديم الدعم الفني لكل من العملاء وأقسام الإنتاج الأخرى.

ويشتمل المختبر على العديد من الأدوات والتجهيزات من بينها جهاز التحليل الطيفي للتحليل الكيميائي للمواد الخام ومنتجات الأنابيب، فضلا عن جهاز الاختبارات الميكانيكية الشامل لإجراء فحوصات الثني والشد والاستطالة والتسطح. كما يتم في المختبر إجراء فحص شاربي للصدمات، واختبارات الصلابة، واختبارات بنية المعدن، وغيرها من الاختبارات الأخرى التي تشمل اختبار الشرخ الحثي الهيدروجيني، واختبار التصدأ الشرخي الإجهادي الكبريتي وفق مواصفات الصناعة أو المواصفات التي يحددها العميل.

TECHNICAL REQUIREMENTS | LARGE DIAMETER

المواصفات Standard Specification	درجة الصلب Grades	التطبيقات Application	Chemical Composition (Max %) الخواص الكيميائية										Mechanical Properties الخواص الميكانيكية					
			C	Si	Mn	P	S	V	Nb	Ti	CEQ	PCM	قوة الخضوع Yield Strength		قوة الشد Tensile Strength		Ratio	الاستطالة Elongation (a)
													Max.	Min.	Max.	Min.	Max.	Min.
API 5L PSL1	B	Suitable for conveying gas, oil & water	0.26	-	1.20	0.030	0.030	c, d	c, d	d	-	-	245	-	415	-	-	$e = \frac{1940 \times A^{0.2}}{U\ 0.9}$
	X42		0.26	-	1.30	0.030	0.030	d	d	d	-	-	290	-	415	-	-	
	X46		0.26	-	1.40	0.030	0.030	d	d	d	-	-	320	-	435	-	-	
	X52		0.26	-	1.40	0.030	0.030	d	d	d	-	-	360	-	460	-	-	
	X56		0.26	-	1.40	0.030	0.030	d	d	d	-	-	390	-	490	-	-	
	X60		0.26	-	1.40	0.030	0.030	f	f	f	-	-	415	-	520	-	-	
	X65		0.26	-	1.45	0.030	0.030	f	f	f	-	-	450	-	535	-	-	
	X70		0.26	-	1.65	0.030	0.030	f	f	f	-	-	485	-	570	-	-	
API 5L PSL2	B	Suitable for conveying gas, oil & water	0.22	0.45	1.20	0.025	0.015	0.05	0.05	0.04	0.43	0.25	245	450	415	760	0.93	
	X42		0.22	0.45	1.30	0.025	0.015	0.05	0.05	0.04	0.43	0.25	290	495	415	760	0.93	
	X46		0.22	0.45	1.30	0.025	0.015	0.05	0.05	0.04	0.43	0.25	320	525	435	760	0.93	
	X52		0.22	0.45	1.40	0.025	0.015	d	d	d	0.43	0.25	360	530	460	760	0.93	
	X56		0.22	0.45	1.40	0.025	0.015	d	d	d	0.43	0.25	390	545	490	760	0.93	
	X60		0.12 f	0.45 f	1.60 f	0.025	0.015	g	g	g	0.43	0.25	415	565	520	760	0.93	
	X65		0.12 f	0.45 f	1.60 f	0.025	0.015	g	g	g	0.43	0.25	450	600	535	760	0.93	
	X70		0.12 f	0.45 f	1.70 f	0.025	0.015	g	g	g	0.43	0.25	485	635	570	760	0.93	
ASTM A53	A	Carbon Steel Pipes for Ordinary piping	0.25	-	0.95	0.05	0.045		-	-	-	-	205	-	330	-	-	
	B		0.30	-	1.20	0.05	0.045		-	-	-	-	240	-	415	-	-	

NOTE: c, d & f – for other requirements, please refer to API Spec 5L Standard.

NOTE: e, h, i & j – for other requirements, please refer to API Spec 5L Standard. Requirements for Sour and Off-Shore services shall be as per API Spec 5L Standard.

NOTE (a): Where: e = Minimum elongation in 50.8mm in percent rounded to the nearest percentage.
A = Cross-sectional area of the tensile test specmen in sq.in (mm2) based on specified outside diameter or nominal specimen width and specified wall thickness rounded to the nearest 0.01 sq.in. (6.5 mm2) or 0.75 sq.in.(484 mm2), whichever is smaller
U = Specified minimum tensile strength, Mpa

TECHNICAL REQUIREMENTS | SMALL DIAMETER

المواصفات Standard Specification	درجة الصلب Grades	التطبيقات Application	الخواص الكيميائية Chemical Composition (Max %)					Mechanical Properties الخواص الميكانيكية				
			C	MN	P	S	Si	قوة الخضوع Yield Strength		قوة الشد Tensile Strength		الاستطالة Elongation (a)
								Max.	Min.	Max.	Min.	Min.
ASTM	G-A	Carbon Steel Pipes for Ordinary Piping	0.25	0.95	0.05	0.045	0.03*	205	-	330	-	$e = \frac{1940 \times A^{0.2}}{U\ 0.9}$
BS 1387	(L / M)	Carbon Steel Pipes for Ordinary Piping	0.2	1.2	0.045	0.045	0.03*	195	-	320	460	20
BSC	-	Carbon Steel Pipes for Ordinary Piping	0.2	1.2	0.045	0.045	0.03*	195	-	320	460	20
SGB		Carbon Steel Pipes for Ordinary Piping	0.2	-	0.045	0.045	0.03*	175.5	-	310	-	17
EN 10255	(M / L1 / L2)	Conveyance of Fluids & Other Applications	0.2	1.4	0.035	0.03	0.03*	195	-	320	520	20
SASO	(L / M / H)	General Purpose	0.2	1.2	0.045	0.045	0.03*	195	-	310	510	17
SBS	-	Ordinary & Structural	0.25	-	0.06	0.06	0.03*	175.5	-	310.9	510.9	17
BS 4568		Electrical Wiring	0.1	0.25～0.50	0.04	0.04	0.03*	275	-	373	-	15
BS 1139		Scaffolding	0.2	-	0.05	0.05	0.03*	235	-	340	-	24
EN 39		Scaffolding	0.2	1.4	0.04	0.045	0.03*	235	-	340	520	24
EN 10219		Scaffolding	0.22	1.6	0.035	0.035	0.03*	355	-	470	630	20
ANSI C80.1		Electrical Rigid Metal	0.2	1.2	0.045	0.045	0.03*	205	-	330	-	$e = \frac{1940 \times A^{0.2}}{U\ 0.9}$
UL - 6		Conduit-Steel	0.2	1.2	0.045	0.045	0.03*	205	-	330	-	

NOTE: e = Minimum elongation in 50.8mm in percent rounded to the nearest percentage. **A** = Cross-sectional area of the tensile test specmen in sq.in (mm2) based on specified outside diameter or nominal specimen width and specified wall thickness rounded to the nearest 0.01 sq.in. (6.5 mm2) or 0.75 sq.in.(484 mm2), whichever is smaller

المتطلبات الفنية / الأقطار الكبيرة

اختبار التسطح Flattening Test (b)	اختبار الثني Bending Test	اختبار الضغط الهيدروستاتيكي Hydrostatic Test	الاختبار المجهري لبنية المعدن Metallographic Examination	اختبار الصدمات Impact Test (PSL2)
Applied for grades ≥ Grade A and LW pipe with D< 323.9mm: **a.** For grade ≥ X60 with t ≥ 12.7mm: H = 2/3 D **b.** For other Grade & thickness combination: H = 1/2 D **c.** For pipe with (D/t) > 10: H = 1/3D The test shall be made alternatively with the weld at 00 and 900 .		**P** = 2St / D **P** = Test pressure, psi (kg/cm2) **S** = Fiber stress, psi (kg/cm2) **t** = Specified wall thickness, in. (mm) **D** = Specified outside diameter, in. (mm)	Metallographic Examination is performed to demonstrate the effectiveness of heat treatment of the entire HAZ (Heat Affected Zone).	Impact Test value in accordance to customer requirements. The test consists of three specimens.
Applicable for standard weight pipe of ND > 2in.: 1st: Ductility of the weld: H = 2/3 D 2nd: Ductility of base metal: H = 1/3 D (> 5t) The test shall be made alternately with the weld at 00 and 900	Applicable for ND < 2in.: = 900 x 12ND When ordered for close coiling: = 1800 x 8ND	Specified respectively in size and grade		

NOTE (b): H = Distance between exterior surface D = Outside Diameter t = Wall Thickness in' mm'

المتطلبات الفنية / الأقطار الصغيرة

اختبار التسطح Flattening Test (b)	اختبار الثني Bending Test	اختبار الضغط الهيدروستاتيكي Hydrostatic Test	الاختبار المجهري لبنية المعدن Metallographic Examination	اختبار الصدمات Impact Test (PSL2)	اختبار الشحنات Eddy Current Test
Applied for ND > 2 in	Applied for ND ≤ 2 in	Specified respectively in size	-	-	Applied for ND ≥ 2 in
Applied for ND > 2 in	Applied for ND ≤ 2 in	bar 50	-	-	-
Applied for ND > 2 in	Applied for ND ≤ 2 in	bar 50	-	-	-
Applied for ND > 2 in	Applied for ND ≤ 2 in	bar 50	-	-	-
Applied for ND > 2 in	Applied for ND ≤ 2 in	bar 50	-	-	-
Applied for ND > 2 in	Applied for ND ≤ 2 in	bar 50	-	-	-
Applied for ND > 2 in	Applied for ND ≤ 2 in	bar 50	-	-	-
-	Applied	bar 50	-	-	-
NA	NA	NA	-	-	-
Applied	NA	NA	-	-	-
NA	NA	NA	-	-	-
NA	Applied for ND ≤ 6 in	NA	-	-	-
NA	Applied for ND ≤ 6 in	NA	-	-	-

U = Specified minimum ultimate tensile strength MPa

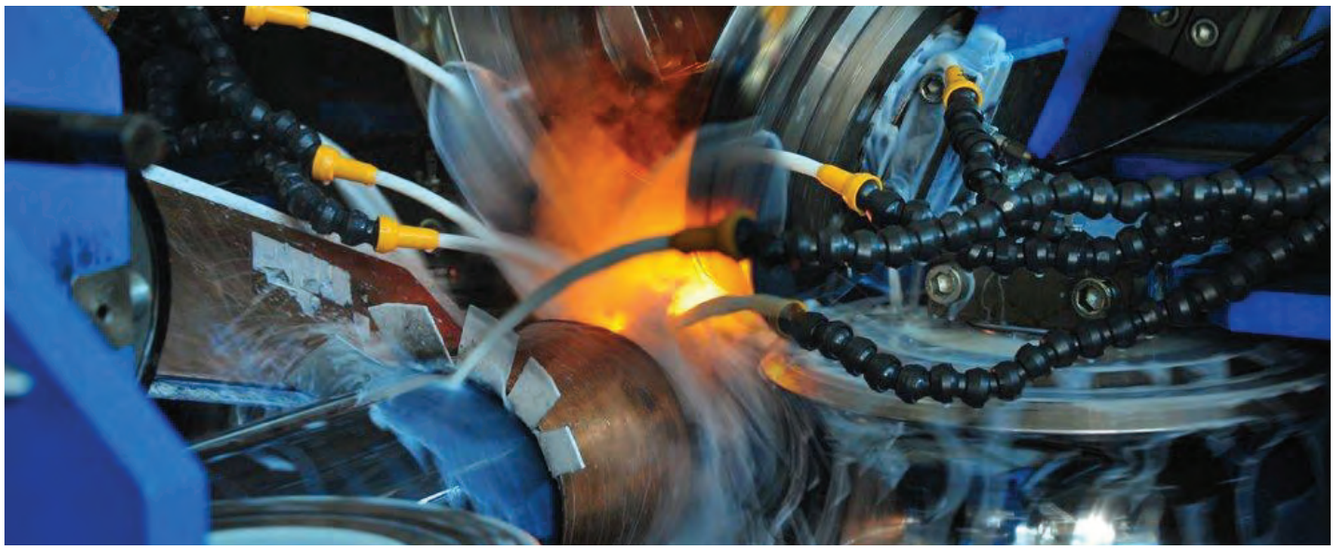
Offering the highest quality steel pipes to major construction projects


نوفر أنابيب صلب وفق أعلى مستويات
الجودة لمشاريع البناء والإنشاء الهامة

عملية تصنيع الأنابيب الملحومة بالحث الحراري عالي التردد
HFI Welded Manufacturing Process

A controlled high precision welded steel pipes formed by rolling hot rolled coil (HRC) and welding is the seam with High Frequency Induction Heating (HFI) process. Pressure is used to forge the material under elevated temperature to melt together, and no filler material is added to the weld (only Forging). The welding apparatus contains an induction coil that is energized with a high-frequency electric current. This generates a high-frequency electromagnetic field that acts on work piece with no contact between the coil and the pipe surface.

عملية لحام ذات دقة عالية، يتم التحكم بأنابيب الصلب التي يتم تشكيلها من لفات الحديد المسحوب على الساخن بواسطة اللحام الحثي عالي التردد. ويستخدم الضغط تحت درجة حرارة مرتفعة في عملية اللحام دون إضافة مواد لطرفي الأنبوب. يحتوي جهاز اللحام على ملف الحث الذي يقوم بتوليد تيار كهربائي عالي التردد. ويولّد هذا الملف مجالا كهرومغناطيسياً عالي التردد على منطقة اللحام دون اتصال بين لفات الحديد وسطح الأنابيب.



