



ADTO GROUP    ADTO Group

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STEEL PIPE PRODUCT MANUAL

THE WORLD-CLASS ONE-STOP SOLUTION PROVIDER OF PIPING MATERIALS!

元拓建材 | 工程设备材料（方案）提供商
ADTO | Building Materials and Equipment Solutions Provider

厂家直供，品质保障，为您创造更多价值
Factory Direct Supply; Quality Guaranteed; Create More Value for You

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CONTENTS

COMPANY PROFILE	01
EQUIPMENTS AND WORKSHOP	02
CERTIFICATES AND HONOR	04
SEAMLESS STEEL PIPE	05
ERW PIPE	11
GALVANIZED STEEL PIPE	12
HOLLOW SECTION	13
WELDED STEEL PIPE	15
ANTI-CORROSION OF STEEL PIPE	17
FLANGES AND PIPE FITTINGS	19
ENGINEERING APPLICATION	23



COMPANY PROFILE >>

ADTO Group, a company based in China, has built its reputation on being a trusted supplier for all steel pipe and pipe fittings in the world since 1998. Integrated with design, manufacturing, project management and sales of steel products, it's headquarters is located in the beautiful city of Changsha in southern China. ADTO Group has been one of the 'China Top 500 Private Enterprises' and 'China Top 100 Steel Corporation'.

Changsha Xiangjia Metal Material Co., Ltd. As an exporting gateway under ADTO Group, we have over 20 years of piping materials making experience and insight into Oil & Gas, Water, Mining, Marine and infrastructure. Our philosophy and commitment focuses on one-stop service for piping materials and pipe fittings, helping our 1000+ business partners including contractors and resellers all over the world to have a better solution, ensuring high quality whilst saving precious time.

Indeed, ADTO is renowned internationally as one of the foremost experts in making piping materials. Combining advanced manufacturing with 10+ overseas branches & offices (Philippines, Indonesia, Vietnam, Myanmar, Cambodia, Thailand, Dubai, Egypt and Nigeria, etc), ADTO has a reputation for serving all its business partners from more than 100 countries and regions better and faster.



EQUIPMENTS AND WORKSHOP

EQUIPMENTS FOR SEAMLESS STEEL PIPES



Rotating Furnace



Piercing Mill



Hot Rolling Mill



Sizing Machine



Straightener



Cooling Bed

EQUIPMENTS FOR WELDED STEEL PIPES



1. Straight Row Roller Forming Machine



2. High Frequency Solid State Welder



3. JCOE Production Line



4. Longitudinal Submerged Arc Welding



5. On-Line Super Spiral Accumulator



6. Spiral Welded Pipe Forming Machine

EQUIPMENTS AND WORKSHOP



7.Spiral Submerged Arc Welding



8.On-Line Weld Seam Annealing



9.Electric Bevelling Machine

EQUIPMENTS FOR TEST AND INSPECTION



- 1.Hydraulic Testing Equipment
- 2.X-ray Inspection Equipment
- 3.Ultrasonic Testing Equipment
- 4.Eddy Current Testing Equipment
- 5.Magnetic Particle Inspection



- 1.Impact Testing Machine
- 2.Universal Testing Machine
- 3.Hardness Tester
- 4.Metallographic Analyzer
- 5.Spectrograph

CERTIFICATES AND HONOR



SEAMLESS STEEL PIPE

LINE PIPE

Standard: GB/T9711-2011,API 5L,ISO3183-2007

Uses: Conveying of gas, water and oil in petroleum and natural gas industries



Specifications of Seamless Steel Pipe

DN	NPS	OD	ANSI/ASME B36.10M												
MM	INCH	MM	SCH10	SCH20	SCH30	STD	SCH40	SCH60	XS	SCH80	SCH100	SCH120	SCH140	SCH160	XXS
6	1/8"	10.3				1.73	1.73		2.41	2.41					
8	1/4"	13.7				2.24	2.24		3.02	3.02					
10	3/8"	17.1				2.31	2.31		3.2	3.2					
15	1/2"	21.3	2.11		2.41	2.77	2.77		3.73	3.73				4.78	7.47
20	3/4"	26.7	2.11		2.41	2.87	2.87		3.91	3.91				5.56	7.82
25	1"	33.4	2.77		2.9	3.38	3.38		4.55	4.55				6.35	9.09
32	1-1/4"	42.2	2.77		2.97	3.56	3.56		4.85	4.85				6.35	9.7
40	1-1/2"	48.3	2.77		3.18	3.68	3.68		5.08	5.08				7.14	10.15
50	2"	60.3	2.77		3.18	3.91	3.91		5.54	5.54				8.74	11.07
65	2-1/2"	73	3.05		4.78	5.16	5.16		7.01	7.01				9.53	14.02
80	3"	88.9	3.05		4.78	5.49	5.49		7.62	7.62				11.13	15.25
90	3-1/2"	101.6	3.05		4.78	5.74	5.74		8.08	8.08					
100	4"	114.3	3.05		4.78	6.02	6.02		8.56	8.56		11.13		13.49	17.12
125	5"	141.3	3.4			6.55	6.55		9.53	9.53		12.7		15.88	19.05
150	6"	168.3	3.4			7.11	7.11		10.97	10.97		14.27		18.26	21.95
200	8"	219.1	3.76	6.35	7.04	8.18	8.18	10.31	12.7	12.7	15.09	18.26	20.62	23.01	22.23
250	10"	273	4.19	6.35	7.8	9.27	9.27	12.7	12.7	15.09	18.26	21.44	25.4	28.58	25.4
300	12"	323.8	4.57	6.35	8.38	9.53	10.31	14.27	12.7	17.48	21.44	25.4	28.58	33.32	25.4
350	14"	355.6	6.35	7.92	9.53	9.53	11.13	15.09	12.7	19.05	23.83	27.79	31.75	35.71	
400	16"	406.4	6.35	7.92	9.53	9.53	12.7	16.66	12.7	21.44	26.19	30.96	36.53	40.19	
450	18"	457.2	6.35	7.92	11.13	9.53	14.27	19.05	12.7	23.83	39.36	34.93	39.67	45.24	
500	20"	508	6.35	9.53	12.7	9.53	15.09	20.62	12.7	26.19	32.54	38.1	44.45	50.01	
550	22"	558.8	6.35	9.53	12.7	9.53		22.23	12.7	28.58	34.93	41.28	47.63	53.98	
600	24"	609.6	6.35	9.53	14.27	9.53	17.48	24.61	12.7	30.96	38.89	46.02	52.37	59.54	
650	26"	660.4	7.92	12.7		9.53			12.7						
700	28"	711.2	7.92	12.7	15.88	9.53			12.7						
750	30"	762	7.92	12.7	15.88	9.53			12.7						
800	32"	812.8	7.92	12.7	15.88	9.53	17.48		12.7						
850	34"	863.6	7.92	12.7	15.88	9.53	17.48		12.7						
900	36"	914.4	7.92	12.7	15.88	9.53	19.05		12.7						
950	38"	965.2				9.53			12.7						
1000	40"	1016				9.53			12.7						
1050	42"	1066.8				9.53			12.7						
1100	44"	1117.6				9.53			12.7						
1150	46"	1168.4				9.53			12.7						
1200	48"	1219.2				9.53			12.7						

