

YOUR EXCELLENT PARTNER



QUALITY + SPEED + PRICE +

PRODUCT RANGE



Standard Fittings

Type of product	Dimensions	Steels	Execution
Elbows	Up to 120''	All grades	Seamless and welded(cold formed, hot formed and by mandrel)
Equal and reducing tees	Up to 120''	All grades	Seamless and welded(cold formed and hot formed)
Concentric and eccentric reducers	Up to 120''	All grades	Seamless and welded(cold formed and hot formed)
Caps	Up to 120''	All grades	Seamless(cold formed and hot formed)

Special Fittings

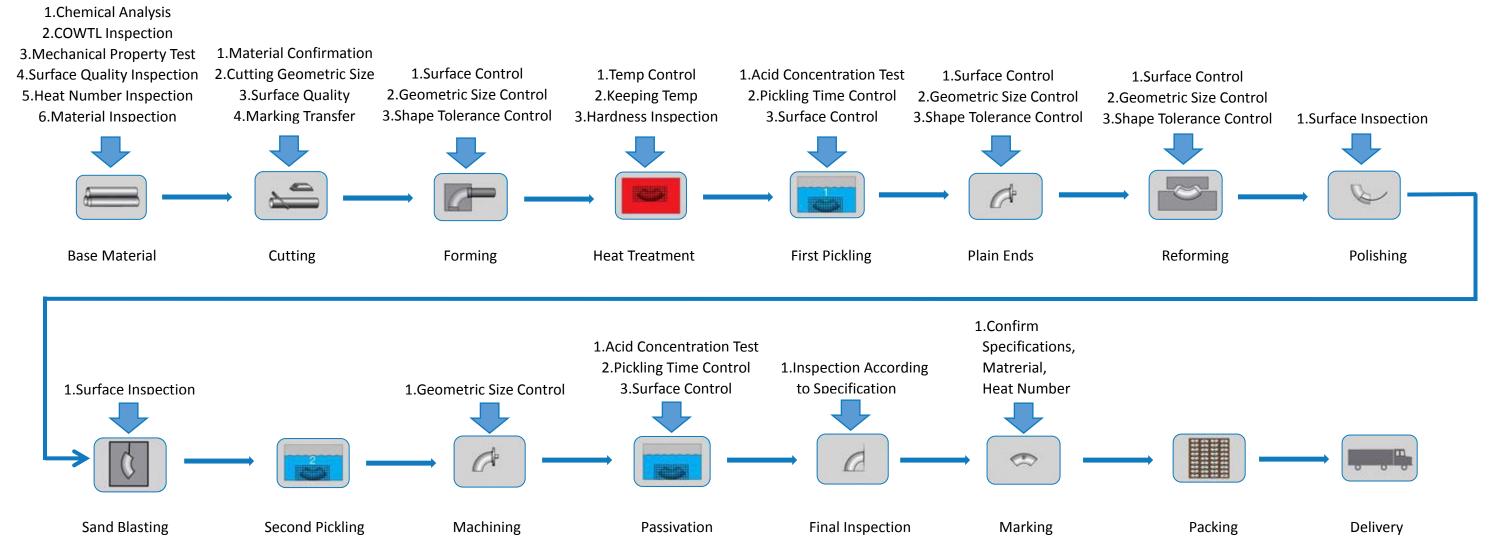
Type of product	Dimensions	Steels	Execution
Reducing elbows	Up to 60''	All grades	Seamless and welded
Special radius bends (3D)	Up to 56"	All grades	Seamless and welded segmentable
Special radius bends(2.5D 3D 4D 5D 7D 10D 18D)	Up to 60''	All grades	Seamless and welded(hot induction and cold formed)
Barred tees	Up to 120''	All grades	Seamless and welded
Special flow tees	Up to 120''	All grades	Seamless and welded
Equal and reducing crosses	Up to 120''	All grades	Seamless and welded
Equal and reducing laterals	Up to 120''	All grades	Seamless and welded

Special products as per Client's drawing









Materials used and related International Standards

CARBON AND ALLOY STEEL FOR ROOM, MODERATE AND ELEVATED TEMPERATURES

- ASTM/ASME A234: WPB WPC WP1 WP11 WP12 WP5 WP22 WP9 WP91
- EN 10216-2: P195GH P235GH P265GH 20MnNb6 16Mo3 8MoB5-4 14MoV63 10CrMo5-5 13CrMo4-5 10CrMo9-10 15NiCuMoNb5-6-4 X11CrMo5 X11CrMo9-1 X10CrMoVNb9-1
- X10CrMoVNb9-1 X10CrWMoVNb9-2 X20CrMoV11-1 (Former BS-DIN-AFNOR equipment grades)
- EN 10253-1 EN 10253-2
- RCC-M: C12 CL3 NC grades P265GH P280GH P295GH P355NH TU42C AE250B1 (Other grades can be supplied upon request)