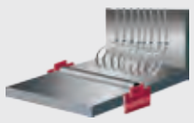
HF - ERW PIPE MANUFACTURING PROCESS FLOWCHART

1. UNCOILLING & LEVELING

2. COIL ACCUMLATOR

3. SIDE TIMMER / EDGE MILING

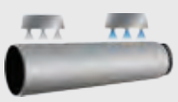
4. ULTRASONIC STRIP LAMINATION



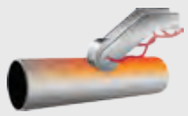
5. FORMING

10. SIZING

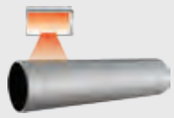
9. AIR COOLING WATER COOLING



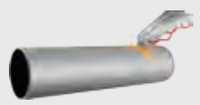
8. SEAM ANNEALING



7. ULTRASONIC INSPECTION OF WELD SEAM



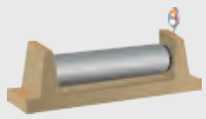
6. H.F. ELECTRIC RESISTANCE WELDING



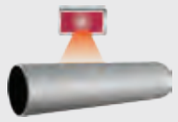
11. CUTTING

12. END FACING

13. HYDROSTATIC TESTING



14. ULTRASONIC INSPECTION OF FULL BODY



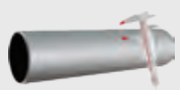
15. ULTRASONIC INSPECTION OF TUBE END

20. SHIPPING

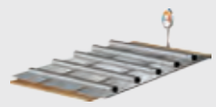
19. STORING PIPE

18. MILL COATING / MARKING

17. VISUAL & DIMENSIONAL CHECK



16. WEIGHING & MEASURING



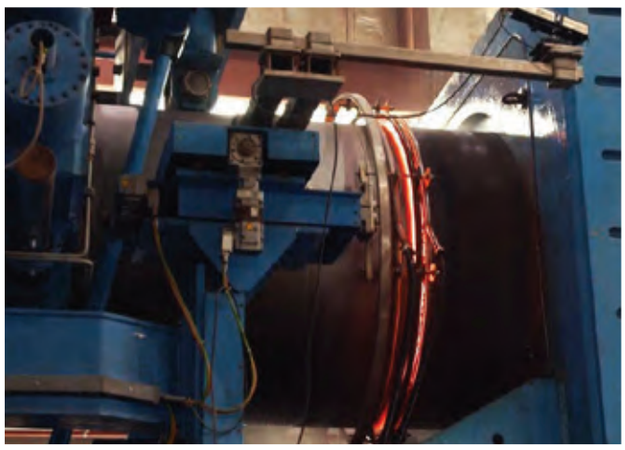
MANUFACTURING CAPABILITIES

SSP high frequency electric-welded pipes are widely used throughout the oil and gas industry, construction and other industrial applications.

إمكانيات التصنيع

تستخدم أنابيب الصلب الملحومة من الشركة السعودية لأنابيب الصلب في صناعة النفط والغاز، وأعمال البناء، وغيرها من الاستخدامات الصناعية.

PRODUCT LINE خط الإنتاج	SIZE RANGES نطاق الأحجام	ANNUAL CAPACITY الطاقة الإنتاجية السنوية
HFI WELDED PIPES	½″ to 20″	350,000 MTY
HOT INDUCTION BENDS	2″ to 64″	30,000 MT
EXTERNAL COATING	4″ to 30″	1 Million M^2
THREADING & COUPLING	6-⅝″ to 20″	3 Million FT



أنابيب ASTM A53 G-A SCH 40 / SASO SSA 1011 الثقيلة

ASTM A53 G-A SCH 40 / SASO SSA 1011 - Heavy

USES OF ASTM:

- Chilled Water System
- Water Lines
- Pedestrian Bridges
- Water Wells & Water Pumps
- Advertising Boards
- Guard Rail
- Firefighting & Fire Protection System
- Space Frame Structure
- Oil, Gas & Steam Line
- Fence
- Protective Barriers
- Boundaries

NOTE:
Permissible variations in weight and dimensions
Outside diameter : 1-1/2 inches and smaller: +/- 0.4
2 inches and larger : +/- 1%
Wall thickness: -12.5%
Weight: +/- 10%

أنابيب الصلب المجلفنه والسوداء حسب المواصفات السعودية رقم ١٠١١ الثقيلة والمعادلة للمواصفات الأمريكية

CARBON STEEL PIPES FOR ORDINARY PIPING CONFIRMING TO SASO STANDARD SSA 1011- HEAVY EQUIVALENT TO ASTM A53 G-A, E.R.W. STEEL PIPES, BLACK AND HOT DIPPED ZINC COATED

الحجم الاسمي Nominal Size		القطر الخارجي Ouside Diameter		السماكة Wall Thickness		Nominal Weight الوزن				Test Pressure اختبار الضغط		عدد الأنابيب في الربطة
						Plain End		Thread and Coupling		Plain Ends		Pieces Per Bundle
A	B	inch	mm	inch	mm	kg/m	kg/ft	kg/m	kg/ft	psi	kg/cm²	
15	1/2	0.840	21.30	0.109	2.770	1.27	0.39	1.27	0.39	700	50.0	120
20	3/4	1.050	26.70	0.113	2.870	1.69	0.51	1.69	0.51	700	50.0	84
25	1	1.315	33.40	0.133	3.380	2.50	0.76	2.50	0.76	700	50.0	60
32	1-1/4	1.660	42.20	0.140	3.560	3.39	1.03	3.40	1.03	1200	85.0	42
40	1-1/2	1.900	48.30	0.145	3.680	4.05	1.23	4.04	1.24	1200	85.0	36
50	2	2.375	60.30	0.154	3.910	5.44	1.66	5.46	1.67	2300	162.0	26
65	2-1/2	2.875	73.00	0.203	5.160	8.63	2.63	8.67	2.64	2500	176.0	18
80	3	3.500	88.90	0.216	5.490	11.29	3.44	11.35	3.45	2220	156.0	14
90	3-1/2	4.000	101.60	0.226	5.740	13.57	4.13	13.71	4.17	2030	143.0	12
100	4	4.500	114.30	0.237	6.020	16.07	4.89	16.23	4.94	1900	134.0	10
125	5	5.563	141.30	0.258	6.550	21.77	6.63	22.07	6.72	1670	118.0	8
150	6	6.625	168.28	0.280	7.110	28.26	8.61	28.58	8.70	1520	107.0	7
200	8	8.625	219.10	0.322	8.180	42.55	12.96	43.73	13.33	1340	95.0	5
250	10	10.750	273.00	0.365	9.270	60.29	18.36	63.36	19.32	1220	86.0	3
300	12	12.750	323.80	0.406	10.310	79.70	24.27	79.70	24.30	1150	81.0	1
350	14	14.000	355.60	0.438	11.130	94.55	28.79			1130	80.0	1
400	16	16.000	406.40	0.500	12.700	123.30	37.55			1120	79.0	1
450	18	18.000	457.00	0.562	14.270	155.87	47.46			1120	79.0	1
500	20	20.000	508.00	0.594	15.090	183.42	55.85			1070	76.0	1

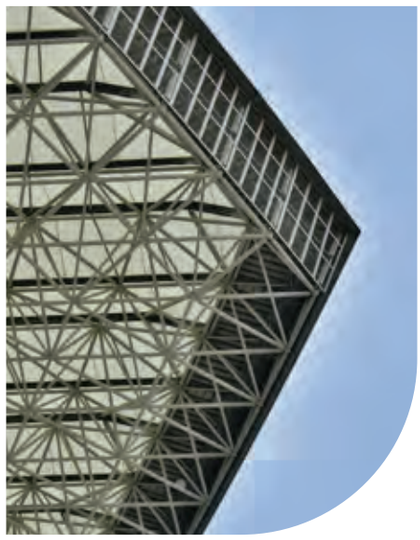
أنابيب الصلب المجلفنه والسوداء حسب المواصفات السعودية رقم ١٠١١ الثقيلة والمعادلة للمواصفات الأمريكية
CARBON STEEL PIPES FOR ORDINARY PIPING CONFIRMING TO SASO STANDARD SSA 1011- LIGHT & MEDIUM EQUIVALENT TO BS 1387-85 STEEL TUBES & TUBULARS SUITABLE FOR SCREWING TO BS21 PIPE THREADS

Class	Outside Diameter القطر الخارجي						Wall Thickness السماكة		Weight of Black Tube الوزن						عدد الأنابيب في الربطة Pieces Per Bundle
	Nominal Bore القطر الأسمى		Max الحد الأعلى		Min الحد الأنى				Plain End بدون جلبة			Screwed and socketed مسننة مع جلبة			
	mm ملم	in بوصة	in بوصة	mm ملم	in بوصة	mm ملم	in بوصة	mm ملم	lb/ft رطل /ق	kg/ft رطل /ق	kg/m كجم/م	lb/ft رطل /ق	kg/ft كجم/ق	kg/m كجم/م	
SSA-L BSL خفيف LIGHT	15	1/2	0.841	21.4	0.825	21.0	0.080	2.0	0.640	0.290	0.947	0.646	0.293	0.956	150
	20	3/4	1.059	26.9	1.041	26.4	0.092	2.3	0.944	0.428	1.38	0.954	0.433	1.39	105
	25	1	1.328	33.8	1.309	33.2	0.104	2.6	1.35	0.612	1.98	1.36	0.617	2.00	70
	32	1 - 1/4	1.670	42.5	1.650	41.9	0.104	2.6	1.73	0.785	2.54	1.75	0.794	2.57	48
	40	1 - 1/2	1.903	48.4	1.882	47.8	0.116	2.9	2.19	0.993	3.23	2.22	1.01	3.27	42
	50	2	2.370	60.2	2.347	59.6	0.116	2.9	2.76	1.25	4.08	2.81	1.27	4.15	30
	65	2 - 1/2	2.991	76.0	2.960	75.2	0.128	3.2	3.90	1.77	5.71	3.98	1.81	5.83	25
	80	3	3.491	88.7	3.460	87.9	0.128	3.2	4.58	2.08	6.72	4.69	2.13	6.89	20
	100	4	4.481	113.9	4.450	113.0	0.144	3.6	6.64	3.01	9.75	6.84	0.310	10.00	10
SSA-M BSM متوسط MEDIUM	15	1/2	0.856	21.7	0.831	21.1	0.104	2.6	0.822	0.373	1.21	0.828	0.376	1.22	120
	20	3/4	1.072	27.2	1.047	26.6	0.104	2.6	1.06	0.481	1.56	1.07	0.485	1.57	84
	25	1	1.346	34.2	1.316	33.4	0.128	3.2	1.64	0.744	2.41	1.65	0.748	2.43	60
	32	1 - 1/4	1.687	42.9	1.657	42.1	0.128	3.2	2.11	0.957	310	2.13	0.966	3.13	42
	40	1 - 1/2	1.919	48.8	1.889	48.0	0.128	3.2	2.43	1.10	3.57	2.46	1.12	3.61	36
	50	2	2.394	60.8	2.354	59.8	0.144	3.6	3.42	1.55	5.03	3.47	1.57	5.10	26
	65	2 - 1/2	3.014	76.6	2.969	75.4	0.144	3.6	4.38	1.99	6.43	4.46	2.02	6.55	18
	80	3	3.524	89.5	3.469	88.1	0.160	4.0	5.69	2.58	8.37	5.80	2.63	8.54	14
	100	4	4.524	114.9	4.459	113.3	0.176	4.5	8.14	3.69	12.20	8.34	3.78	12.50	10
	125	5	4.534	140.6	5.459	138.7	0.192	5.0	10.9	4.94	16.60	11.2	5.08	17.10	8
	150	6	6.539	166.1	6.459	164.1	0.192	5.0	12.9	5.85	19.70	13.3	6.03	20.30	7
BSH الثقيل HEAVY	32	1 - 1/4	1.689	42.4	0.825	42.1	0.158	4.0	2.549	1.159	3.8	2.569	1.168	3.83	42
	40	1 - 1/2	1.921	48.8	1.041	48.0	0.158	4.0	2.938	1.335	4.38	2.965	1.348	4.42	36
	50	2	2.394	60.8	1.309	59.8	0.177	4.5	4.152	1.887	6.19	4.199	1.969	6.26	26
	65	2 - 1/2	3.016	76.6	1.650	75.4	0.177	4.5	5.319	2.418	7.93	5.394	2.254	8.05	18
	80	3	3.524	89.5	1.882	88.1	0.197	5	6.908	3.14	10.3	7.043	3.201	10.5	14
	100	4	4.524	114.9	2.347	113.3	0.213	5.4	9.726	4.421	14.5	9.927	4.512	14.8	10
	125	5	4.535	140.6	2.960	138.7	0.213	5.4	12.01	5.457	17.0	12.34	5.61	18.4	8
	150	6	6.539	166.1	3.460	164.1	0.213	5.4	14.29	6.494	21.3	14.69	6.677	21.9	7

*Available upon request

NOTES: 1) Dimensions and weights are in accordance with ISO R65
2) Hydrostatic test pressure: 700psi (50kg/cm²)