♦ Tolerances on dimensions:

Standard	Outside Diameter Tolerance		Wall Thickness Tolerance
API SPEC 5L	D<60.3 mm	+0.41mm/-0.40mm	+15.0%/-12.5%
	D>60.3 mm	+0.75%/-0.40mm	

SEAMLESS STEEL PIPE

♦ Chemical composition

Class	Grade	C≤	Mn≤	P≤	S≤	V≤	Nb≤	Ti≤
PSL1	L245/B	0.28	1.20	0.030	0.030	-	-	-
	L290/X42	0.28	1.30	0.030	0.030	-	-	-
	L320/X46	0.28	1.40	0.030	0.030	-	-	-
	L360/X52	0.28	1.40	0.030	0.030	-	-	-
	L390/X56	0.28	1.40	0.030	0.030	-	-	-
	L415/X60	0.28	1.40	0.030	0.030	-	-	-
	L450/X65	0.28	1.40	0.030	0.030	-	-	-
	L485/X70	0.28	1.40	0.030	0.030	-	-	-
PSL2	L245N/BN	0.24	1.20	0.025	0.015	-	-	0.04
	L290N/X42N	0.24	1.30	0.025	0.015	0.06	0.05	0.04
	L320N/X46N	0.24	1.40	0.025	0.015	0.07	0.05	0.04
	L360N/X52N	0.24	1.40	0.025	0.015	0.10	0.05	0.04
	L390N/X56N	0.24	1.40	0.025	0.015	0.10	0.05	0.04
	L415N/X60N	0.24	1.40	0.025	0.015	0.10	0.05	0.04
	L450Q/X65Q	0.18	1.70	0.025	0.015	-	-	-
	L485Q/X70Q	0.18	1.80	0.025	0.015	-	-	-

♦ Mechanical properties

Standard	Grade	Yield strength (Mpa)		Tensile strength(Mpa)		Elongation(%)
		min	max	min	max	min
GB/T9711 API 5L ISO3183	PSL1					
	L245/B	245		415		$A_f = c \frac{A_{XC}^{0.2}}{U^{0.9}}$
	L290/X42	290		415		
	L320/X46	320		435		
	L360/X52	360		460		
	L390/X56	390		490		
	L415/X60	415		520		
	L450/X65	450		535		
	PLS2					
	L245N/BN	245	450	415	760	$A_f = c \frac{A_{XC}^{0.2}}{U^{0.9}}$
	L290N/X42N	290	495	415	760	
	L320N/X46N	320	525	435	760	
	L360N/X52N	360	530	460	760	
	L390N/X56N	390	545	490	760	
	L415N/X60N	415	565	520	760	
	L450Q/X65Q	450	600	535	760	

OCTG PRODUCTS

Standard: API SPEC 5CT, API SPEC 5B, ISO 11960
Uses: Tubing is used to extruding petroleum and natural gas from a well; Casing serves as wall of a well



♦ Chemical Composition (%);

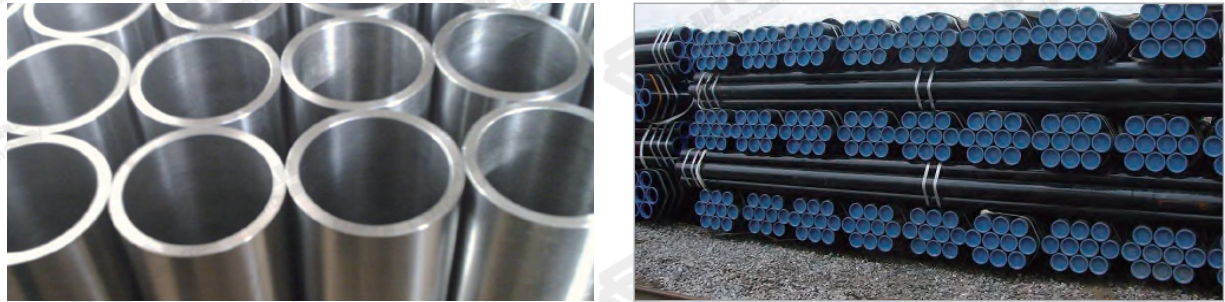
Grade	C		Mn		Mo		Cr		Ni	Cu	P	S	Si
	min	max	min	max	min	max	min	max	max	max	max	max	max
J55	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
K55	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
N80	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
L80-1	-	0.43	-	1.90	-	-	-	-	0.25	0.35	0.030	0.030	0.45
C90-1	-	0.35	-	1.00	0.25	0.75	-	1.20	0.99	-	0.020	0.010	-
C90-2	-	0.50	-	1.90	-	N.L.	-	N.L.	0.99	-	0.030	0.010	-
C95	-	0.45	-	1.90	-	-	-	-	-	-	0.030	0.030	0.045
T95-1	-	0.35	-	1.20	0.25	0.85	0.40	1.50	0.99	-	0.030	0.010	-
T95-2	-	0.5	-	1.90	-	-	-	-	-	-	0.030	0.010	-
P110	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-

♦ Mechanical Properties:

Grade	Yield Strength				Tensile Strength		Hardness		Allowable Hardness Variation
	min		max		min		max		
	Psi	Mpa	Psi	Mpa	Psi	Mpa	HRC	HBW	HRC
J55	55,000	379	80,000	552	75,000	517	-	-	-
K55	55,000	379	80,000	552	95,000	655	-	-	-
N80	80,000	552	110,000	758	100,000	689	-	-	-
L80-1	80,000	552	95,000	655	95,000	655	23	241	-
C90	90,000	621	105,000	724	100,000	689	25.4	255	3.0
C95	95,000	655	110,000	758	105,000	724	-	-	-
T95	95,000	655	110,000	758	125,000	724	25.4	255	3.0
P110	110,000	758	140,000	965	100,000	862	-	-	-

STRUCTURAL AND MECHANICAL TUBE

Standard: ASTMA519, EN 10297, EN 10210, DIN 1629, GB/T 8162, JIS G3445
Uses: For manufacture of pipeline, vessels, equipment, pipe fittings and steel structures



♦ Mechanical Properties:

Standard	Grade	Tansile Strength	Yield Strength Not less than		Elongation Not less than
			≤16mm	> 16-30mm	
GB/T 8162	10	≥335	205	195	24
	20	≥390	245	"235	20
	35	≥510	305	295	17
	45	≥590	335	325	14
	Q345	≥490	325	315	21
DIN 1629	-	-	≤16mm	>16mm	-
	St37.0	350-480	235	225	25
	St44.0	420-550	275	265	21
	St55	540-645	295	285	17
	St52.0	500-650	355	345	21

