ISO Certificates

CERTIFICATE OF REGISTRATION

SRI Quality System Registrar

ANAB

MGMT. SYS. RvA C 074

Having been audited in accordance with requirements of

ISO 9001:2008 – ANSI/ISO/ASQ Q9001-2008

SRI Quality System Registrar, Seven Fields, Pennsylvania, USA
Steel Related Industries Quality System Registrar, LTD, Alexandra House, Ballsbridge, Dublin 4, Ireland, EU
hereby grants to:

Weldbend Corporation

Registration of the management system at its location:

6600 South Harlem Avenue
Argo, Illinois, USA

The conditions for maintaining this certificate of registration are set forth in the SRI registration agreements R20.3 and R20.4. Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2008 requirements may be obtained by consulting the organization.

Scope of ISO 9001:2008 registration: "Manufacture of carbon steel butt-welding fittings and forged ste... flanges."
Exclusions: Design and Development; Service Provision
Initial SRI registration date: September 7, 2004
Current registration period: August 26, 2009 through August 25, 2012

Signed for SRI: Christopher H. Lake, President & COO

Certificate Date: August 26, 2009
Certificate Number: 008300
Registration Number: 2600-01

CERTIFICATE OF COMPLIANCE

SRI Quality System Registrar

Steel Related Industries Quality System Registrar
Seven Fields, Pennsylvania, USA
Alexandra House, Ballsbridge, Dublin 4, Ireland EU

A legal entity within the United States and European Union with competence demonstrated via ANAB and RvA accreditation as an ISO 9001 certification body with a scope of accreditation for the assessment of quality management systems of organizations which include the manufacture of materials and in the technology of the materials concerned, as specified in the scope below

-CERTIFIES-

Weldbend Corporation

at its location:

6600 South Harlem Avenue
Argo, Illinois, USA

has implemented, operates and maintains a Management System in accordance with the requirements of

Pressure Equipment Directive (PED) 97/23/EC 7/2, Annex I, Paragraph 4.3

Scope of PED compliance: "Manufacture of carbon steel butt-welding fittings and forged steel flanges."

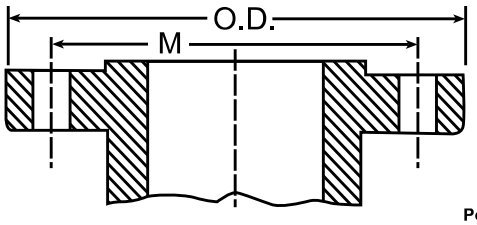
Signed for SRI: Christopher H. Lake, President & COO

Date: August 26, 2009
Registration Number: 2600-01

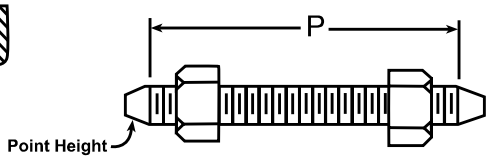
Steel Related Industries Quality System Registrar, LTD is a registered, duly licensed, operating "legal entity" in the European Union, and as such, is fully responsible for Management System Certificates bearing its U.S. and Ireland address for the purpose of satisfying the material manufacture requirements of the European Union Pressure Equipment Directive. This certificate is valid and will remain in effect when accompanied by a valid ISO 9001:2008 registration certificate that bears SRI's Ireland address, as noted above.

- Weldbend is PED Compliant. Weldbend maintains a strict quality control system ensuring it continually meets the most current ISO Certifications.

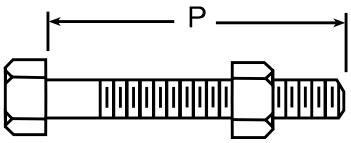
For Ring Type Joint Facing Dimension information see page 148.



Flange



Stud Bolt



Machine Bolt

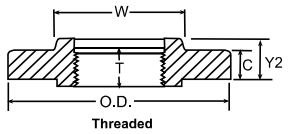
Bolting Pattern and Bolt Lengths								
Pipe Size	Outside Diameter	Drilling				Length of Bolts		
		Diameter of Bolt Circle	Diameter of Bolt Holes	Number of Bolt Holes	Diameter of Bolts	Stud Bolts Raised Face 0.06 in.	Stud Bolts Ring Joint	Machine Bolts Raised Face 0.06 in.
	O.D.	M				P	P	P
ASME B16.5								
½	3.50	2.38	⅝	4	½	2.25	*	2.00
¾	3.88	2.75	⅝	4	½	2.50	*	2.00
1	4.25	3.12	⅝	4	½	2.50	3.00	2.25
1 ¼	4.62	3.50	⅝	4	½	2.75	3.25	2.25
1 ½	5.00	3.88	⅝	4	½	2.75	3.25	2.50
2	6.00	4.75	¾	4	⅝	3.25	3.75	2.75
2 ½	7.00	5.50	¾	4	⅝	3.50	4.00	3.00
3	7.50	6.00	¾	4	⅝	3.50	4.00	3.00
3 ½	8.50	7.00	¾	8	⅝	3.50	4.00	3.00
4	9.00	7.50	¾	8	⅝	3.50	4.00	3.00
5	10.00	8.50	⅞	8	¾	3.75	4.25	3.25
6	11.00	9.50	⅞	8	¾	4.00	4.50	3.25
8	13.50	11.75	⅞	8	¾	4.25	4.75	3.50
10	16.00	14.25	1	12	⅞	4.50	5.00	4.00
12	19.00	17.00	1	12	⅞	4.75	5.25	4.00
14	21.00	18.75	1 ⅛	12	1	5.25	5.75	4.50
16	23.50	21.25	1 ⅛	16	1	5.25	5.75	4.50
18	25.00	22.75	1 ¼	16	1 ⅛	5.75	6.25	5.00
20	27.50	25.00	1 ¼	20	1 ⅛	6.25	6.75	5.50
24	32.00	29.50	1 ⅜	20	1 ¼	6.75	7.25	6.00
ASME B16.47 Series A								
30	38.75	36.00	1 ⅜	28	1 ¼	Formula for determining bolt lengths (P) see page 159.		
36	46.00	42.75	1 ⅝	32	1 ½			
42	53.00	49.50	1 ⅝	36	1 ½			
48	59.50	56.00	1 ⅝	44	1 ½			
ASME B16.47 Series B								
30	34.94	33.31	⅞	44	¾	Formula for determining bolt lengths (P) see page 159.		
36	41.62	39.75	1	44	⅞			
42	48.25	46.12	1 ⅛	48	1			
48	54.81	52.56	1 ¼	44	1 ⅛			