Tolerances: Thickness:
- Light: - 8%
- Medium: - 10%



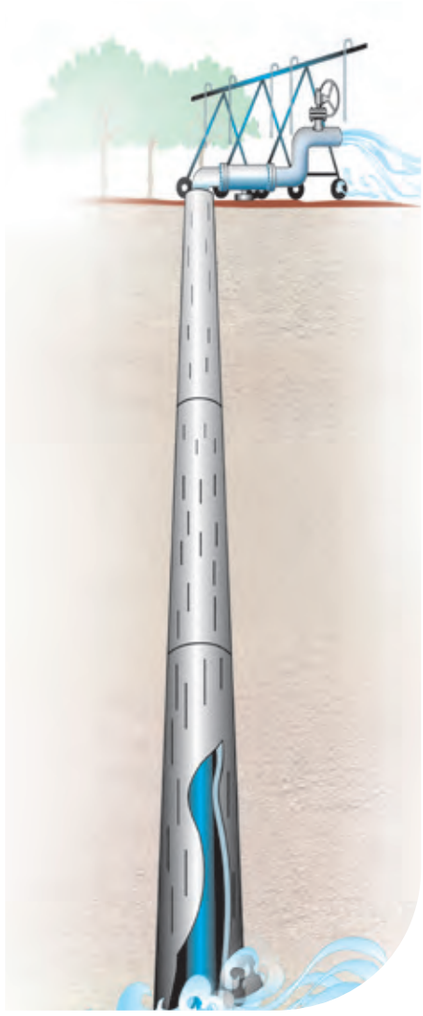
مواصفات المنتج ASTM A53

ASTM A53 Product Specifications

Nominal Size	Outside Diameter		Wall Thickness		Schedule No. and Weight Class	Nominal Weight		Test Pressure			
								Grade A		Grade B	
inch	inch	mm	inch	mm		kg/m	kg/ft	psi	bar	psi	bar
2	2.375	60.3	0.154	3.91	(STD) XS (80)	5.44	1.658	2300	159	2500	172
			0.218	5.54		7.48	2.280	2500	172	2500	172
			0.344	8.74		11.11	3.386	2500	172	2500	172
			0.436	11.07		13.44	4.097	2500	172	2500	172
2 ½	2.875	73	0.203	5.16	40 (STD) XS (80) XXS	8.63	2.630	2500	172	2500	172
			0.276	7.01		11.41	3.478	2500	172	2500	172
			0.375	9.52		14.90	4.542	2500	172	2500	172
			0.552	14.02		20.39	6.215	2500	172	2500	172
3	3.5	88.9	0.125	3.18	40 (STD) XS (80) XXS	6.72	2.048	1290	89	1500	100
			0.156	3.96		8.29	2.527	1600	110	1870	129
			0.188	4.78		9.92	3.024	1930	133	2260	156
			0.216	5.49		11.29	3.441	2220	153	2500	172
			0.250	6.35		12.93	3.941	2500	172	2500	172
			0.281	7.14		14.40	4.389	2500	172	2500	172
			0.300	7.62		15.27	4.654	2500	172	2500	172
			0.438	11.13		21.35	6.507	2500	172	2500	172
			0.600	15.24		27.68	8.437	2500	172	2500	172
3 ½	4	101.6	0.125	3.18	40 (STD) XS (80)	7.72	2.353	1120	77	1310	190
			0.156	3.96		9.53	2.905	1400	67	1640	113
			0.188	4.78		11.41	3.478	1690	117	1970	136
			0.226	5.74		13.57	4.136	2030	140	2370	163
			0.250	6.35		14.92	4.548	2250	155	2500	172
			0.281	7.14		16.63	5.069	2500	172	2500	172
			0.318	8.08		18.63	5.678	2800	193	2800	193
4	4.5	114.3	0.125	3.18	40 (STD) XS (80)	8.71	2.655	1000	69	1170	81
			0.156	3.96		10.78	3.286	1250	86	1460	101
			0.188	4.78		12.91	3.935	1500	103	1750	121
			0.219	5.56		14.91	4.545	1750	121	2040	141
			0.237	6.02		16.07	4.898	1900	131	2210	152
			0.250	6.35		16.90	5.151	2000	138	2330	161
			0.281	7.14		18.87	5.752	2250	151	2620	181
			0.312	7.92		20.78	6.334	2500	172	2800	193
			0.337	8.56		22.32	6.803	2700	186	2800	193
5	5.563	141.3	0.156	3.96	40 (STD) XS (80)	13.41	4.087	1010	70	1180	81
			0.188	4.78		16.09	4.904	1220	84	1420	98
			0.219	5.56		18.61	5.672	1420	98	1650	114
			0.258	6.55		21.77	6.635	1670	115	1950	134
			0.281	7.14		23.62	7.199	1820	125	2120	146
			0.312	7.92		26.05	7.940	2020	139	2360	163
			0.344	8.74		28.57	8.708	2230	154	2600	179
			0.375	9.52		30.94	9.431	2430	168	2800	193
6	6.625	168.3	0.188	4.78	40 (STD)	19.27	5.873	1020	71	1190	82
			0.219	5.56		22.31	6.800	1190	82	1390	96
			0.250	6.35		25.36	7.730	1360	94	1580	109
			0.280	7.11		28.26	8.614	1520	105	1780	123
			0.312	7.92		31.32	9.546	1700	117	1980	137
			0.344	8.74		34.39	10.482	1870	129	2180	151
			0.375	9.52		37.28	11.363	2040	141	2380	164
8	8.625	219.1	0.188	4.78	40 (STD) XS	25.26	7.699	780	54	920	64
			0.203	5.16		27.22	8.297	850	59	1000	69
			0.219	5.56		29.28	8.925	910	63	1070	74
			0.250	6.35		33.31	10.153	1040	72	1220	84
			0.277	7.04		36.31	11.067	1160	80	1350	93
			0.312	7.92		41.24	12.570	1300	90	1520	105
			0.322	8.18		42.55	12.969	1340	93	1570	109
			0.344	8.74		45.34	13.820	1440	100	1680	116
			0.375	9.52		49.20	14.996	1570	109	1830	127
			0.406	10.31		53.08	16.179	1700	118	2000	138
			0.438	11.13		57.08	17.398	1830	127	2130	147
			0.500	12.70		64.64	19.702	2090	145	2430	168

APPLICATION FOR ASTM A53

- Water well casing
- Water pipelines
- Chilled water system
- Fire fighting
- Construction applications such as fences, protective barriers, etc.



Nominal Size	Outside Diameter		Wall Thickness		Schedule No. and Weight Class	Nominal Weight		Test Pressure			
								Grade A		Grade B	
inch	inch	mm	inch	mm		kg/m	kg/ft	psi	bar	psi	bar
			0.188	4.78		31.62	9.638	630	44	730	51
			0.203	5.16		34.08	10.388	680	47	800	56
			0.219	5.56		36.67	11.177	730	51	860	60
			0.250	6.35		41.75	12.725	840	58	980	68
			0.279	7.09		46.49	14.170	930	65	1090	76
10	10.75	273	0.303	7.80		51.01	15.548	1030	71	1200	83
			0.344	8.74		56.96	17.361	1150	80	1340	93
			0.365	9.27	40 (STD)	60.29	18.376	1220	85	1430	99
			0.438	11.13		71.87	21.906	1470	402	1710	118
			0.500	12.70	XS	81.52	24.847	1670	116	1950	135
			0.594	15.09		95.97	29.252	1990	138	2320	160
			0.203	5.16		40.55	12.360	570	40	670	47
			0.219	5.56		43.63	13.298	620	43	720	50
			0.250	6.35		49.71	15.152	710	49	820	57
			0.281	7.14		55.75	16.993	790	55	930	65
			0.312	7.92		61.69	18.803	880	61	1030	71
			0.330	8.38		65.18	19.867	930	65	1090	75
12	12.75	323.8	0.344	8.74		67.90	20.696	970	67	1130	78
			0.375	9.52	STD	73.78	22.488	1060	73	1240	86
			0.406	10.31	40	79.70	24.293	1150	80	1340	93
			0.438	11.13		85.82	26.158	1240	86	1440	100
			0.500	12.70	XS	97.43	29.697	1410	98	1650	114
			0.562	14.27		108.92	33.199	1590	110	1850	128
			0.625	15.88		121.39	36.999	1770	122	2070	143
			0.210	5.33		46.04	14.033	540	38	630	44
			0.219	5.56		47.99	14.627	560	39	660	46
			0.250	6.35		54.69	16.670	640	45	750	52
			0.281	7.14		61.35	18.699	720	50	840	58
			0.312	7.92		67.90	20.696	800	55	940	65
			0.344	8.74		74.76	22.787	880	61	1030	71
14	14	355.6	0.375	9.52	STD	81.25	24.765	960	67	1120	78
			0.438	11.13	40	94.55	28.819	1130	78	1310	91
			0.469	11.91		100.94	30.767	1210	84	1410	98
			0.500	12.70	XS	107.39	32.732	1290	89	1500	104
			0.594	15.09		126.71	38.621	1530	106	1790	124
			0.625	15.88		133.69	40.749	1600	111	1880	130
			0.219	5.56		54.96	16.752	490	34	570	40
			0.250	6.35		62.64	19.093	560	39	660	46
			0.281	7.14		70.30	21.427	630	44	740	51
			0.312	7.92		77.83	23.723	700	49	820	57
			0.344	8.74		85.71	26.124	770	53	900	62
16	16	406.4	0.375	9.52	STD	93.17	28.398	840	58	980	68
			0.438	11.13	40	108.49	33.068	990	69	1150	80
			0.469	11.91		115.86	35.314	1060	73	1230	85
			0.500	12.70	(XS)	123.30	37.582	1120	74	1310	91
			0.562	14.27		138.49	42.212	1280	89	1490	103
			0.625	15.88		153.90	46.907	1420	98	1650	114
			0.250	6.35		70.60	21.519	500	35	580	40
			0.281	7.14		79.24	24.152	560	39	660	46
			0.312	7.92		87.75	26.746	620	43	730	51
			0.344	8.74		96.66	29.462	690	48	800	56
			0.375	9.52	STD	105.10	32.034	750	52	880	61
18	18	457	0.406	10.31		113.62	34.631	810	56	950	66
			0.438	11.13		122.43	37.317	880	61	1020	71
			0.469	11.91		130.78	39.862	940	65	1090	76
			0.500	12.70	XS	139.20	42.428	1000	69	1170	81
			0.562	14.27	40	155.87	47.509	1120	73	1310	91
			0.625	15.88		174.96	53.328	1260	87	1470	102
			0.250	6.35		78.55	23.942	450	31	520	36
			0.281	7.14		88.19	26.880	510	36	590	41
			0.312	7.92		97.67	29.770	560	39	660	46
			0.344	8.74		107.60	32.796	620	43	720	50
			0.375	9.52	STD	117.02	35.668	680	47	790	55
20	20	500	0.406	10.31		126.53	38.566	730	51	850	59
			0.438	11.13		136.37	41.566	790	55	920	64
			0.469	11.91		145.70	44.409	850	59	950	66
			0.500	12.70	XS	155.12	47.281	900	62	1050	73
			0.594	15.09	40	183.42	55.906	1070	74	1250	87
			0.625	15.88		193.24	58.900	1130	78	1320	91

استخدامات أنابيب ASTM

- تبطين آبار المياه
- خطوط نقل المياه
- تمديدات التكييف
- نظم مكافحة الحريق
- العديد من الاستخدامات الإنشائية (مثل الأسوار، حواجز الحماية .... الخ)

Trusted partner for general processing applications

الشريك المعتمد ..
لاستخدامات لا حصر لها

Reliable solutions to OCTG segment

حلول متكاملة في مجال تبطين الآبار

مواصفات EN 10255
EN 10255 Specifications

EN 10255 TYPE L1

Specified Outside Diameter D (mm)	Thread Size R	Outside Diameter		Wall Thickness T (mm)	M Medium Series		Pieces Per Bundle
		Maximum (mm)	Minimum (mm)		Mass Per Unit Length of Bare Tube		
					Plain End (kg/m)	Threaded & Socketed (kg/m)	
21.3	½	21.8	21	2.6	1.21	1.22	120
26.9	¾	27.3	26.5	2.6	1.56	1.57	84
33.7	1	34.2	33.3	3.2	2.41	2.43	60
42.4	1 ¼	42.9	42	3.2	3.1	3.13	42
48.3	1 ½	48.8	47.9	3.2	3.56	3.6	36
60.3	2	60.8	59.7	3.6	5.03	5.1	26
76.1	2 ½	76.6	75.3	3.6	6.42	6.54	18
88.9	3	89.5	88	4	8.36	8.53	14
114.3	4	115	113.1	4.5	12.2	12.5	10
139.7	5	140.8	138.5	5	16.6	17.1	8
165.1	6	166.5	163.9	5	19.8	20.4	7

EN 10255 TYPE L2

Specified Outside Diameter D (mm)	Thread Size R	Outside Diameter		Wall Thickness T (mm)	M Medium Series	
		Maximum (mm)	Minimum (mm)		Mass Per Unit Length of Bare Tube	
					Plain End (kg/m)	Threaded & Socketed (kg/m)
21.3	½	21.7	21.0	2.3	1.08	1.09
26.9	¾	27.1	26.4	2.3	1.39	1.40
33.7	1	34.0	33.2	2.9	2.20	2.22
42.4	1 ¼	42.7	41.9	2.9	2.82	2.85
48.3	1 ½	48.6	47.8	2.9	3.24	3.28
60.3	2	60.7	59.6	3.2	4.49	4.56
76.1	2 ½	76.3	75.2	3.2	5.73	5.85
88.9	3	89.4	87.9	3.6	7.55	7.72
114.3	4	114.9	113.0	4.0	10.8	11.1

NOTE: Pieces per bundle: Not determined yet (to be checked by PCD & Production Dept.)

EN 10255 M SERIES

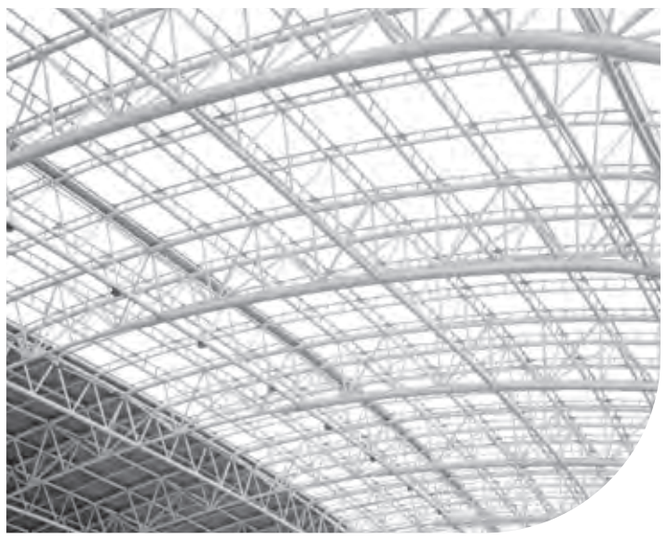
Specified Outside Diameter D (mm)	Thread Size R	Outside Diameter		Wall Thickness T (mm)	M Medium Series		Pieces Per Bundle
		Maximum (mm)	Minimum (mm)		Mass Per Unit Length of Bare Tube		
					Plain End (kg/m)	Threaded & Socketed (kg/m)	
21.3	½	21.4	21.0	2.0	0.947	0.956	150
26.9	¾	26.9	26.4	2.3	1.38	1.39	105
33.7	1	33.8	33.2	2.6	1.98	2.00	70
42.4	1 ¼	42.5	41.9	2.6	2.54	2.57	48
48.3	1 ½	48.4	47.8	2.9	3.23	3.27	42
60.3	2	60.2	59.6	2.9	4.08	4.15	30
76.1	2 ½	76.0	75.2	3.2	5.71	5.83	25
88.9	3	88.7	87.9	3.2	6.72	6.89	20
114.3	4	113.9	113.0	3.6	9.75	10.0	10

NOTE: The tolerance on wall thickness is:

- ± 10% for M series.
- 8% with the plus tolerance limited by the mass tolerance, for Types L1 and L2.

The mass tolerance on welded tubes is:

- ± 7.5% on bundles of 10 tons or more, for M series.
- + 10% – 8% on individual tubes for Types L1 and L2..



EN 39

Tube	Nominal Values (Type 4)	Nominal Values (Type 3)	Tolerances	Pieces Per Bundle
Wall thickness, mm	4.0	3.2	- 10 %	-
Outside Diameter, mm (including ovality)	48.3	48.3	± 0.50	36
Inside Diameter, mm	40.3	41.9	*	-
Mass (single tube), kg/m	4.37	3.56	-7.5 %	-

* The inside diameter of tubes shall allow insertion of a gauge of diameter 37.7 mm for a minimum length of 200 mm.