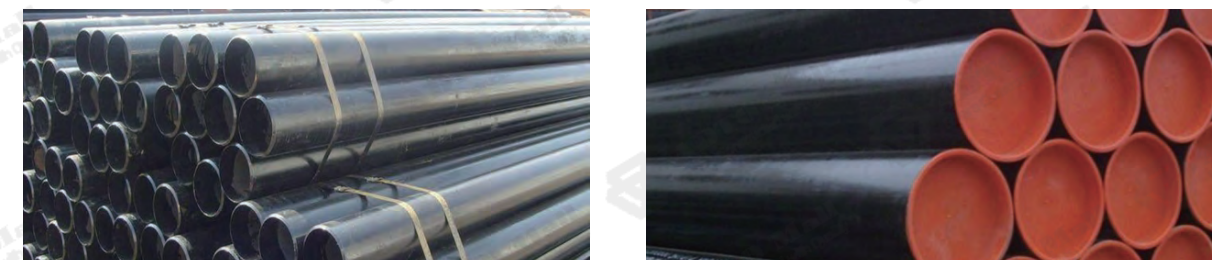
♦ Chemical Composition(%)

Standard	Grade	C	Si	Mn	P	S	Cr	Ni	Cu	V
GB/T 8162	10	0.07-0.13	0.17-0.37	0.35-0.65	≤0.025	≤0.020	≤0.15	≤0.30	≤0.25	-
	20	0.17-0.23	0.17-0.37	0.35-0.65	≤0.025	≤0.020	≤0.25	≤0.30	≤0.25	-
	35	0.32-0.39	0.17-0.37	0.50-0.80	≤0.025	≤0.020	≤0.25	≤0.30	≤0.25	-
	45	0.42-0.50	0.17-0.37	0.50-0.80	≤0.025	≤0.020	≤0.25	≤0.30	≤0.25	-
	Q345A	≤0.20	≤0.55	1.00-1.60	≤0.025	≤0.020	≤0.30	≤0.30	≤0.30	-
	Q345B	≤0.20	≤0.55	1.00-1.60	≤0.025	≤0.020	≤0.30	≤0.30	≤0.30	-
	Q345C	≤0.20	≤0.55	1.00-1.60	≤0.025	≤0.020	≤0.30	≤0.30	≤0.30	0.02-0.15
	Q345D	≤0.18	≤0.55	1.00-1.60	≤0.025	≤0.020	≤0.30	≤0.30	≤0.30	0.02-0.15
DIN 1629	St37.0	≤0.17	0.17-0.37	0.35-0.65	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25	-
	St44.0	≤0.21	0.17-0.37	0.50-0.80	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25	-
	St55	0.33-0.41	0.17-0.37	0.50-0.80	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25	-
	St52,0	≤0.22	≤0.55	≤1.60	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25	-

SEAMLESS STEEL PIPE

FLUID PIPE

Standard: GB/T 8163 China National Standard
ASTMA 53M Standard of American Society for Testing & Materials
ASTMA 106 Standard of American Society for Testing & Materials
Uses: For conveyance of petroluem, gas and conveyance of other fluid



♦ Mechanical Properties:

Standard	Grade	Tansile Strength	Yield Strength Not less than		Elongation Not less than
			≤16mm	> 16mm	
GB/T 8163	10	335-475	≥205	≥195	≥24
	20	410-550	≥245	≥235	≥20
	0295	430-610	≥295	≥285	≥22
	Q345	490-665	≥325	≥315	≥21
DIN 1629	A	≥330	≥205		See Table 3 of ASTM A 53
	B	≥415	≥240		
	A	≥330	≥205		See Table 4 of ASTM A 106
	B	≥415	≥240		
	c	≥485	≥275		

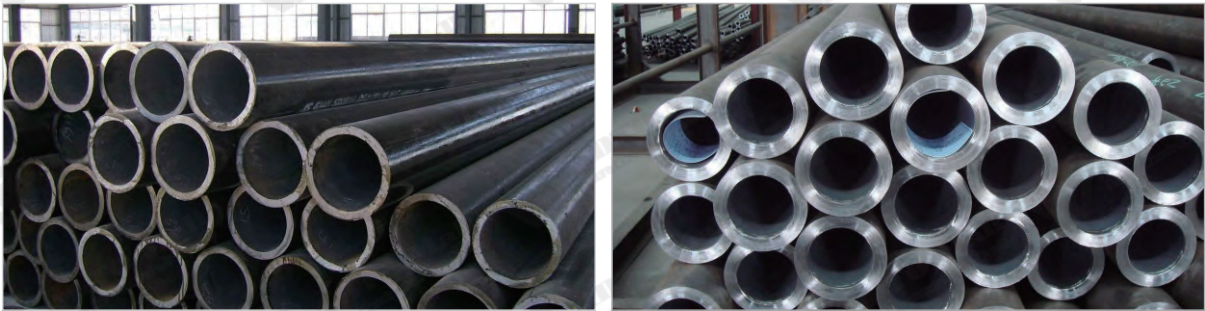
♦ Chemical Composition(%)

Standard	Grade	C	Si	Mn	P	S	Ni	Cr	Cu	Mo	V
GB/T 8163	10	0.07-0.13	0.07-0.37	0.35-0.65	≤0.035	≤0.035	≤0.30	≤0.15	≤0.25	-	-
	20	0.07-0.23	0.17-0.37	0.35-0.65	≤0.035	≤0.035	≤0.30	≤0.25	≤0.25	-	-
	Q295A	≤0.16	≤0.55	0.80-1.50	≤0.045	≤0.045	≤0.30	≤0.30	≤0.30	-	-
	Q295B	≤0.16	≤0.55	0.80-1.50	≤0.040	≤0.040	≤0.30	≤0.30	≤0.30	-	-
	Q345A	≤0.20	≤0.55	1.00-1.60	≤0.045	≤0.045	≤0.30	≤0.30	≤0.30	-	-
	Q345B	≤0.20	≤0.55	1.00-1.60	≤0.040	≤0.040	≤0.30	≤0.30	≤0.30	-	-
	Q345C	≤0.20	≤0.55	1.00-1.60	≤0.035	≤0.035	≤0.30	≤0.30	≤0.30	-	0.02-0.15
	Q345D	≤0.18	≤0.55	1.00-1.60	≤0.030	≤0.030	≤0.30	≤0.30	≤0.30	-	0.02-0.15
	Q345E	≤0.18	≤0.5	1.00-1.60	≤0.025	≤0.025	≤0.30	≤0.30	≤0.30	-	0.02-0.15
ASTM A53M	A	≤0.25	-	≤0.95	≤0.05	≤0.045	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08
	B	≤0.30	-	≤1.20	≤0.05	≤0.045	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08
ASTM A106	A	≤0.25	≥0.10	0.27-0.93	≤0.035	≤0.035	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08
	B	≤0.30	≥0.10	0.29-1.06	≤0.035	≤0.035	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08
	C	≤0.35	≥0.10	0.29-1.06	≤0.035	≤0.035	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08

SEAMLESS STEEL PIPE

BOILER TUBE

Standard: ASME SA-106, ASTM A179, ASME SA-192M, ASME SA-209M, ASME SA-210M, ASME SA-213M, ASTM A312, ASME SA 333, ASME SA 335, DIN 17175, EN 10216,GB 3087, GB 5310, JIS G3461-G3462, JIS G3454-G3456
Uses: For manufacture wall panel, economizer,reheater,superheater and steam pipeline of boilers.