STAINLESS STEEL

- ASTM/ASME A/SA 403: WP304 WP304L WP304H WP304LN WP304N WP316 WP316L
 WP316H WP316LN WP316N WP317 WP316L WP32
- WP321H WP347 WP347H WPS31254
- RCC-M: CL1 CL2 CL3 grades Z2CND17.12 Z2CN18.10 Z2CND18.12N (Other grades can be supplied upon request)
- ASTM A774: TP304L TP316L TP317L TP321 TP347
- Equivalent grades of EN 10253-3 EN10253-4(Former AFNOR-DIN-BS equivalent grades)

COPPER ALLOY

- Copper-nickel ASTM/ASME B/SB 466: UNS C70600 (CuNi 90/10) - UNS C71500 (CuNi 70/30)

Manufacturing Standards

- ASME B16.9 ADME B16.25 MSS-SP75 MSS-SP43
- DIN 2605 2606 2615 2616 2617 BS 1640 GOST 17374 17375 17376 17377 17378 17379 17380

HIGH YIELS STEEL FOR PIPELINE AND OFFSHORE

- ASTM A860/MSS-SP75: WPHY 42 WPHY 46 WPHY 52 WPHY 60 WPHY 65 WPHY 70 grades WPHY 80 only as per MSS-SP75
- EN10208-2: L245NB L290NB L360NB L415NB L360QB L415QB L50QB L485QB L555QB L360MB L415MB L450MB L485MB
- API 5L X42 X46 X52 X60 X65 X70

CARBON AND ALLOY STEEL FOR LOW TEMPERATURE SERVICE

ASTM/ASME A/SA 420 WPL6 - WPL3

FERRTIC/AUSTENITIC STAINLESS STEEL

- ASTM/ASME A/SA 815: UNS 31803 (duplex) - UNS 32750 (superduplex) - UNS 32760 (superduplex) UNS 32550 (superduplex) and equivalent

NICKEL ALLOY

 ASTM/ASME B/SB 366: UNS N04400 - UNS N06600 - UNS N06625 - UNS N08020 UNS N08800 - UNS N08811 - UNS N08825 - UNS N10276

TITANIUM ALLOY

- ASTM/ASME B/SB363: WPT2 - WPT12

Design Codes

- ASME B31.1 ASME B31.3 ASME B31.4 ASME B31.8
- EN13445 13480 12952 (Former BS PD 5500 Swedish Ordinance AFS 1994:39)
- DIN 2413 TRD301
- AD 2000 Merkblatt B2 B3 B9
- Stoomwezen Rules for Pressure Vessels

Raw Material

Test Equipment

Quality Control From Raw Material



Production Equipment



Magnetic Particle Inspection



DYE Penetrant Inspection



Hardness Test



RT Test and Report

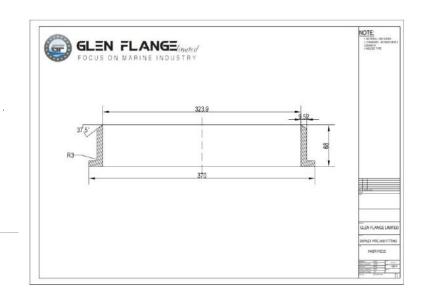


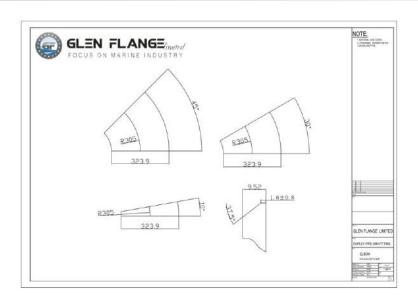
Fitting Process

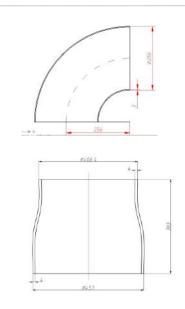


Welding Heat Treatment Sand Blasting Pickling

Qualification Certification























Certificate Documents



CHONGQING GLEN FLANGE LIMITED

Tel: +86-23-67964368 FAX: +86-23-67504207

Address: No.99 Longhua Road. Yubei District, Chongqing 401120, China Email: info@glenflange.com Web: www.glenflange.com

Mill Test Certificate

PED/97/23/EC Cert. No.: 1270-2012-CE-RGC-DNV 50095-2009-AQ-RGC-RvA

Certificate: EN10204 3.1 Certificate No.: JNDIA2016-GN1747-1 Page 1 of 3

Customer:

PO No.:GLE1606-30

Description: DUPLEX FITTINGS

Material: S32205

Heat Treatment: Solution annealed & water quenched(1100℃).