EN 10219

Nominal Size	OD, mm			Wall Thickness, mm			Mass	Standard Length
	Minimum	Standard	Maximum	Minimum	Standard	Maximum	Kg/m	mm
1½"	47.8	48.3	48.8	2.88	3.2	3.52	3.56	6000

NOTE: Tolerances:

- Outside Diameter: ± 1% with a minimum of ± 0.5 mm and a maximum of ± 1.0 mm
- Wall Thickness: ± 10%
- Length: 0, +15 mm
- Mass: ± 6% on individual delivered lengths

SCAFFOLDING TUBES BS 1139 أنابيب السقالات

فئة Grade	القطرالخارجي OD		السماكة Wall Thickness	الوزن Unit Weight Kg/m	عدد الأنابيب في الربطة Pieces Per Bundle
	mm	inch			
A	48.3	1 ½	4	4.37	36

*** ARAMCO Specification**
Wall Thickness (Wt) Tol. = +5%
Zinc Coating Thickness = 40 micron
Zinc Coating Weight = 285 g/m²

NOTE: Other scaffolding specification be produced as per agreement with customer

أنابيب SBS وSGB والأنابيب التجارية
SBS, SGB and Commercial Pipes

CARBON STEEL TUBES FOR LIGHT STRUCTURAL AND OTHER GENERAL PURPOSES. (S.B.S.)

القطر الأسمى Nominal Size		القطر الخارجي Outside Diameter (mm)		السماكة Wall Thickness (mm)		الوزن Weight of Pipe	عدد الأنابيب في الربطة Pieces per Bundle
ملم mm	بوصة inch	الدارج Standard	الفرق المسموح به Tolerance	الحد الأعلى Standard	الحد الأدنى Minimum	كجم /م Kg/m	
15	1/2	20.9	± 0.2	1.5	1.35	0.717	150
20	3/4	26.5	± 0.2	1.5	1.35	0.925	105
25	1	32.8	± 0.3	1.5	1.35	1.158	70
32	1¼	41.6	± 0.4	1.5	1.35	1.480	48
40	1½	47.5	± 0.4	1.5	1.35	1.701	42
50	2	59.6	± 0.5	1.8	1.62	2.566	30
65	2½	74.8	± 0.7	1.8	1.62	3.240	25
80	3	87.7	± 0.8	2.0	1.80	4.230	20
100	4	112.8	± 1.0	2.2	1.98	6.000	10

NOTE: Tensile Strength = 31.7 - 52.1 kg/mm² Yield Strength = 17.9 kg/mm² Elongation = 17% (min)

أنابيب BSC التجارية المناسبة للربط مع أنابيب التسنين BS 21
BSC COMMERCIAL GRADE STEEL TUBES SUITABLE FOR SCREWING TO BS 21 PIPE THREADS

Nominal Bore		Outside Diameter				Wall Thickness			Weight of Black Tube				Pieces per bundle
		max		min		Standard		min	Plain End		Screw % Socketed		
mm	inch	inch	mm	inch	mm	inch	mm	mm	kg/m	lb/ft	kg/m	lb/ft	
15	½	0.831	21.10	0.815	20.70	0.075	1.9	1.75	0.89	0.60	0.90	0.605	150
20	¾	1.051	26.70	1.035	26.30	0.083	2.1	1.94	1.25	0.840	1.26	0.853	105
25	1	1.299	33.00	1.283	32.60	0.090	2.3	2.12	1.74	1.122	1.75	1.189	70
32	1 ¼	1.646	41.80	1.630	41.40	0.091	2.3	2.12	2.23	1.499	2.26	1.519	48
40	1 ½	1.880	47.70	1.862	47.30	0.098	2.5	2.3	2.77	1.862	2.81	1.888	42
50	2	2.358	59.9	2.335	59.30	0.102	2.6	2.4	3.66	2.453	3.72	2.500	30
65	2 ½	2.957	75.10	2.933	74.50	0.114	2.9	2.67	5.14	3.454	5.26	3.535	25
80	3	3.465	88.00	3.441	87.40	0.114	2.9	2.67	6.06	4.072	6.23	4.187	20
100	4	4.453	113.10	4.429	112.50	0.126	3.2	2.95	8.66	5.813	8.95	6.015	10
125	5	5.535	140.60	5.461	138.70	0.177	4.5	4.14	15.00	10.081	15.50	10.417	8
150	6	6.539	166.10	6.461	164.10	0.177	4.5	4.14	17.82	11.976	18.42	12.379	7
200	8	8.555	217.30	8.476	215.30	0.209	5.3	4.88	27.50	18.545	28.86	19.395	5

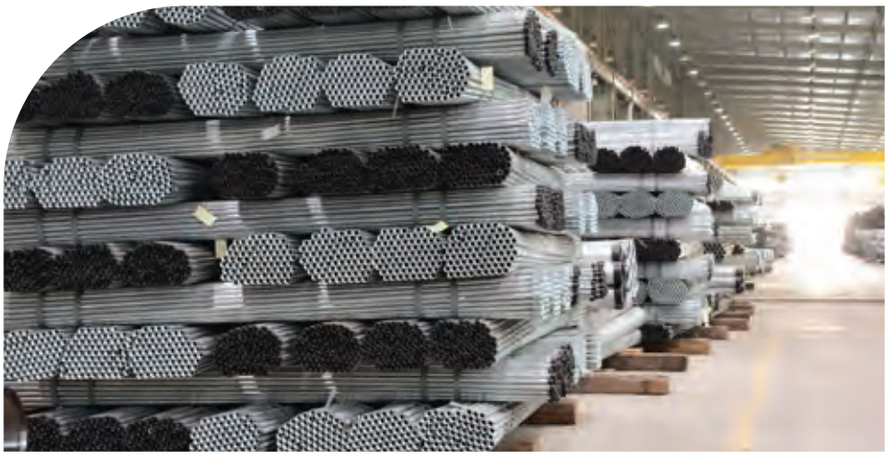
NOTE:
1) Tensile Strength: 33-47 kg/mm²
2) Elongation is 5.65 $\sqrt{50}$: 20% (min)
3) Hydrostatic pressure for test: 50 kg/cm (700psi)
4) Standard length: 6 meters.
5) Unit weight of tube will vary with respect to OD & wall thickness.

APPLICATIONS الاستخدامات

- Steel Furniture الأثاث الصلب
- Hand Rails الدرابزينات
- Ceilings الأسقف
- Water Irrigation & Nipples الري
- Fences الأسوار
- Trolleys العربات
- Dairy Houses مرافق الأنعام

USES of SBS استخدامات أنابيب SBS

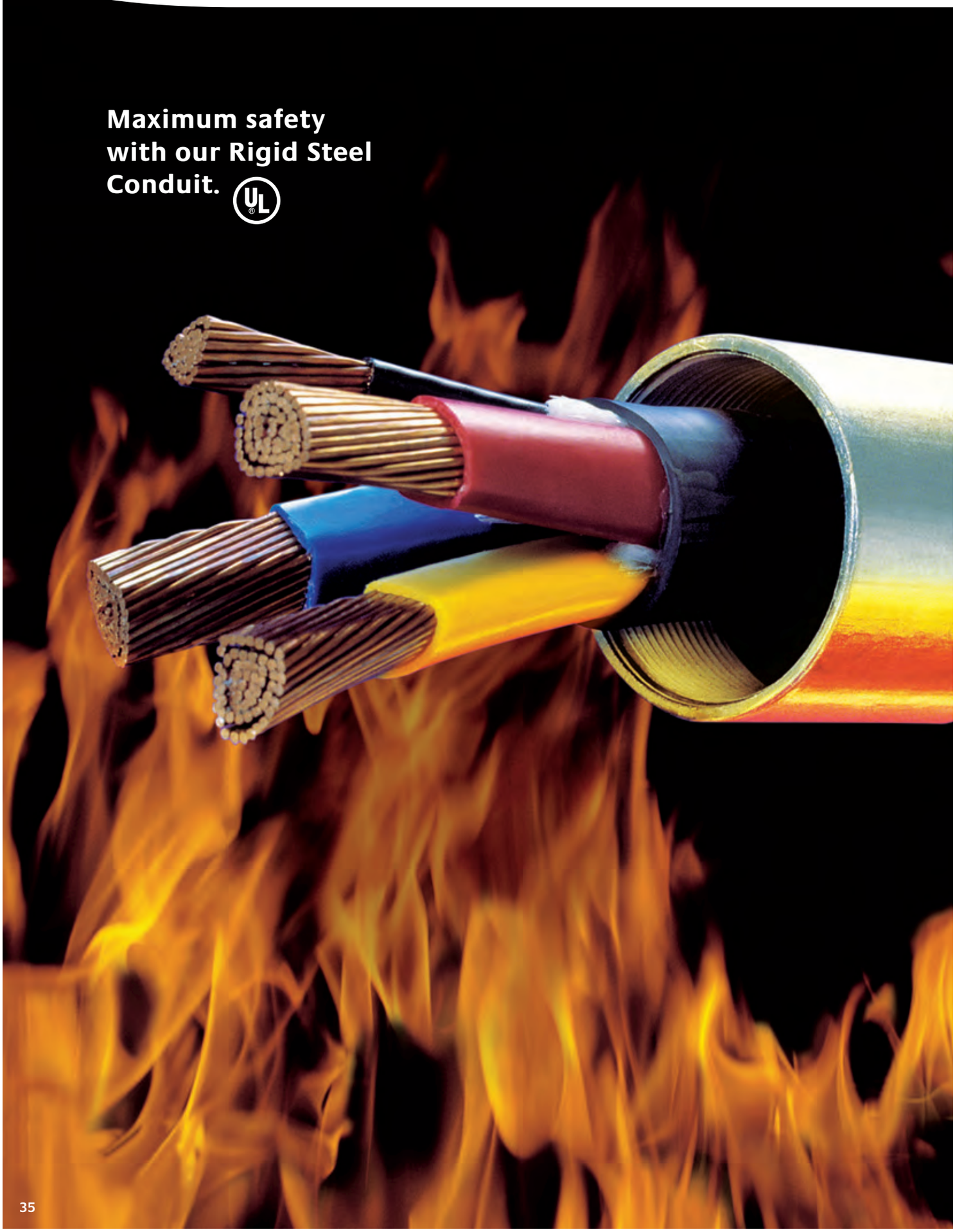
- Green ~Houses البيوت الزجاجية
- Ceilings الأسقف
- Decorations الديكورات
- Steel Frames الإطارات الفولاذية
- Car Exhaust عوادم السيارات



الأنابيب السعودية ذات الخط الأخضر لاستعمالات المياه والبخار والهواء
SAUDI GREEN BAND PIPES FOR STEAM, WATER & AIR PIPING

القطر الأسمى Nominal Size		القطر الخارجي Outside Diameter (mm)		السماكة Wall Thickness (mm)		الوزن Weight of Pipe		عدد الأنابيب في الربطة Pieces per Bundle
ملم mm	بوصة inch	الدارج Standard	الفرق المسموح به Tolerance	الدارج Standard	الحد الأعلى Minimum	بدون جلبة Plain End كجم/م (Kg/m)	مع الجلبة Screw & Socketed كجم/م (Kg/m)	
15	1/2	21.3	± 0.3	2.6	2.39	1.20	1.21	120
20	3/4	26.9	± 0.3	2.6	2.38	1.56	1.57	84
25	1	33.7	± 0.4	3.2	2.93	2.41	2.43	60
32	1¼	42.4	± 0.4	3.2	2.93	3.09	3.12	42
40	1½	48.3	± 0.4	3.2	2.93	3.56	3.60	36
50	2	60.3	± 0.5	3.6	3.29	5.09	5.10	26
65	2½	76.1	± 0.5	3.6	3.29	6.44	6.56	18
80	3	88.9	± 0.6	4.0	3.65	8.38	8.55	14
100	4	114.3	± 0.7	4.5	4.05	12.18	12.49	10

NOTE: Tensile Strength = 31.7 - 52.1 kg/mm² Yield Strength = 17.9 kg/mm² Hydrostatic Pressure Test = 50 kg/cm²


Maximum safety
with our Rigid Steel
Conduit.

SAUDI STEEL PIPE COMPANY
DAMMAM, SAUDI ARABIA
UL LISTED
IN SAUDI
ALANABEEB
RIGID STEEL

ELECTRICAL RIGID METAL CONDUIT TUBES UL-6/ ANSI C80.1, HOT DIP GALVANIZED

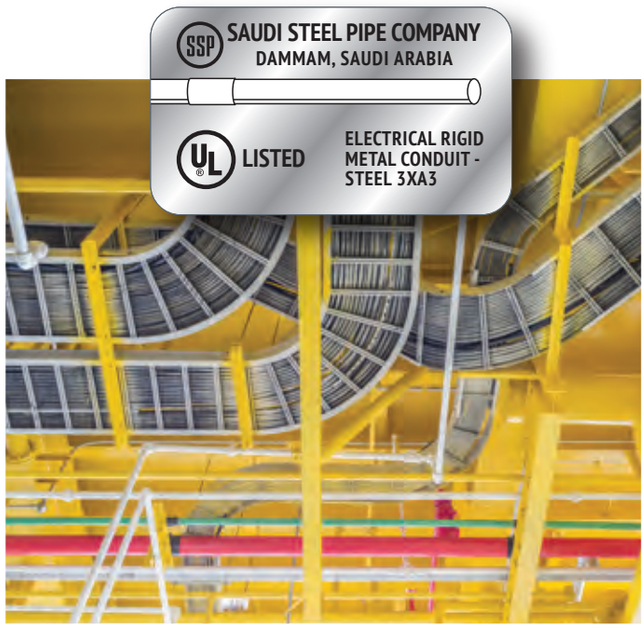
أنابيب الكهرباء حسب مواصفات المعهد الوطني الأمريكي للأنابيب المجلفنة الصلبة