Tolerances on Dimensions:

♦ Outside Diameter Tolerance:

Standard	Outside Diameter(mm)	Tolerance
DIN 17175	≤100	±0.75%(min ±0.5mm)
	>100	± 0.90%
GB3087	≤180	1.0%(min ±0.5mm)
	50	±0.5mm
GB 5310	>50	±1.0%
ASME SA-192M ASME SA-209M ASME SA-210M ASME SA-213M JIS G 3461	101.6	±0.4,-0.8mm
	>101.6-190.5	+0.4,-1.2mm
ASME SA-106	48.3	±0.4mm
	≥48.3-114.3	±0.79mm
	>114.3	+1.5, - 0.79mm

♦ Wall Thickness Tolerance:

Standard	Outside Diameter da	Wall Thickness S	Tolerance
DIN 17175	≤130	S≤2Sn	+15%,-10%
		2 Sn≤S≤4Sn	+12.5%,-10%
		S>4Sn	±9%
	>130	S≤0.05da	+17.5%,-12.5%
		0.05da<S≤0.11da	±12.5%
		S>0.11da	10%
GB3087		3.0 -20	+15%,-12.5%(min.+0.45mm,-0.35mm)
		>20	±12.5%
GB 5310		<3.5	+15%, -10%(min.+0.48,-0.32mm)
		3.5 -20	+15%,-10%
		>20	±10%
ASME SA-192M ASME SA-209M ASME SA-210M ASME SA-213M JIS G 3461		2.41-3.8	+35%,-0%
		>3.8-4.6	+33%,-0%
		>4.6	+28%,-0%
ASME SA-106			±12.5%

ERW STEEL PIPE

ERW PIPE

ERW Pipe: Electric Resistance Welded steel tube used in oil drilling and machinery manufacturing, etc.
Steel Grade: Q235, Q345, S235JR, S275JR, S355JR, S355J2H, GR. A, GR. B, GR. C, GR. D, STK400, STK500, A, B, X42, X46, X52, X56, X60, X65, X70
Standard: GB/T3091-2001 , BS1387-1985, DIN EN10025, EN10219, JIS G3444:2004, ASTM A53, API 5L



ERW Pipe Welded With Flanges,Epoxy Coated



Welded Pipe

◆ BS1387:1985 ERW PIPE

DN	A			B			C		
	Outer Diameter		Wall Thickness	Outer Diameter		Wall Thickness	Outer Diameter		Wall Thickness
	Max	Min		Max	Min		Max	Min	
	21.4	21.0	2.0	21.7	21.1	2.6	21.7	21.1	3.2
15	26.9	26.4	2.3	27.2	26.6	2.6	27.2	26.6	3.2
20	33.8	33.2	2.6	34.2	33.4	3.2	34.2	33.4	4.0
25	42.5	41.9	2.6	42.9	42.1	3.2	42.9	42.1	4.0
32	48.4	47.8	2.9	48.8	48.0	3.2	48.8	18.0	4.0
40	60.2	59.6	2.9	60.8	59.8	3.6	60.8	59.8	4.5
50	76.0	75.2	3.2	76.6	75.4	3.6	76.6	75.4	4.5
65	88.7	87.9	3.2	89.5	88.1	4.0	89.5	88.1	5.0
80	113.9	113.0	3.6	114.9	113.1	4.5	114.9	113.3	5.4
100				140.6	138.7	5.0	140.6	138.7	5.4
125				166.1	164.1	5.0	166.1	164.1	5.4
150									

◆ JISG3444:2004 STK 400/500 STRUCTURAL CARBON STEEL PIPE

Outer Diameter (mm)	Wall Thickness (mm)	Outer Diameter (mm)	Wall Thickness (mm)	Outer Diameter (mm)	Wall Thickness (mm)
21.7	2.0	60.5	2.3-4.0	139.8	3.6-6.0
27.2	2.0-2.3	76.3	2.8-4.0	165.2	4.5-7.1
34.0	2.3	89.1	2.8-3.2	190.7	4.5-8.2
42.7	2.3-2.5	101.6	3.2-5.0		
48.6	2.3-3.2	114.3	3.2-4.5		

GALVA NIZED STEEL PIPE

HOT DIPPED GALVANIZED PIPE / PRE-GALVANIZED PIPE

Steel Grade: Q195, Q235, Q345, S235JR, S275JR, S355JR, GR.A, GR.B, GR.C, GR.D, STK400, STK500
Standard: GB/T3091-2001, BS1387-1985, DIN EN10025, EN10219, JIS G3444: 2004, ASTM A53, BS-EN10255-2004
Surface Finish: hot dipped galvanized, electro galvanized, black, painted, threaded, socket, engraved, Groove.
Pre-galvanized pipe: outer diameter: 19mm-100mm; thickness 1mm-2.3mm; zinc coating : 80-120g/m2