Marking

- ·Manufacture's Mark
- Dimension Schedule
- Material

S(Seamless)&W(Welded)

Heat Number&Standard

Extend o	f Material	Delivery
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NO.	Description	Dimension	Material	Quantity(PCS)	Heat No.	Remarks
1	30°ELBOW SR	323.9*9.52	S32205-S	2	1512-1996	ANSI B16.9-2012
2	10°ELBOW SR	323.9*9.52	\$32205-S	2	1512-1996	ANSI B16.9-2012
3	60°ELBOW SR	273*9.27	S32205-S	4	1512-1996	ANSI B16.9-2012
9	INNER PIECE	323.9*9.52	S32205-S	30	1512-1996	AS DRAWING
10	INNER PIECE	273*9.27	S32205-S	30	1512-1996	AS DRAWING

Inspection Results(The Requirements are fulfilled as listed in Annex)

A.Chemical Analysis:[%]

Heat No.	C ≤0.030	Si ≤1.00	Mn ≤2.00	P ≤0.030	S ≤0.020	Cr 22.0-23.0	Ni 4.5-6.5	Nb	N 0.14-0.2	Mo 2.0-3.0	
1512-1996	0.018	0.33	1.02	0.026	0.001	22.58	5.05		0.162	3.05	
1512-1996	0.018	0.33	1.02	0.026	0.001	22.58	5.05		0.162	3.05	
1512-1996	0.018	0.33	1.02	0.026	0.001	22.58	5.05		0.162	3.05	
1512-1996	0.018	0.33	1.02	0.026	0.001	22.58	5.05		0.162	3.05	
1512-1996	0.018	0.33	1.02	0.026	0.001	22.58	5.05		0.162	3.05	
	1512-1996 1512-1996 1512-1996	\$0.030 1512-1996 0.018 1512-1996 0.018 1512-1996 0.018 1512-1996 0.018	Heat No. ≤0.030 ≤1.00 1512-1996 0.018 0.33 1512-1996 0.018 0.33 1512-1996 0.018 0.33 1512-1996 0.018 0.33	Heat No. ≤0.030 ≤1.00 ≤2.00 1512-1996 0.018 0.33 1.02 1512-1996 0.018 0.33 1.02 1512-1996 0.018 0.33 1.02 1512-1996 0.018 0.33 1.02 1512-1996 0.018 0.33 1.02	Heat No. ≤0.030 ≤1.00 ≤2.00 ≤0.030 1512-1996 0.018 0.33 1.02 0.026 1512-1996 0.018 0.33 1.02 0.026 1512-1996 0.018 0.33 1.02 0.026 1512-1996 0.018 0.33 1.02 0.026 1512-1996 0.018 0.33 1.02 0.026	Heat No. ≤0.030 ≤1.00 ≤2.00 ≤0.030 ≤0.020 1512-1996 0.018 0.33 1.02 0.026 0.001 1512-1996 0.018 0.33 1.02 0.026 0.001 1512-1996 0.018 0.33 1.02 0.026 0.001 1512-1996 0.018 0.33 1.02 0.026 0.001 1512-1996 0.018 0.33 1.02 0.026 0.001	Heat No. ≤0.030 ≤1.00 ≤2.00 ≤0.030 ≤0.020 22.0-23.0 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58	Heat No. ≤0.030 ≤1.00 ≤2.00 ≤0.030 ≤0.020 22.0-23.0 4.5-6.5 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05	Heat No. ≤0.030 ≤1.00 ≤2.00 ≤0.030 ≤0.020 22.0-23.0 4.5-6.5 Nb 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05	Heat No. ≤0.030 ≤1.00 ≤2.00 ≤0.030 ≤0.020 22.0-23.0 4.5-6.5 Nb 0.14-0.2 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05 0.162 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05 0.162 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05 0.162 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05 0.162 1512-1996 0.018 0.33 1.02 0.026 0.001 22.58 5.05 0.162	