الحجم الأسمي Nominal Size		القطر الخارجي Outside Diameter[a]		السماكة Wall Thickness		الطول Length of Straight Conduit[b] ± 6mm ± 1/4 in		وزن عشرة أنابيب مع الجلب Minimum Acceptable Weight of Ten Lenghts of Conduit with Ten Couplings				وزن أنبوب واحد مع الجلبة Minimum Acceptable Weight of one Lenght of Conduit with Coupling				عدد الأنابيب في الربطة Pieces per bundle
								مع الجلفنة Finished Zinc Coated		مع التسنين Bare Threaded Tubes		مع الجلفنة Finished Zinc Coated		مع التسنين Bare Threaded Tubes		
ملم mm	بوصة inch	ملم mm	بوصة inch	ملم mm	بوصة inch	ملم mm	بوصة للقدم Feet-inch	kg كجم	lbs رطل	kg كجم	lbs رطل	kg كجم	lbs رطل	kg كجم	lbs رطل	
16	1/2	21.34	0.840	2.64	0.104	3030	9' - 11-1/4"	35.8	79	34.2	75.4	3.58	7.9	3.42	7.54	120
21	3/4	26.67	1.050	2.72	0.107	3030	9' - 11-1/4"	47.6	105	45.5	100.4	4.76	10.5	4.55	10.04	84
27	1	33.40	1.315	3.20	0.126	3025	9' - 11"	69.4	153	66.8	147.2	6.94	15.3	6.68	14.72	60
35	1-1/4	42.16	1.660	3.38	0.133	3025	9' - 11"	91.2	201	87.8	193.5	9.12	20.1	8.78	19.35	42
41	1-1/2	48.26	1.900	3.51	0.138	3025	9' - 11"	112.9	249	109	240.4	11.29	24.9	10.9	24.04	36
53	2	60.33	2.375	3.71	0.146	3025	9' - 11"	150.6	332	145.6	321.1	15.06	33.2	14.56	32.11	26
63	2-1/2	73.03	2.875	4.90	0.193	3010	9' - 10-1/2"	239	527	233.1	513.9	23.9	52.7	23.31	51.39	18
78	3	88.90	3.500	5.21	0.205	3010	9' - 10-1/2"	309.6	682	302.4	666.6	30.96	68.2	30.24	66.66	14
91	3-1/2	101.60	4.000	5.46	0.215	3005	9' - 10-1/4"	376.9	831	368.6	812.6	37.69	83.1	36.86	81.26	12
103	4	114.30	4.500	5.72	0.225	3005	9' - 10-1/4"	441	972.3	431.6	951.6	44.1	97.23	43.16	95.16	10
129	5	141.30	5.563	6.22	0.245	2995	9' - 10"	595.8	1313.6	584.2	1288	59.58	131.36	58.42	128.8	8
155	6	168.28	6.625	6.76	0.266	2995	9' - 10"	791.7	1745.3	777.8	1714.7	79.17	174.53	77.78	171.47	7

NOTE: **Tolerances:**

a) Nominal Size 12~ 41mm + 0.38 mm, Nominal Size 53~ 155 mm ± 1%

b) The lenghts indicated are designed to produce a 3.05m (10 ft) length conduit when straight- tapped conduit coupling is attached.



USES OF SAUDI STEEL PIPE CONDUIT FOR PROJECTS

• Hot-Dipped Galvanized Rigid Steel Conduit provides Greater protection for cables and more resistance to corrosion than any others conduits.

• Another important advantage of using rigid steel conduit is safety. Its heavy wall maximize the protection against possible fire hazards and physical abuse.

• SSP's hot-dipped galvanized rigid steel conduit is manufactured in strict conformance with the following standards:

- American National Standard Institute (ANSI) C80.1
- Underwriters Laboratories Specifications No. 6 (UL-6)

ADVANTAGES OF SAUDI STEEL PIPE CONDUIT

- Better corrosion resistance than any other metallic conduits
- Greater resistance to mechanical or electrical damage.
- Storage Mechanical support...
- Better protection under sun exposure, storms & strong wind
- Better dissipation of heat
- Better grounding
- Greater protection against short circuit fires
- Lower cost for the same protection than any conduit
- Better Quality
- Shortest time of delivery

LIGHT STEEL CONDUIT FOR ELECTRICAL WIRING BS 4568: PART 1 (CLASS 4)

الأنابيب الخفيفة لتمديدات الكهرباء معايير BS 4568 جزء١ (فئة ٤)

المقاس الأسمى Nominal Size		القطر الخارجي Outside Diameter		السماكة Wall Thickness		طول الأنبوب Length without coupling		وزن الأنبوب Nominal Wt. Screwed without coupler	
mm	ملم	mm	ملم	mm	ملم	mm	ملم	Kg/pc	كج / للقطعة
20		19.85 ± 0.15		1.60		3750		2.936	
25		24.80 ± 0.20		1.60		3750		3.731	
32		31.80 ± 0.20		1.60		3750		4.878	

BS 4568: DIMENSIONS OF COUPLING (INTERNALLY SCREWED) AND TOLERANCE

أبعاد الجلب المعدنية

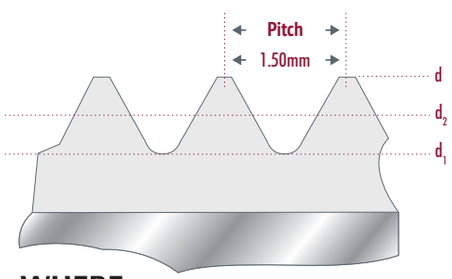
المقاس الأسمى Nominal Size		طول الجلبة Length min		القطر الخارجي OD min		القطر الأصلي Major Dia (D) min.		القطر الفعلي Effective Dia (D) mm		القطر الثانوي Minor Dia (D) mm	
mm	ملم	mm	ملم	mm	ملم	mm	ملم	min الأدنى	max الأقصى	min الأدنى	max الأقصى
16		30		17.5		16.000		15.026	15.262	14.376	14.751
20		33		21.5		20.000		19.026	19.262	18.376	18.751
25		39		26.7		25.000		24.026	24.276	23.376	23.751
32		43		33.8		32.000		31.026	31.276	30.376	30.751
Thread Form		Metric Threads of ISO Form									
Thread Spec.		Based on BS 3643 Part 3 Tables 6 & 7 Fitting Tolerance Class 7H (Free Fit)									
Thread Profile		Screw Threads in accordance with fig. 1									

THREADING REQUIREMENT OF BS 4568 CONDUIT

متطلبات التسنين BS 4568

المقاس الأسمى Nominal Size	التسنين لكل أنش TPI	المسافة بين التسنين Pitch mm	Thread Lengths طول السنة				Full O.D. Threads القطر الخارجي للسنة			
			Max الأقصى		Min الأدنى		Max الأقصى		Min الأدنى	
			mm	ملم	mm	ملم	mm	ملم	mm	ملم
16	17	1.50	13.50		11.50		15.97		15.59	
20	17	1.50	15.00		13.00		19.97		19.59	
25	17	1.50	18.05		16.00		24.97		24.59	
32	17	1.50	20.00		18.00		31.97		31.59	
			23.81		22.23					

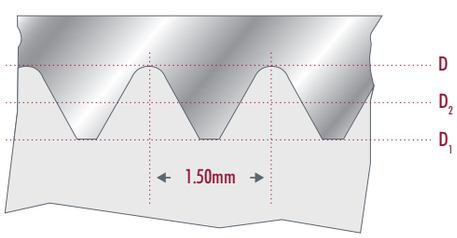
BS 4568 THREAD (CONDUIT)



WHERE

- **d** = Major Diameter
- **d_2** = Minor Diameter
- **d_1** = Effective Diameter

BS 4568 THREAD (FITTINGS)



- in practice the root is rounded and cleared outside of the line

WHERE

- **D** = Major Diameter
- **D_2** = Minor Diameter
- **D_1** = Effective Diameter

MANUFACTURING OF CONDUIT

تصنيع أنابيب الكهرباء

- High frequency ERW method.
- Hot dip galvanizing (Protection Type: Class 4 - Heavy protection inside and outside).

TEST REQUIREMENTS

متطلبات الاختبار

- Tensile test
- Bending
- Copper Sulphate test
- Dimensional test (OD, thickness)
- Plug gauge test (Go, Not-Go) for accuracy of screwing
- Visual checking

تربيط الأنابيب ذات الأقطار الكبيرة
Bundling Large Diameter Pipes

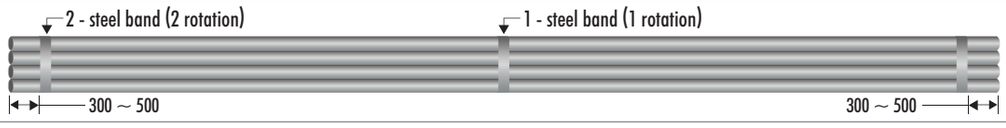
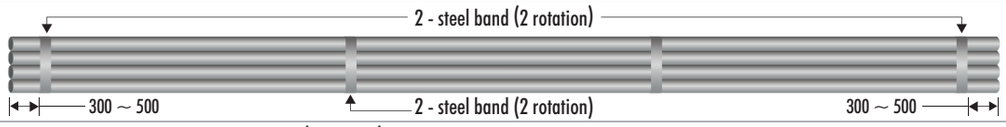
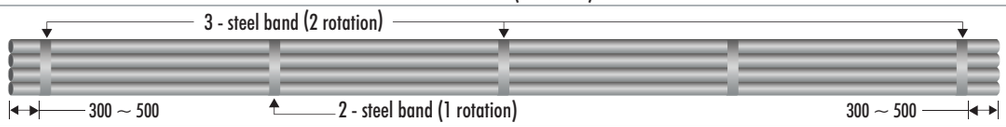
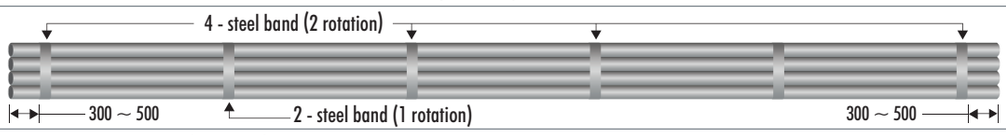
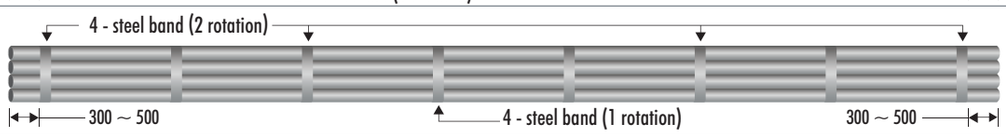
PACKING

- Unless otherwise specified, length of pipe shall be packed based on table 1.
- If necessary, a protector maybe applied to the pipe to prevent the end damage during storage and delivery
- The method of bundling based on pipe length is as shown in table 2.

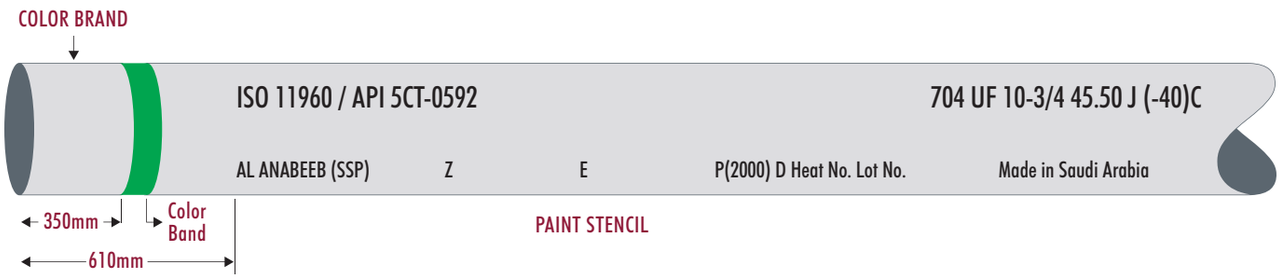
TABLE 1. NUMBER OF LENGTHS IN ONE BUNDLE

Nominal Size		Product Specification	
		SASO 1011 (L, M, H) BS1387 (C, L, M, H)	
A	B	SBS, SGB, ASTM, API	
mm	in	Length: < 9M (30ft)	Length: < =9M (30ft)
100	4″	10	7
125	5″	8	5
150	6″	7	5
200	8″	5	3
250	10″	3	3
300	12″	1	1
350	14″	1	1
400	16″	1	1
450	18″	1	1
500	20″	1	1

TABLE 2. METHOD OF BUNDLING

DIV.	Table 2. Method of Bundling
8m (26ft) ≤ Len. < 9m (30ft) (without distinction of Nom. size)	
8m (26ft) ≤ Len. < 9m (30ft) Nom. size: 100A ~ 150A	
8m (26ft) ≤ Len. < 9m (30ft) (200A ≤ Nom. size ≤ 400A)	
9m (30ft) ≤ Len. Len < 13m (43ft) (without distinction of Nom. size)	
13m (43ft) ≤ Len. (without distinction of Nom. size)	

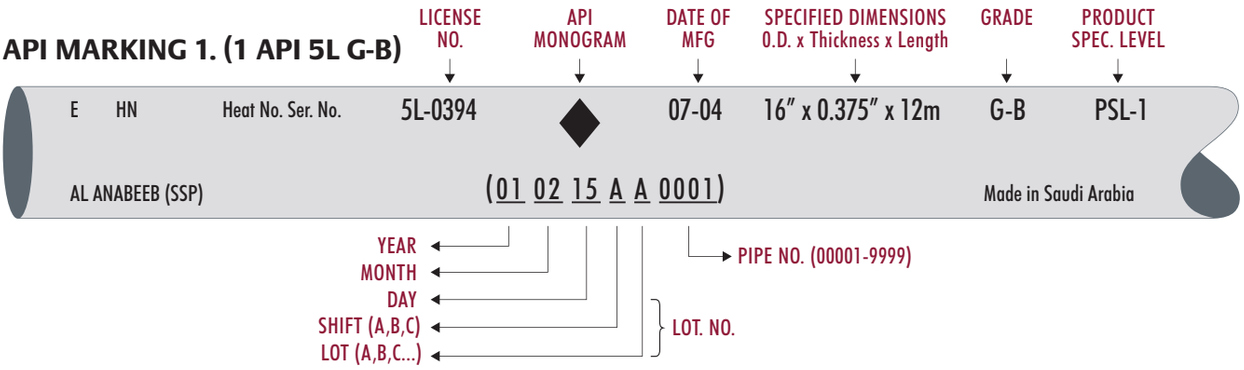
API 5CT MARKING



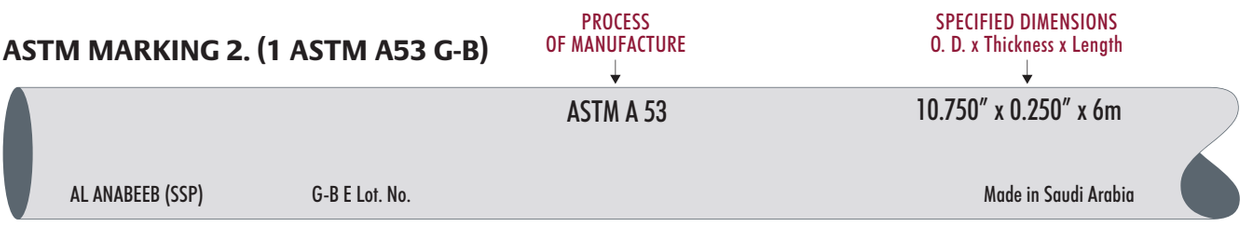
1. Color ring marking on the outside surface starting at 350mm from pipe end.
2. Paint stencil starting from at least 0.6m (2f).
3. UF: Unthreaded pipe either upset or non-upset
4. 45.50: mass designation, specified wall thickness for coupling stock
5. J: symbol of grade (J-55)
6. (-40) C : reduce alternative impact test temperature (optional)
7. Z: normalized pipes
8. E : electric resistance welding method symbol
9. P(2000) : hydrostatic test pressure in psi
10. 'D': full length drift test