Hot Dipped Galvanized Pipe

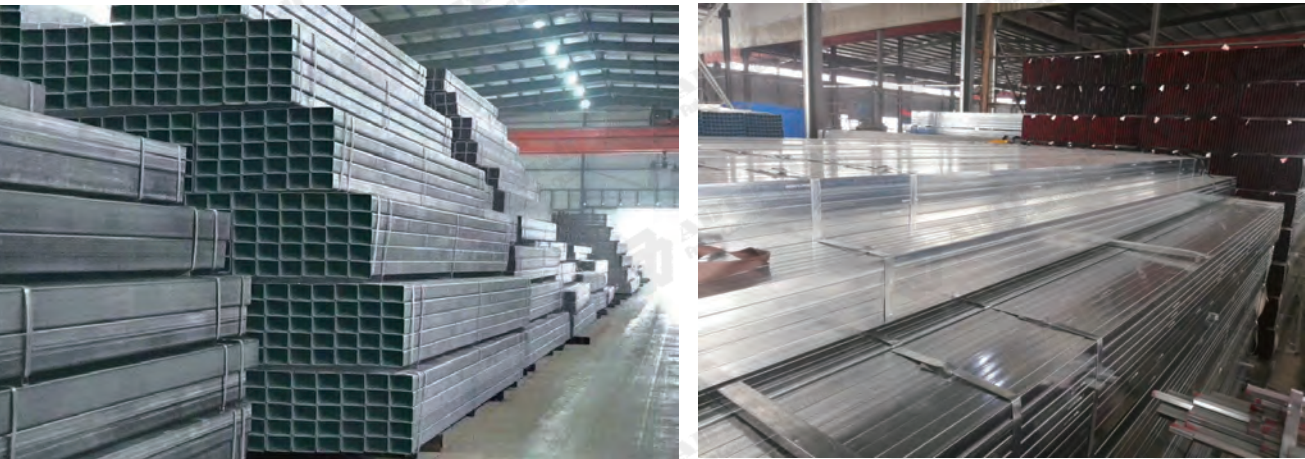


Pre-Galvanized Pipe

Outer Diameter		Wall Thickness	Length
Inch	mm	mm	m
1/2"	21.3	0.6-3.0	0.3-12
3/4"	26.9	0.6-3.0	0.3-12
1'	33.4	1.0-3.0	0.3-12
1-1/4"	42.3	1.0-4.0	0.3-12
1-1/2'	48.3	1.0-4.0	0.3-12
2'	60.3	1.5-4.0	0.3-12
2-1/2'	76.1	1.5-4.0	0.3-12
3'	88.9	1.5-9.5	0.3-12
4, ,	114.3	2.0-9.5	0.3-12
5, ,	141.3	3.0-9.5	0.3-12
6, ,	168.3	3.0-12.0	1.0-12
8, ,	219.1	3.2-12.0	1.0-12
10, ,	273	3.2-12.0	1.0-12
12, ,	323.8	6.0-15.0	1.0-12
14, ,	355.6	8.0-15.0	1.0-12
16, ,	406.4	8.0-20.0	1.0-12

SQUARE/RECTANGULAR TUBE
(HOLLOW SECTION)

Square/Rectangular Tube is applicable to frame for civil construction, furniture and etc. We can supply the products according to following standards: GB/T6728-2002, ASTM A500, JIS G3466, En10210, EN10219



Pre-galvanized Hollow Section

Size (mm)	Thickness (mm)	Length (m)	Size (mm)	Thickness (mm)	Length (m)
12.7x12.7	0.7-1.2	5-12	19x25	0.7-2.0	5-12
16x16	0.7-1.2	5-12	20x40	0.7-1.6	5-12
19x19	0.7-1.2	5-12	27x47	0.7-1.6	5-12
20x20	0.7-1.5	5-12	30x40	0.7-1.6	5-12
22x22	0.7-1.5	5-12	25x50	0.7-1.8	5-12
25x25	0.7-1.5	5-12	30x50	0.7-2.0	5-12
29x29	0.7-1.7	5-12	37x57	0.7-2.0	5-12
30x30	0.7-1.7	5-12	37x77	0.7-2.0	5-12
32x32	0.7-1.7	5-12	38x75	0.7-2.0	5-12
35x35	0.7-1.7	5-12	40x60	0.7-2.0	5-12
37x37	0.7-1.7	5-12	50x75	0.7-2.0	5-12
38x38	0.7-1.7	5-12	40x80	0.7-2.0	5-12
40x40	0.7-1.7	5-12	50x100	0.85-2.0	5-12
45x45	0.7-1.7	5-12	25x75	0.9-2.0	5-12
50x50	0.7-2.0	5-12	50x150	1.3-2.2	5-12
60x60	0.7-2.0	5-12	80x80	0.7-2.0	5-12
75x75	0.7-2.0	5-12	100x100	0.7-2.0	5-12

• Square tube

Size (mm)	Thickness (mm)	Size (mm)	Thickness (mm)
20x20	1.5-2.75	75x75	1.5-5.75
20x30	1.5-2.75	80x80	1.5-5.75
25x25	1.5-2.75	50x100	1.5-5.75
30x30	1.5-3.0	60x100	1.5-5.75
20x40	1.5-3.0	80x100	1.5-5.75
30x40	1.5-3.0	60x120	1.5-5.75
25x50	1.5-4.0	40x100	1.5-5.75
30x60	1.5-4.0	80x120	1.7-6.0
30x50	1.5-4.75	100x100	1.7-6.0
40x40	1.5-4.75	80x140	2.5-6.0
40x50	1.5-4.75	120x120	2.5-6.0
40x60	1.5-4.75	80x160	2.5-6.0
50x50	1.5-4.75	75x150	2.5-6.0
40x80	1.5-5.75	100x150	2.5-6.0
50x70	1.5-5.75	150x150	2.5-6.0
50x80	1.5-5.75	140x140	2.5-6.0
60x80	1.5-5.75	200x100	2.5-6.0
60x90	1.5-5.75	200x200	3.5-10.0
60x60	1.5-5.75	200x300	4.5-11.75
70x70	1.5-5.75	200x400	4.5-11.75



• Pre-galvanized round pipe

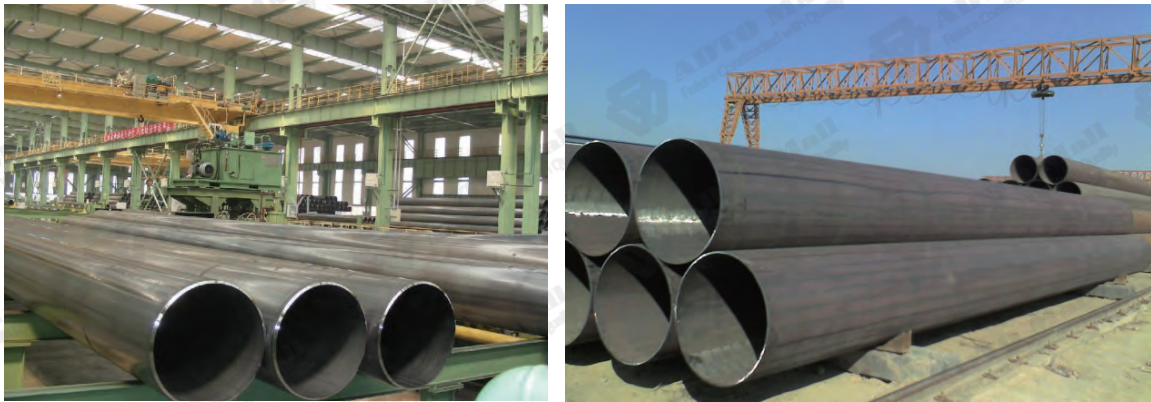
Size (mm)	Thickness (mm)
16	0.7-1.2
20	0.8-2.2
22	0.8-2.2
25	0.8-2.2
25.4	0.8-2.2
32	0.8-2.2
33.4	0.8-2.2
38	1.0-2.2
40	1.0-2.2
42	1.0-2.3
47	1.0-2.3
48	1.0-2.3
59	1.0-2.3
60.3	1.0-2.3
75	1.0-2.3
87	1.0-2.3
112	1.0-2.3



WELDED PIPE

LSAW STEEL PIPE

LSAW steel pipe Structural Pipes and Low-pressure liquid transportation pipes
Standard: ASTM A139(Grade-A-E) ASTM A252(Grade 1-3) JIS G3444(STK290-540) GB/T3091(Q215-345)
OD: 508-1422MM
WT: 6-40MM
Length: 6-12M
Uses: as low-pressure liquid transportation pipes and different types of load bearing structure units as well as other purposes. We can also supply with other sizes according to clients requirements.