B.Mechanical Properties&Tensile Inspection:

3	Heat No.	Yield Strength(MPa) ≥450	Tensile Strength(MPa)	Elongation A50(%)	Hardness(HBW) ≤290	Reduction of Area(Z%)	Charpy	
		σ 0.2	≥655	≥20%		16Combons	(AK)	
1	1512-1996	610	705	35	195/180/190	1	1	
2	1512-1996	610	705	35	195/180/190	1	1	
3	1512-1996	610	705	35	195/180/190	1	- 1	
9	1512-1996	610	705	35	195/180/190	1	1	
10	1512-1996	610	705	35	195/180/190	1	1	
		10.0000						

C.Inspection and Related Data Verify:

Dimensional Check	PASSED	Flattening Test	1
Surface Quality Inspection	PASSED	Radiography Examination	1
Penetration Examination	1	Corrosion Test	1
PMI	PASSED	Hardness Test	PASSED

D.Remarks:

Work Inspector

2016-08-09

QUALIT Stamp of Quality Dep

TSINSHAN PRODUCT QUALITY CERTIFICATE



浙江青山钢铁有限公司 ZHE JIANG TSINGSHAN IRON & STEEL COMPANY, LTD. 产品质量证明书 PRODUCT QUALITY CERTIFICATE

地址: 浙江省爾水市青田县小崎 I 业区 Add:Industry Park, Qingtian, Zhe Jiang 邮编 Postal code:323903 电话 Telephone: 0577-86909688 传真: 0577-86909855 0578-6732299

炉号	代号 (練号)	規格	支数	重量			化学	成分 Ch	emical	Composi	tion /	6			Rpo. 2	Rm	A	Z	Akuz	
Heat No	Grade	Size mm	Pcs	Weight T	С	Si	Mn	P	S	Cr	Ni	Cu	Мо	N	N/mm ²	N/mm ²	%	%	J	F
15B11115	2205	¢ 48*4	10		0.024	0.39	1.08	0.028	0.001	22. 41	5.09		3.07	0.15	570	785	42			Г
15B12149	2205	¢89*6	5		0.024	0.39	1.08	0.028	0.001	22, 41	5.09		3.07	0.15	570	785	42			
15B12068	2205	⊄ 114. 3*6. 5	5		0.018	0.41	1.22	0.025	0.003	22. 32	5. 11		3.13	0.17	550	795	45			
15B12068	2205	¢140*7	5		0.013	0.41	1. 22	0.025	0.003	22. 32	5. 11		3. 13	0.17	550	795	45			
注 Remarks:							2000				IT IN SA	26.16								
	Testing: GOOO	rature: 1060℃ 1	5.	と画质量 S Nun-dest ime: 30 m	ructive	Test:	GOOD				1004 314 300				n: GOO ion test	50	16			
The materri 本证明书盖员 This certif the orinal 如有质量异议 If any qual 联系电话Tel	i保部檢驗专用等 icate is valid stamp of the a 《,请来电来涵》	e has been tested 或经授权的销售部 with the orginal athorized sales of 密明情况,并告知原 se clarify via pl	公章生效 L stamp of departmen i量证明书	,复印无统 f the qua it.photoco 编号. or fax, i	改. dlity de pies ar	partmente invaj	t or id. certifi	cate n		standar	d.			产品质 Qualit	原量 を は y insp は 対 に 対 に が に が に が に に に に に に に に に に に に に	支用拳 Stamp	质)	

TAIGANG PRODUCT QUALITY CERTIFICATE

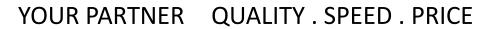


由西太钢不锈图度衍有现金可

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		#145 art No.		00	0014734	1-169616		IT IR			无锡太钢清售有限公司				性责单位 PURCHASER				0.48	中植物层型位有能公司无锡物液中心						
		1.3536: 00ECT			無利力引 LED STI PLA	UNLESS S	STEEL.	执行 STAN		AS	STM A240//	12101-05	316L		と状态 ERYSTATE	PIC	JAJBY SLING	NEOL SOLUTION	1	RAIN W	GON NO.			4650526		
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0.	N	Vo.	No.		GRADE		(mm)		PCS	WE1G	Hr C	Si	Mo	P	S	Cr	1	Ni C	u	Al	Ti	N	Мо			
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Dimension Inspection



Marking, Packing & Transport



Marking Packing and Delivery







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