	H-40	J-55	K-55	Die Stampin
Color Band	No. Color	Bright Green	Bright Green	OD: 4 1/2 ≥ 6.4mm
No. of Band	-	1	2	-

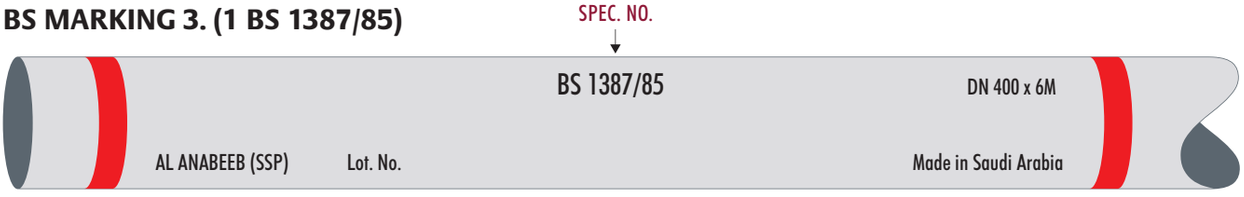
API MARKING 1. (1 API 5L G-B)



ASTM MARKING 2. (1 ASTM A53 G-B)



BS MARKING 3. (1 BS 1387/85)



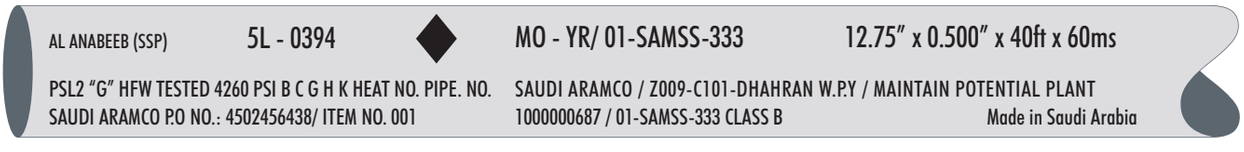
BS (L) : Brown
BS (M): Blue
BS (H) : Red

1. Tubes less than 4m in length shall have one color band.
2. Tubes of 4m to 7m length shall have two color bands, one near each end.
3. These bands shall be applied on outside surface approximately 50mm wide.
4. It can be marked with 2 layers instead of 1 layer.

DUAL MARKING 4. (1 API 5L G-B PSL 1 / ASTM A53 G-B)

API 5L X -60 PSL 2 SOUR

ARAMCO MARKING



تربيـط وعلامـات الأنابيـب ذات الأقطـار الصغيـرة
Marking & Bundling Small Diameter

LIGHT TUBE (BROWN BAND) ١. الأنبـوب الخفيـف (خـط بنـي)

AL ANABEEB (SSP) HEAT NO.

SSA 1011 - L/BSS/W/EN 10255 L2 DN 25X6M 01A01A02-00001

HEAVY TUBE ٢. الأنبـوب الثقيـل

AL ANABEEB (SSP) HEAT NO.

SSA 1011 - H/ASTM A 53 G-A SCH 40 ERW DN 25X6M 01A01A 02-00001

MEDIUM TUBE (BLUE BAND) ٣. الأنبـوب المتوسـط (خـط أزرق)

AL ANABEEB (SSP) HEAT NO.

SSA 1011-M/BSS/DIN2440/W/EN 10255M DN 25X6M 01A01B02-00001

MEDIUM TUBE (GREEN BAND) ٤. الأنبـوب السـعودي المتوسـط (خـط أخضر)

AL ANABEEB (SSP) HEAT NO.

SSA 1011-M DN 25X6M 01A01A 02-00001

ANSI C80.1 / UL6 ٥. الأنابيـب التمديـدات الكهربائيـة

AL ANABEEB (SSP)

UL 6 ERMC-S 3XA3 / ANSI C80.1 RSC 1" X 10" 01A01B02-00001
MADE IN SAUDI ARABIA HEAT NO.
"CONSULT MANUFACTURER FOR PROPER INSTALLATION"

SBS ٦. الأنبـوب السـعودي الخفيـف

AL ANABEEB (SSP) HEAT NO.

SBS 1"X6M 01A01A02-00001

BSC ٧. الأنابيـب التجاريـة

AL ANABEEB (SSP) HEAT NO.

BSS 1"X6M 01A01B02-00001

BS 4568 ٨.الأنابيـب الخفيفـة لتمديـد الكهربـاء

AL ANABEEB (SSP) HEAT NO.

BS 4568 CLASS 4 CONDUIT DN 20X3.75 M 05L08A 01-0001

EN 10219 ENGRAVED ٩.أنابيـب السـقالات

AL ANABEEB (SSP)

EN 10219 THK 3.2 MM 05 12 08

BS 1139 ENGRAVED ١٠. أنابيـب السـقالات

AL ANABEEB (SSP)

BS1139 PART 1-1.1 4MM 05 12 08

EN 39 ENGRAVED ١١. أنابيـب السـقالات

Thickness 4 — **EN 39 SSP 4 051208**

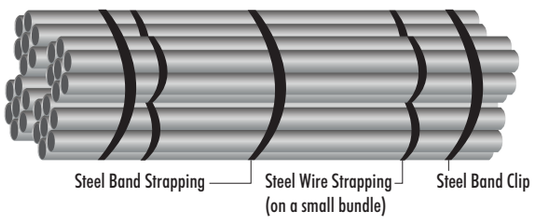
Thickness 3.2 — **EN 39 SSP 3 051208**

QUANTITY IN PIECES FOR EACH PACKING BUNDLE

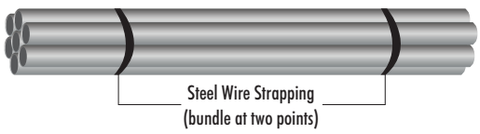
Nominal Size		Product Specification			SRP	
in	mm	SSA 1011-L BS 1387 C.L. SBS, BS 4568	SSA 1011-M&H BSM, SGB, A53 UL/ ANSI C 80.1	Fence Tube	Size	Pcs.
1/2"	15	150	120	-	16x16	289
3/4"	20	105	84	-	20x20	225
1"	25	70	60	91	25x25	196
1 1/4"	32	48	42	61	30x30	144
1 1/2"	40	42	36	61	40x20	144
2"	50	30	26	37	50x25	120
2 1/2"	65	25	18	19	60x30	96
3"	80	20	14	19	80x30	54
3 1/2"	90	-	12	-	-	-
4"	100	10	10	-	-	-

TYPICAL PACKING

Large Bundle



Small Bundle



PIPES BUNDLE CONFIGURATION (Pcs / Bundle)

SSAH/ANSI/UL/SSAM													
Size	Configuration - Pcs by Layer												Total
1/2"	7	8	9	10	11	12	13	12	11	10	9	8	120
3/4"	8	9	10	11	12	11	10	9	4				84
1"	6	7	8	9	9	8	7	6					60
1-1/4"	5	6	7	8	7	6	3						42
1-1/2"	4	5	6	7	6	5	3						36
2"	3	4	5	6	5	3							26
2-1/2"	3	4	5	4	2								18
3"	3	4	4	3									14
4"	3	4	3										10
5"	2	3	3										8
6"	2	3	2										7
8"	2	3											5
10"	1	2											3

NOTE: Pipe Range from 12" ~ 20" Pipe supply without bundling.

SSAL/BSC/SBS														
Size	Configuration - Pcs by Layer													Total
1/2"	8	9	10	11	12	13	14	15	14	13	12	11	8	150
3/4"	8	9	10	11	12	13	12	11	10	9				105
1"	6	7	8	9	10	9	8	7	6					70
1-1/4"	5	6	7	8	7	6	5	4						48
1-1/2"	5	6	7	8	7	6	3							42
2"	3	4	5	6	5	4	3							30
2-1/2"	4	5	6	6	4									25
3"	3	4	5	5	3									20
4"	3	4	3											10
5"	3	3	2											8
6"	2	3	2											7
8"	2	3												5
10"	1	2												3


Bend up to 64"
الثني حتى 64"

عملية الثني بالحث الحراري عالي التردد
High Frequency Induction Bending

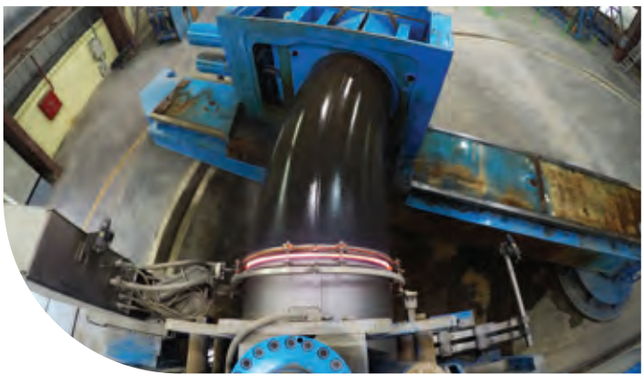
Induction Bending is a controlled high precision bending of pipe and shapes under localized heating using high frequency induction electric power. It is a flexible and versatile method to solve and simplify many difficult situations for mechanical and construction contractors in oil, gas, petrochemical plants and architectural structures to substitute for elbows and fitting and to make new creative shapes.

SSP has two bending machines. The first one had a capacity ranging from 2" up to 42" outside diameter. The bending radius can be minimum of 3 times the diameter, with the maximum bending radius of 5 times the diameter or 8,000 mm, whichever is larger. The second bending machine is capable of bending 18" up to 48" outside diameter with a maximum bending radius of up to 5D. The wall thickness range from as thin as 3.91mm up to 50 mm.

The bending machine heats the pipe inductively over a small cross-section, while the pipe is mechanically driven through a water cooled induction ring. The bending of the pipe is caused by means of a rotating arm on a pivot that, at the same time, determines the radius of the bend. As the arm is completely free adjustable between its minimum and maximum radius, we are not limited by a number of fixed bending radii determined by available bending blocks.

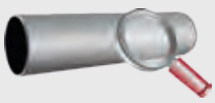
The bending moment is in the inductively heated zone directly behind this bending zone. The pipe is cooled by air or water, depending on the kind of material.

In most cases we work with complete pipe lengths, so we can produce bends either with or without straight tangents and multiple bends that are limited only by the length of the pipe.



PIPE BENDING PROCESS FLOWCHART

1. INCOMING INSPECTION

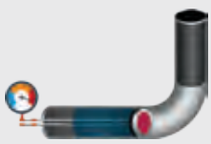


2. HOT BENDING MACHINE

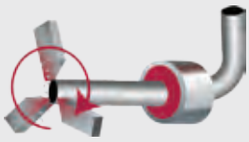
3. DIMENSIONAL CHECK BEFORE HEAT TREATMENT

4. HEAT TREATMENT FURNACE

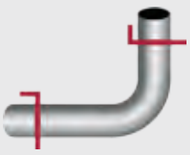
5. HYDROSTATIC TEST



10. EDGE BEVELING



9. CUTTING ENDS TO TANGENT LENGTH

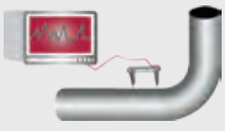


8. UT THICKNESS TEST

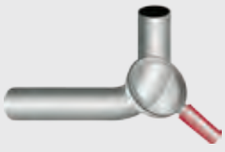
7. UT ALONG THE SEAM WELD

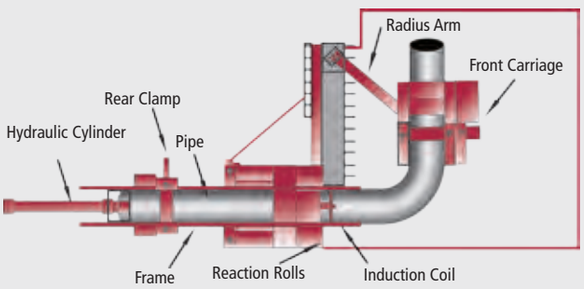
6. DIMENSIONAL CHECK

11. MAGNETIC PARTICLE AND UT LAMINATION



12. MARKING AND FINAL INSPECTION





HEAT TREATMENT

After induction bending a wide range of materials require stress relieving heat treatment. To perform this type of heat treatment, SSP has one at its disposal with a floor space of 5 x 15 meters, and is 3 meters high. It has a capacity of up to 50 tons.

The use of our furnace is not limited to bends only. We are also capable of performing heat treatment on welded construction parts and pre-fabricated pipeline systems. Therefore we can also deal with enquires for heat treatment only.

BEVELLING

After cutting the pipes to size, SSP can perform weld end preparation in accordance with a series of specifications, such as the ANSI B16.9. ANSI B 16.25, DIN 2559 and the API 5L specification.

Specific customer requirements can very often be met as well. In case structural requirement of the pipeline systems demand higher wall thickness is needed, the bends can be tapered internally to any required connecting wall thickness.

APPLICABLE FIELDS OF SSP INDUCTION PIPE BENDS

- **Pipe Lines**
  Gas, Petroleum and water including Risers & J- tubes for Offshore platforms
- **Plants:**
  Petroleum, Chemical, Steel, Fertilizers etc.
- **Structures:**
  Airports, Gymnasiums, Amusement Facilities, Bridges etc.
- **Power Plants:**
  Nuclear, Thermal, Geothermal and Hydro Electric.
- **Transportation:**
  Pressure Shooting Pipes, Slurry & Dust Transportation pipelines.