• Chemical Component, Mechanical Propertiest

Standard	Grade	Chemical Composition(max)%					Mechanical Propeties	
		C	Si	Mn	S	P	Yield Strength(Mpa)	Tensile strength(Mpa)
GB/T 700-2006	A	0.22	1.4	0.35	0.050	0.045	235	370
	B	0.20	1.4	0.35	0.045	0.045	235	370
	C	0.17	1.4	0.35	0.040	0.04	235	370
	D	0.17	1.4	0.35	0.035	0.035	235	370
GB/T 1591-2009	A	0.20	1.7	0.5	0.035	0.035	345	470
	B	0.20	1.7	0.5	0.030	0.03	345	470
	C	0.20	1.7	0.5	0.030	0.03	345	470
BS EN10025	S235JR	0.17	1.4	-	0.035	0.035	235	360
	S275JR	0.21	1.5	-	0.035	0.035	275	410
	S355JR	0.24	1.6	-	0.035	0.035	355	470
DIN 17100	ST37-2	0.20	-	-	0.050	0.050	225	340
	ST44-2	0.21	-	-	0.050	0.050	365	410
	ST52-3	0.20	1.6	0.55	0.040	0.040	345	490
JIS G3101	SS400	-	-	-	0.500	0.500	235	400
	SS490	-	-	-	0.500	0.500	275	490
API 5L PSL1	A	0.22	0.9	-	0.030	0.03	210	335
	B	0.26	1.2	-	0.030	0.03	245	415
	X42	0.26	1.3	-	0.030	0.03	290	415
	X46	0.26	1.4	-	0.030	0.03	310	435
	X52	0.26	1.4	-	0.030	0.03	360	460
	X56	0.26	1.1	-	0.030	0.03	390	460
	X60	0.26	1.4	-	0.030	0.03	415	520
	X65	0.26	1.45	-	0.030	0.03	450	535
	X70	0.26	1.65	-	0.030	0.03	585	570

WELDED PIPE

SSAW STEEL PIPE

Spiral Welded Pipe is widely applied to the transportation for various of liquid and powdery solid, such as petroleum, natural gas, chemical, heat supply, gas supply, bittern, ore pulp, coal powder and etc. It also can be used as structural tube, engineering tube and the piling tube.

Standard	Grade
GB/T9711.1	L175, L210, L245, L290, L320, L360, L390, L415, L450, L485, L555
GB/T9711.2	L245NB, L245MB, L290NB, L290MB, L360NB, L360MB, L360QB, L415NB, L415MB, L415QB, L450MB, L450QB, L485MB, L485QB, L555MB, L555QB
SY/T5037	Q235B, Q345B
SY/T5040	Q235B, Q345B
API5L	A, B, X42, X46, X52, X56, X60, X65, X70, X80



Outer Diameter (mm)	Wall Thickness (mm)	Length (m)	Outer Diameter (mm)	Wall Thickness (mm)	Length (m)
219	6 - 8	1 - 12	1016	8 - 23	1 - 12
273	6 - 10	1 - 12	1020	8 - 23	1 - 12
325	6 - 14	1 - 12	1220	8 - 23	1 - 12
377	6 - 14	1 - 12	1420	10 - 23	1 - 12
426	6 - 16	1 - 12	1620	10 - 23	1 - 12
478	6 - 16	1 - 12	1820	10 - 25.4	1 - 12
508	6 - 18	1 - 12	2020	10 - 25.4	1 - 12
529	6 - 18	1 - 12	2200	10 - 25.4	1 - 12
610	6 - 19	1 - 12	2420	10 - 25.4	1 - 12
630	6 - 19	1 - 12	2620	10 - 25.4	1 - 12
720	6 - 22	1 - 12	2820	10 - 25.4	1 - 12
820	7 - 22	1 - 12	3000	10 - 25.4	1 - 12
920	8 - 23	1 - 12			

ANTI-CORROSION PROCESSING ABOUT PIPELINE 3PE/PP

STANDARD:
External coating refer to NF A49-710,DIN30670,CAN CSA21,CAN CSA20,SY/T0143,SY/T0315 and other country's external anti-corrosion standards;
Internal coating refer to NF A49-709,API RP 5L2,SY/T0457 and other country's external anti-corrosion standards.

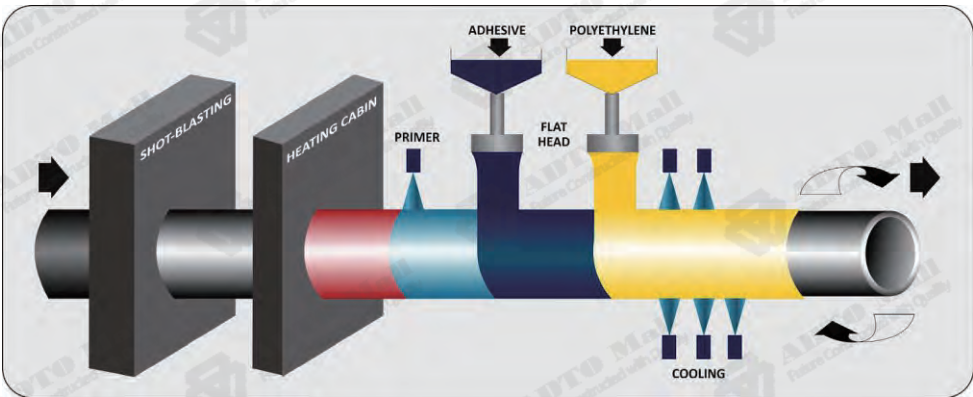
APPLICATION:
The external coating is mainly used for anti-corrosion protection for liquid pipes before burying, and internal drag-reducing coating is mainly used for reduce the investment and maintenance costs.



Inner corrosion protection of steel pipes
We offer inside corrosion protection for DN100~700mm steel pipes. We coat inner wall of treated steel pipe with red oxide anticorrosive paint, bicomponent liquid epoxy paint or other paint designated by clients by means of centrifugal coating.