MATERIAL

- Seamless, ERW, SAW, Straight, spiral welded pipes.
- Carbon Steel, Alloy Steel, Stainless Steel, Copper-Nickel Aluminum and etc.

SHAPE:

- Round pipe, Square pipe, H-I Beam, Angle, Rail, Round & Square Bar etc.

SPECIFICATION:

- API 5L, PFI, ANSI, ASME B 31,4 & 31,8 MS- SP-44,75, 83
- Shell, Adnoc, Kuwait Oil Company, Qatar Petroleum, ARAMCO

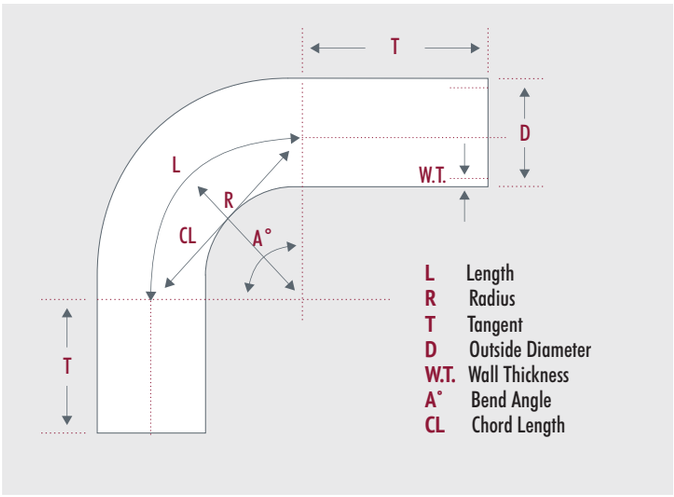
		OD (IN)	Wall Thickness	Angle Degree
Machine 1	Minimum	2"	3.91	1
	Maximum	42"	50	260
Machine 2	Minimum	18"	7.1	1
	Maximum	48"	50	260

عملية الثني بالحث الحراري عالي التردد
High Frequency Induction Bending

DIMENSIONAL PARAMETERS

Type		D Dimensions	R Radius	W.T. Thickness milimeter	L Length meter	T Tangent milimeter	A° Angle
Pipe	Min	2"	3 D	3.91	0.75	200/400	1°
	Max	48"	8 M	50	12		260°
H.I Beam & etc.	Min		350 mm	7.1	1	400	1°
	Max		9 M	50	2		260°

Bend Length [L] = R x π x $\frac{A°}{180°}$ (π = 3.1416)



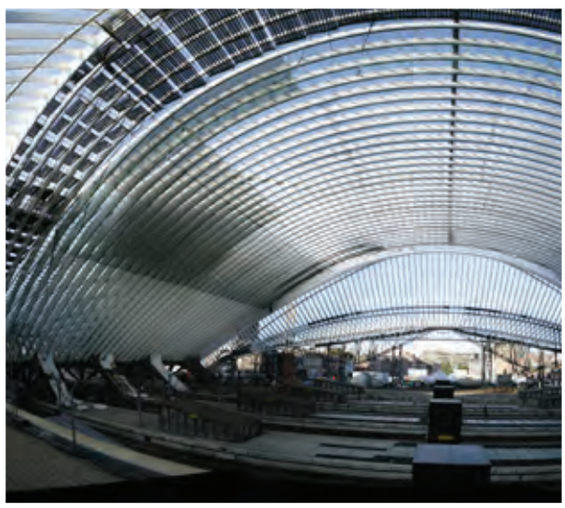
THICKNESS REDUCTION & OVALITY RATIO

Thickness Reduction Ratio = $\frac{\text{Nominal Thickness - Minimum Thickness x 100\%}}{\text{Nominal Thickness}}$

Ovality Ratio = $\frac{\text{Maximum Diameter - Minimum Diameter x 100\%}}{\text{Nominal Diameter}}$

RATIO	3 D	3 D	3 D	< 10 D
Thickness Reduction Ratio	12.5%	12.5%	12.5%	2.5 -5%
OvalityRatio	(3-5)	2.5%	2%	1%

- Large radius for smooth flow of fluids
- Less field welding
- Less on-site x-ray inspection
- Different angles to fit the jobsite
- Multiple bends for quick installation
- Fewer connections/joints means less potential for leakage
- Uniformity of material of pipe & bend
- Fast service due to our location near customers in Dammam 2nd Industrial City
- Coordination with field engineers to simplify site-work
- Cost effective & time saving alternative to weld bends and elbows or other process in the field.
- Fully equipped lab for in-factory and site testing
- Precise dimension control over other methods of bending
- Minimal changes in ovality, wall thickness and micro-structure due to hot bending vs cold bending
- mechanical properties controlled by virtue of thermal treatment and cooking practices
- Less need for on-site coating and shrink sleeves in the field.



EXTERNAL COATING SOLUTIONS

SSP has recently added anti-corrosion coating facility with 1 Million sqm annual capacity, suitable for coating full range of welded and seamless pipes up to 30" diameter. SSP anti-corrosion coating include Fusion Bonded Epoxy (FBE) and three-layer polyethylene/polypropylene external pipe coating systems. The new coating facility is fully equipped with testing, inspection and tracking systems to ensure highest quality control of product and processes.

FBE External Fusion Bonded Epoxy Coating (single & dual layer)

FBE coating is a high performance coating of an anti-corrosive thermosetting epoxy resin powder that utilizes heat to melt, crosslink and adhere to a metal substrate. It provides a coating with excellent adhesion, and a tough, smooth finish resistant to abrasion, chemical degradation and soil stress damage.

Advantages of FBE Coating:

- Excellent adhesion to steel.
- Excellent resistance to cathodic disbondment and good chemical and abrasion resistance.
- Excellent corrosion resistance, specially prevents the pipe from stress corrosion cracking.
- Resistance to biological attack.
- Toughness: can be installed under the sea, through rolling planes, in rocky, mountainous areas, in the desert as well as in cold conditions.

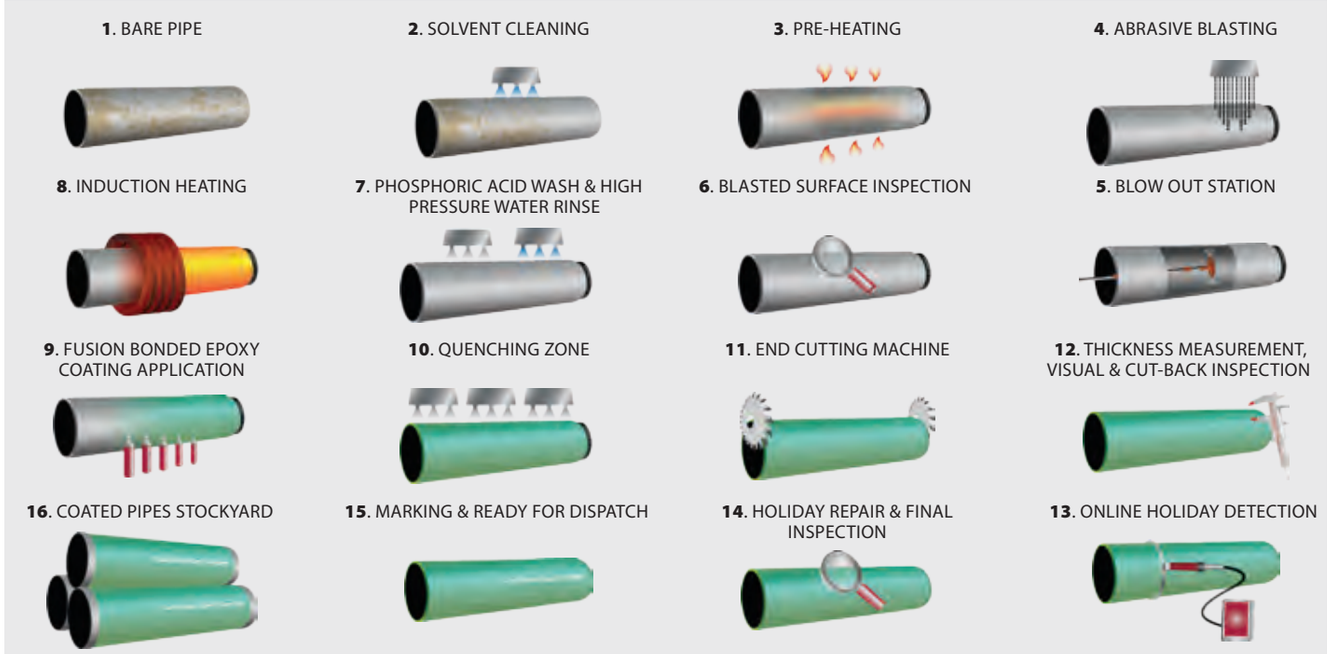
This combination of properties–particularly the ease of use, physical and chemical durability makes FBE an ideal choice as a protective coating on variety of environmental conditions.

SSP also provides dual layer FBE coatings. Dual layer FBE coatings provide much greater versatility to coating protection system capability. The top layer can be designed to impart specific characteristics as required by the coating system such as protection against mechanical damage – impact, abrasion, gouge etc. for handling and storage under extreme conditions.

Standards and Specifications:

CSA Z245.20 NACE SP0394 09-SAMSS-089

Fusion Bonded Epoxy (FBE) Coating Process



3LPE 3-Layer Polyethylene Coating:

The external three layer polyethylene coating system consists of a layer of high-performance anti corrosive layer of fusion bonded epoxy, an intermediate co-polymer adhesive layer, followed by a layer of extruded polyethylene. In addition to the excellent chemical and adhesive properties of the epoxy powder, the polyethylene coating layer provides toughness and durability to the coating system.

Advantages of 3LPE Coatings:

- Excellent in adhesion to steel and corrosion resistance.
- Good flexibility, excellent cathodic disbondment resistance.
- High impermeability (low moisture permeation).
- Provides mechanical protection (high degree of damage tolerance or impact resistance) and reduces coating-damage penetration to the substrate.
- Produces a uniform and continuous thickness profile without air bubbles and holidays.
- High dielectric strength.
- Provides UV resistance for several years.

Standards and Specifications:

CSA Z245.21 ISO 21809-1 DIN 30670

3LPP 3-Layer Polypropylene Coating:

The external three layer polypropylene coating system consists of a layer of high-performance anti corrosive layer of fusion bonded epoxy, an intermediate co-polymer adhesive layer, followed by a layer of extruded polypropylene. In addition to the excellent chemical and adhesive properties of the epoxy powder, the polypropylene coating layer provides toughness and durability to the coating system especially in high temperature pipeline applications.

Advantages of External 3LPP Coatings:

- Excellent adhesion to the steel and corrosion resistance.
- Good flexibility, excellent cathodic disbondment resistance.
- High impermeability (low moisture permeation).
- Provides mechanical protection (high degree of damage tolerance or impact resistance) and reduces coating-damage penetration to the substrate.
- Produces a uniform and continuous thickness profile without air bubbles and holidays.
- High dielectric strength.
- Provides UV resistance for several years.
- Polypropylene coating system is well suited for high temperature environments and where high level of mechanical properties are required for handling.

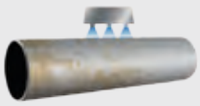
Standards and Specifications:

CSA Z245.21 ISO 21809-1

3LPE and 3LPP Coating Process

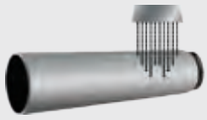
1. BARE PIPE

2. SOLVENT CLEANING

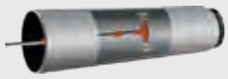


3. PRE-HEATING

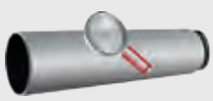
4. ABRASIVE BLASTING



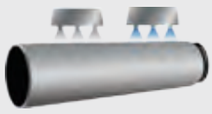
5. BLOW OUT STATION



6. BLASTED SURFACE INSPECTION

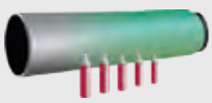


7. PHOSPHORIC ACID WASH & HIGH PRESSURE WATER RINSE

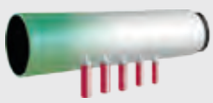


8. INDUCTION HEATING

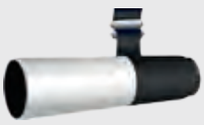
9. FUSION BONDED EPOXY COATING APPLICATION



10. ADHESIVE COPOLYMER APPLICATION



11. EXTRUDED POLYETHYLENE



12. QUENCHING ZONE

13. END CUT MACHINE

14. THICKNESS MEASUREMENT, VISUAL INSPECTION, CUT-BACK INSPECTION

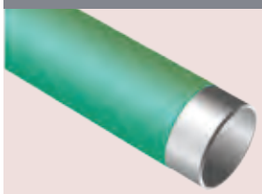
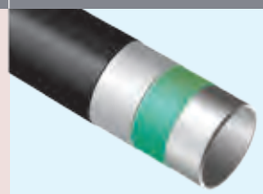
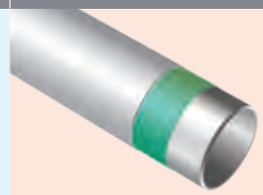
15. ONLINE HOLIDAY DETECTION

16. HOLIDAY REPAIR & FINAL INSPECTION

17. MARKING AND READY FOR DISPATCH

18. COATED PIPES STOCKYARD

إمكانيات التغليف والطلاء الخارجي
External Coating Capabilities

	FBE	3LPE	3LPP
			
Applications	Oil, Gas and Water Pipelines	- Oil, Gas and Water Pipelines - Other mechanical applications	- Oil, Gas and Water Pipelines - Pipelines for high temp - Other mechanical applications
Pipe Size Range	4" - 30"	4" - 30"	4" - 30"
Pipe Length	6 - 18 m	6 - 18 m	6 - 18 m
Max. Coating Thick	1000 µm	4 m	4 mm
Minimum Operating Temp.	-30°C	-30°C	-20°C
Maximum Operating Temp.	130°C	90°C	140°C
Holiday Testing	✓	✓	✓
Gel Time Testing	✓	✓	✓
Cathodic Disbondment Testing	✓	✓	✓
Flexibility Testing	✓	✓	✓
Moisture Content Testing	✓	✓	✓
Adhesion Testing	✓	✓	✓
DSC Analysis	✓	✓	✓
Particle Size Analysis	✓	✓	✓
Melt Flow Rate Testing	✓	✓	✓
Tensile Testing		✓	✓
Impact Testing		✓	✓
Indentation Testing		✓	✓
Peel-off Strength Testing		✓	✓
Hot Water Adhesion Testing		✓	✓

فريق عملنا
OUR TEAM

OCCUPATIONAL HEALTH AND SAFETY

Occupational Health and Safety has been given prime importance in SSP and safety is an integral of all our operations. We have established Occupational Health & Safety (OH&S) Policy, Safety Manual and in Operation & Maintenance activities. We encourage safe and incident-free work environment according to international management systems, awareness programs and education to employees are facilitated to ensure safe practice. We have on-site Emergency Plan and Safety Operating Procedures. There is a Safety Group under the guidance of CEOs monitoring the safety activities of all respective sites.