Outer corrosion protection of steel pipes

- 1. (FBE) Single-layer FBE coating
Characterized by excellent corrosion-proof performance, insulatibity and relatively long service life, epoxy powder coating is one of the most advanced outer anticorrosive coating of pipeline, there are normal type and strengthened type, thickness: normal type:300~400μm;strengthened type:400~500μm.
- 2. (2FBE) Two-layer FBE coating
Two-layer epoxy powder coating is a compound coating structure composed of anticorrosive epoxy powder floor layer and mechanical damage resistant epoxy powder surface layer. There are normal type and strengthened type. Thickness: total thickness of normal type: ≥620μm;total thickness of strengthened type: ≥800μm.
- 3. (2PE/2PP) Two-layer PE/PP cocating
Two-layer PE/PP coating is characterized by excellent corrosion-proof performance,insulatibity, relatively long service life and mechanical damage resistance. There are normal type and strengthened type. The thickness varies with the specification shift of steel pipe; Min thickness of normal type:1.8mm, min thickness of strengthened type:2.5mm.
- 4. (3PE/3PP) Three-layer PE/PP cocating
Three-layer PE/PP coating is characterized by excellent corrosion-proof performance, ,insulatibity, relatively long service life and mechanical damage resistance,it is widely used in coating for all kinds of major pipeline engineering. There are normal type and strengthened type. The thickness varies with the specification shift of steel pipe: Min thickness of normal type:1.8mm, min thickness of strengthened type:2.5mm.



Thickness of 2PE/2PP/3PE/3PP External Coating

Norminal Diameter DN	Epoxy Coating/μm	Adhesive Coating/μm	Minimum Thickness of PE/PP Coating/mm	
			Common	Enhanced
DN≤100	≥120	≥170	1.80	2.50
100<DN≤250			2.00	2.70
250<DN<500			2.20	2.90
500≤DN<800			2.50	3.20
DN≥800			3.00	3.70

Tickness of Two-Layer External FBE Coating

Coating Level	The Minimum Thickness/μm	
	Bottom Layer	Enhanced
Normal Level	250	370
Reinforce Level	300	500

Thickness of Single-Layer External FBE Coating

Coating Level	The Minimum Thickness/μm
Normal Level	300
Reinforce Level	400

Thickness of Internal FBE Coating

Pipe Operation Requirements	The Minimum Thickness/μm	
Drap Reduction Pipeline	≥50	
Anti-corrosion Pipeline	Normal Level	≥250
	Reinforce Level	≥350

Thickness of Liquid Epoxy Internal Coating

Anti-corrosion Level	Thickness of Dry Film/μm
Normal Level	≥200
Reinforce Level	≥300
Extra-reinforce Level	≥450

FLANGES



Specification:	GB/T 9112, GB/T 9125, GB/T 13402, ASME B 16.5, ASME B 16.47, ASME B 16.48, ASME B 16.36, API 590, API 605, EN 1092, EN 1759, BS 1560, BS 4504, ISO 7005, JIS B 2220.
Steel Grade:	20#, 25#, 35#, 16Mn, 20MnMo, 20MnMoNb, 15CrMo, 35CrMo, 12Cr1MoV, 14Cr1MoV, 12Cr2Mo, 11Cr5Mo, A105, A181, A350, A727, A182, A522, A707, A694.
Outer Diameter:	IF Flange: 3/8"~80"; BW Flange: 3/8"~160"; SO Flange: 3/8"~40"; PL Flange: 3/8"~80"; TH Flange: 3/8"~40"; SW Flange: 3/8"~30"; BL Flange: 3/8"~80".
Nominal Pressure:	IF Flange: PN2.5bar~ PN400bar, CLASS150~CLASS2500; BW Flange: PN2.5bar~ PN400bar, CLASS150~CLASS2500; SO Flange: PN6bar~ PN100bar, CLASS150~CLASS1500; PL Flange: PN2.5bar~ PN100bar; TH Flange: PN6bar~ PN100bar, CLASS150~CLASS1500; SW Flange: PN210bar~ PN100bar, CLASS150~CLASS1500; BL Flange: PN2.5bar~ PN100bar, CLASS150~CLASS1500.
Connection Type:	IF, SO, WN, PL, TH, SW, BL, BL(S), PJ/SE, PJ/PR
Surface Type:	IF Flange: FF, RF, MFM, TG, RJ; BW Flange: FF, RF, MFM, TG, RJ; SO Flange: FF, RF, MFM, TG, RJ; PL Flange: FF, RF; TH Flange: FF, RF; SW Flange: RF, MFM, TG, RJ; BL Flange: FF, RF, MFM, TG, RJ

TYPE OF FLANGE



PLATE FLANGE



THREADED FLANGE



SLIP-ON FLANGE



SOCKET WELDING FLANGE



LAP JOINT FLANGE



BLIND FLANGE



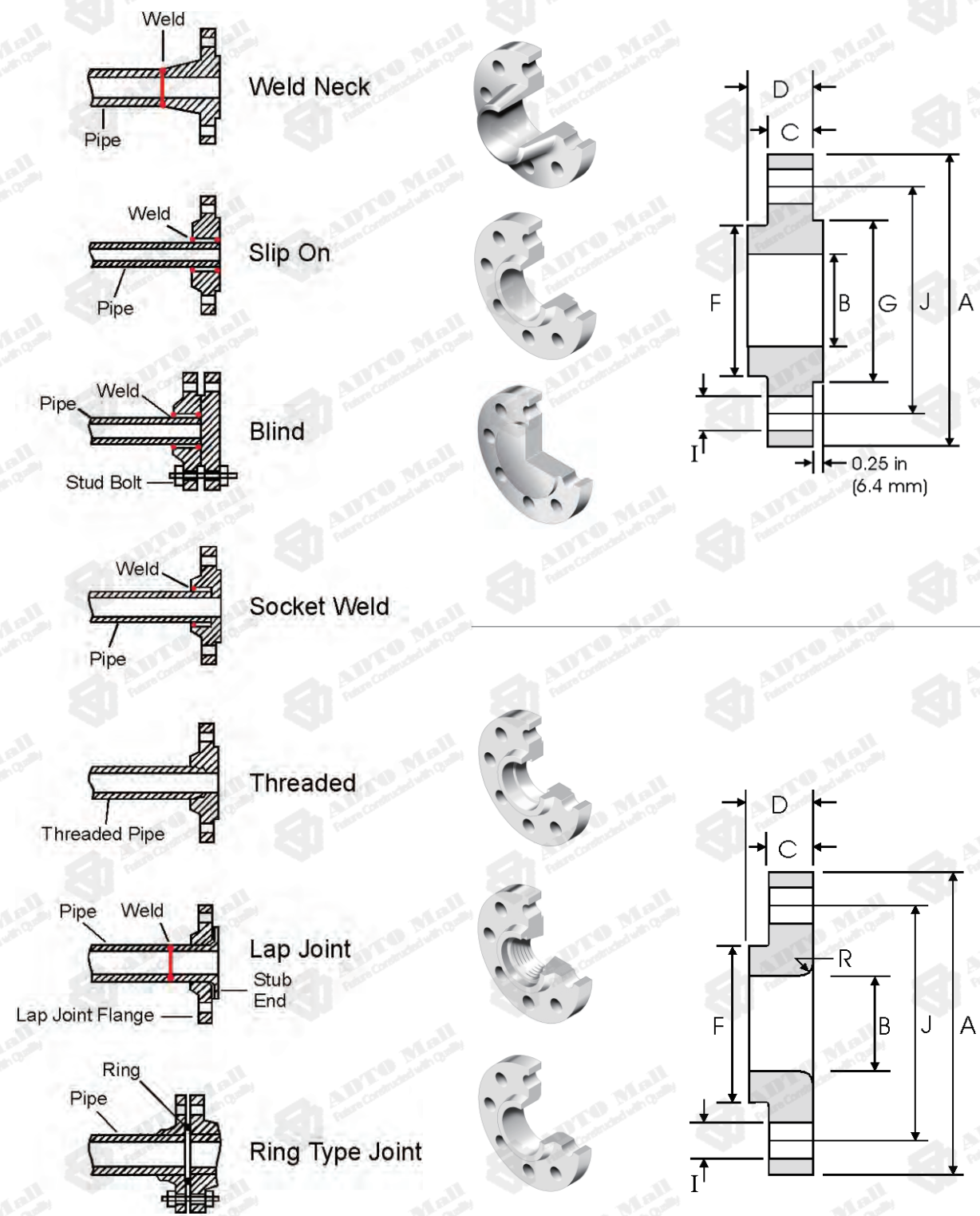
WELDING NECK FLANGE



SPECIAL FLANGE



CARBON STEEL FLANGE



PIPE FITTINGS



Pipe Fittings	Butt Welding Fittings	Forged Fittings
Specification:	GB/T 12459, GB/T 13401, GB/T 10752, ASME B 16.9, ASME B 16.49, ASME B 16.25, EN 10253, DIN 2605, DIN 2615, DIN 2616, DIN 2617, BS 1640, BS 1965, GOST 17375, GOST 17376, GOST 17378, GOST 17379, ISO 3419, ISO 5251, JIS B 2311, JIS B 2312, JIS B 2313	GB/T 14383, GB/T 19326, ASME B 16.11, BS 3799, JIS B 2316
Steel Grade:	10#, 20#, 20G, 20MnG, 09MnV, Q295, Q245R, Q195, Q215, Q235, Q275, Q345, Q345R, Q370R, 16Mn, 12CrMo, 15CrMo, 1Cr5Mo, 12Cr2Mo, 12CrMoG, 15CrMoG, 12Cr2MoG, 12Cr1MoVG, 15MoG, 20MoG, 18MnMoNbR, 13MnNiMoR, 15CrMoR, 14Cr1MoR, 12Cr2Mo1R, 12Cr1MoVR, A234 WPB, A234 WPC, A234 WP, A420 WPL, A860 WPHY, A758	20#, 25#, 35#, 16Mn, 20MnMo, 20MnMoNb, 15CrMo, 35CrMo, 12Cr1MoV, 14Cr1MoV, 12Cr2Mo, 11Cr5Mo, A105, A181, A350, A727, A182, A522, A707, A694
Outer Diameter:	Elbow: 1/2"~60"; Bend: 1/2"~60"; Tee/Cross: 1/2"~60"; Reducer: 1/2"~60"; Cap/Lap: 1/2"~60"	Forged Elbow: 1/8"~4"; Forged Tee/Cross: 1/8"~4"; Forged Coupling/Cap: 1/8"~4"; Forged Nipolet: socket weldolet: 1/8"~4"; threadolet: 1/8"~4"; Weldolet: 1/8"~24"
Wall Thickness/ Nominal Pressure:	Elbow/Bend/Tee/Cross/Reducer /Cap/Lap/: 4mm~200mm	Forged Elbow: socket welding-CLASS 3000, CLASS 6000, CLASS 9000, thread-CLASS 2000, CLASS 3000, CLASS 6000; Forged Tee/Cross: socket welding-CLASS 3000, CLASS 6000, CLASS 9000, thread-CLASS 2000, CLASS 3000, CLASS 6000; Forged Coupling/Cap: socket welding-CLASS 3000, CLASS 6000, CLASS 9000, thread-CLASS 3000, CLASS 6000; Forged Nipolet: socket weldolet-CLASS 3000, CLASS 6000; threadolet-CLASS 3000, CLASS 6000; weldolet-SCH XS, SCH 160
Type:	Elbow Bending Radius: R=1D~10D; Elbow Angle: 30°, 45°, 60°, 90°, 180°; Bend Bending Radius: R=3D~10D; Bend Angle: 0°~180°; Tee: straight tee/reducing tee; Reducer: concentric/eccentric	Angle of Forged Elbow: 45°, 90°

ENGINEERING APPLICATION

1.Application Fields

Oil & Gas

Refineries
Petrochemical Plants
Offshore Facilities
Pipelines

Water Supply
Sewage

Dams
Transmission Pipelines
Irrigation Canals
Pumping Stations

Power/Alternative Energy

Thermal and Hydroelectric Power
Waste-to-Energy Plants
Transmission Lines
Substations

Industrial
Process

Steel Mills
Pharmaceutical Plants
Chemical Plants
Mining

2.Engineering Application



ENGINEERING APPLICATION

1.Exhibition



The 22nd VietBuild, Vietnam-2019



The 125th Canton Fair in Guangzhou-2019



The 125th Canton Fair in Guangzhou-2019



The 124th Canton Fair in Guanzhou-2018

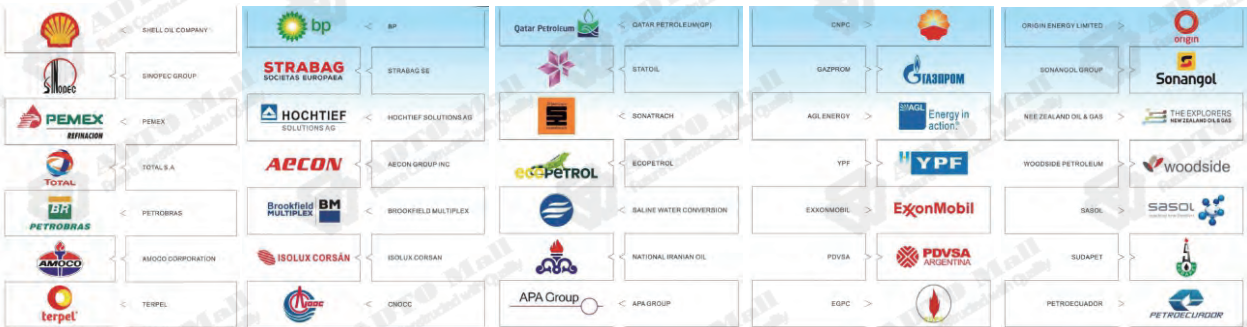


BIG 5 International Building & Construction Show-2018



Conbuild Indonesia Fair 2018

2.Client Base



3.Marketing Network

With more than 5000 clients all around the world, our annual sales reaches to 100,000 tons and our markets spread to Middle East, South East of Asia, Europe, South America, Africa and Australia.