Environmental and Safety Management System (EHS)

Environmental and Safety Management System (EHS) complies with ISO 14001 and OHSAS 18001 standards. Sustainability is part of the our corporate strategy and business success. Policies and programs are implemented to reduce resources wastage for our environmental benefits.

الصحة المهنية والسلامة

تحظى الصحة المهنية والسلامة بأهمية خاصة لدى الشركة السعودية لأنابيب الصلب، وتعد السلامة جزءاً لا يتجزأ من جميع عملياتها التشغيلية. وقد حرصت الشركة على تطبيق سياسة الصحة المهنية والسلامة، وإصدار كتيب تعليمات السلامة، وأنشطة التشغيل والصيانة. وتعمل الشركة على خلق بيئة عمل آمنة وخالية من الإصابات وفق أنظمة الإدارة العالمية، مع نشر برامج التوعية، وتثقيف الموظفين لضمان تطبيق الممارسات الآمنة. تملك الشركة خطة للعمل في حالات الطوارئ، مع تطبيق إجراءات التشغيل الآمن. كما قامت بتشكيل مجموعة السلامة والتي تعمل تحت إشراف الرئيس التنفيذي وتقوم بمتابعة أنشطة السلامة في جميع مواقع العمل ذات الصلة.

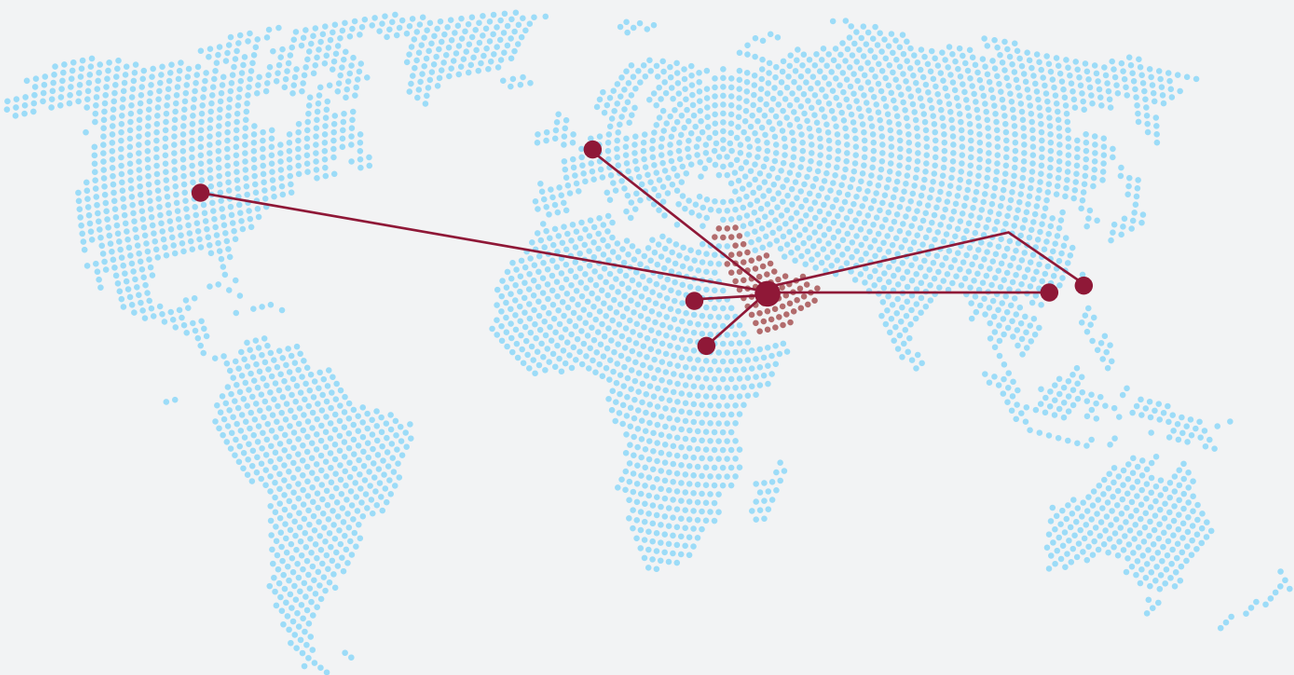
نظام إدارة البيئة والسلامة

يتوافق نظام إدارة البيئة والسلامة مع معايير الآيزو ١٤٠٠١، ومعايير أوهساس ١٨٠٠١. كما تعد الاستدامة جزءاً من استراتيجية الشركة وفصلا من فصول نجاحها. يتم تطبيق السياسات والبرامج بهدف خفض الهدر في الموارد، بما يحافظ على البيئة.

المبيعات والتسويق
Sales and Marketing

تقوم الشركة السعودية لأنابيب الصلب بتسويق منتجاتها عبر مكاتب التسويق الرئيسية في الدمام والرياض وجدة, و من خلال شبكة موزعين معتمدين في المملكة العربية السعودية والدول المجاورة. تم اعتماد منتجات الشركة السعودية لأنابيب الصلب من قبل شركات النفط والغاز الوطنية وحازت على الكثير من شهادات التأهيل والاعتماد الدولية. و توفر الشركة مجموعة شاملة من المنتجات والخدمات اللازمة لخدمة صناعة النفط والغاز في خطوط الأنابيب وتبطين الآبار, والثني بالحث الحراري , والتغليف الخارجي. وتعد الشركة مساهماً رئيسياً في قطاع الطاقة, ومشاريع البناء و البنية التحتية في المنطقة. وقد اعتمدت الشركة السعودية لأنابيب الصلب خطط تسويقية للتنمية والتوسع دولياً للوصول الى العملاء المحتملين في انحاء العالم.

Saudi Steel Pipe Company (SSP) markets its products through main sales offices in Dammam, Riyadh and Jeddah, and through branched network of reliable distributors in the Kingdom of Saudi Arabia, and neighboring countries. SSP products are approved by major National Oil & Gas Companies and certified by international authorities. The company delivers comprehensive range of products and services to Oil & Gas industry including line pipes, OCTG pipes with threading and coupling, hot induction bending and external coating services. SSP is a major contributor to power, construction and infrastructure projects in the region. SSP has adopted marketing plans to expand internationally by reaching potential clients around the world.



الموارد البشـرية
Human Resources

The key to continuity and development is the qualified manpower for production and quality control. SSP employees undergo training programs which includes classroom studies as well as on job training in the training and development center in Dammam Factory. SSP also provides housing, recreation, medical and other services for SSP employees.

The company has adopted human resources plan that aims to create a professional environment that would continuously improve the performance of all employees, matching the right person to the right job.

The human resource policy of the company focuses on maximizing local workforce employment opportunities. Wide range of training programs at various levels to enhance skills and capacity to meet needs and future operations. Empowering female talent and their contribution to the workforce with a platform to build their skills and further their standing in the local job market.

السـبيل الـى التطويـر و الاسـتمرار هـو تدريـب المـوارد البشـرية المؤهلـة علـى الانتـاج بجـودة ونوعيـة عاليـة. وتقـوم الشـركة السعودية لأنابيـب الصلب بتأهيـل الشـباب السعودييـن عـن طريـق الدراسـات النظريـة والتدريـب علـى رأس العمـل فـي مركـز التدريـب والتطويـر فـي مصنـع الشـركة بالدمـام. وتقـوم الشـركة بتوفيـر مرافـق الاسـكان والترفيـه والعـلاج وجميـع الخدمـات للعامليـن فـي الشركة.

تبنّـت الشـركة السعودية للأنابيـب خطـة مـوارد بشـرية تهـدف لخلـق بيئـة مثاليـة لتطويـر كفـاءة موظفـي الشـركة, لملائمـة الموظـف بالوظيفة المناسـبة له.

تركـز سياسـة المـوارد البشـرية للشـركة علـى تحقيـق أعلـى مسـتويات السـعودة فـي فـرص العمـل المحليـة. كمـا توفـر مجموعـة متنوعـة مـن البرامـج التدريبيـة التـي تشـمل مختلـف المسـتويات لتعزيـز المهـارات والقـدرة علـى تلبيـة الاحتياجـات والعمليـات المسـتقبلية. تدعـم المواهـب النسـائية ومسـاهمتها فـي القـوى العاملـة و بنـاء مهاراتهـا وتعزيـز مكانتهـا فـي سـوق العمـل المحلية.

خارطة الموقع
Location Map

عناوين المكاتب
Office Addresses

المكتب الرئيسي والمصانع ومبيعات التصدير: Head Office Factories and Export Sales:

الشركة السعودية لأنابيب الصلب, ص.ب ١١٦٨٠، الدمام ٣١٤٦٣، المملكة العربية السعودية

Saudi Steel Pipe Company: P.O. Box: 11680, Dammam 31463, Kingdom of Saudi Arabia

+966 13 812 2222 + ٩٦٦ ١٣ ٨١٢ ٢٢٢٢ info@sspipe.com

+966 13 812 1005 + ٩٦٦ ١٣ ٨١٢ ١٠٠٥ www.sspipe.com

مكتب مبيعات جدة: Jeddah Sales Office:

ص.ب ١٢٠٦٣، جدة ٢١٤٧٣، المملكة العربية السعودية

P.O. Box: 12063, Jeddah 21473, Kingdom of Saudi Arabia

+966 12 660 8423 +٩٦٦ ١٢ ٦٦٠ ٨٤٢٣

+966 12 660 5607 +٩٦٦ ١٢ ٦٦٠ ٥٦٠٧

مكتب مبيعات الرياض: Riyadh Sales Office:

ص.ب ٢١٤٢٠، الرياض ١١٤٧٥، المملكة العربية السعودية

P.O. Box: 21420, Riyadh 11475, Kingdom of Saudi Arabia

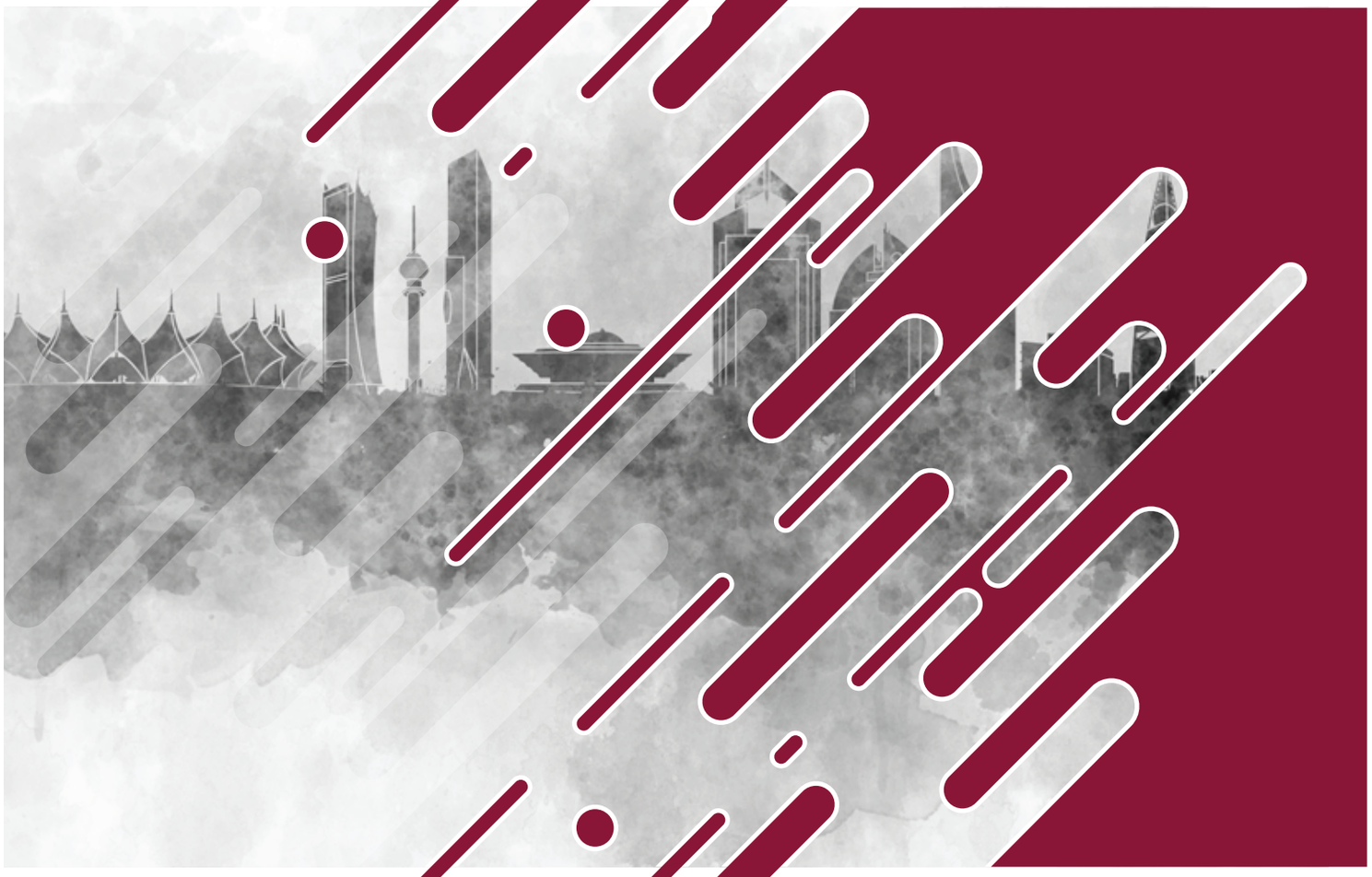
+966 11 201 3450 +٩٦٦ ١١ ٢٠١ ٣٤٥٠

+966 11 201 3440 +٩٦٦ ١١ ٢٠١ ٣٤٤٠

SSP

الأنابيب السعودية

sspipe.com



اسم راسخ في صناعة الأنابيب