WELDBEND NOTES

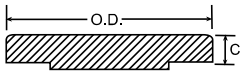
TEL: 708/594-1700
FAX: 708/458-0106
www.weldbend.com

CLASS 150 STEEL PIPE FLANGES

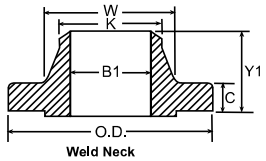
For Ring Type Joint Facing Dimension information see page 148.



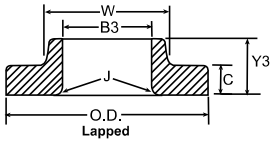
Threaded



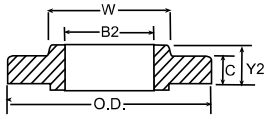
Blind



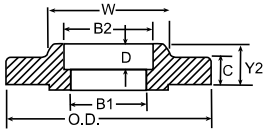
Weld Neck



Lapped



Slip-on



Socket Weld

Pipe Size	Outside Diameter of Flange	Thickness of Flange (Min.)	Thickness of Lap Joint (Min.)	Diameter of Hub*	Diameter of Weld Neck	Length Through Hub			Thread Length (Min.)	Bore			Lap Joint Radius	Depth of Socket
						Threaded, Slip-on & Socket Weld	Lap Joint	Weld Neck		Slip-on & Socket Weld (Min.)	Lap Joint (Min.)	Weld Neck & Socket Weld		
	O.D.	C	C	W	K	Y2	Y3	Y1	T	B2	B3	B1 ▲	J	D
ASME B16.5														
½	3.50	0.38	0.44	1.19	0.84	0.56	0.62	1.81	0.62	0.88	0.90	0.62	0.12	0.38
¾	3.88	0.44	0.50	1.50	1.05	0.56	0.62	2.00	0.62	1.09	1.11	0.82	0.12	0.44
1	4.25	0.50	0.56	1.94	1.32	0.62	0.69	2.12	0.69	1.36	1.38	1.05	0.12	0.50
1 ¼	4.62	0.56	0.62	2.31	1.66	0.75	0.81	2.19	0.81	1.70	1.72	1.38	0.19	0.56
1 ½	5.00	0.62	0.69	2.56	1.90	0.81	0.88	2.38	0.88	1.95	1.97	1.61	0.25	0.62
2	6.00	0.69	0.75	3.06	2.38	0.94	1.00	2.44	1.00	2.44	2.46	2.07	0.31	0.69
2 ½	7.00	0.81	0.88	3.56	2.88	1.06	1.12	2.69	1.12	2.94	2.97	2.47	0.31	0.75
3	7.50	0.88	0.94	4.25	3.50	1.12	1.19	2.69	1.19	3.57	3.60	3.07	0.38	0.81
3 ½	8.50	0.88	0.94	4.81	4.00	1.19	1.25	2.75	1.25	4.07	4.10	3.55	0.38	
4	9.00	0.88	0.94	5.31	4.50	1.25	1.31	2.94	1.31	4.57	4.60	4.03	0.44	
5	10.00	0.88	0.94	6.44	5.56	1.38	1.44	3.44	1.44	5.66	5.69	5.05	0.44	
6	11.00	0.94	1.00	7.56	6.63	1.50	1.56	3.44	1.56	6.72	6.75	6.07	0.50	
8	13.50	1.06	1.12	9.69	8.63	1.69	1.75	3.94	1.75	8.72	8.75	7.98	0.50	
10	16.00	1.12	1.19	12.00	10.75	1.88	1.94	3.94	1.94	10.88	10.92	10.02	0.50	
12	19.00	1.19	1.25	14.38	12.75	2.12	2.19	4.44	2.19	12.88	12.92	12.00	0.50	
14	21.00	1.31	1.38	15.75	14.00	2.19	3.12	4.94	2.25	14.14	14.18	13.25	0.50	
16	23.50	1.38	1.44	18.00	16.00	2.44	3.44	4.94	2.50	16.16	16.19	15.25	0.50	
18	25.00	1.50	1.56	19.88	18.00	2.62	3.81	5.44	2.69	18.18	18.20	17.25	0.50	
20	27.50	1.62	1.69	22.00	20.00	2.81	4.06	5.62	2.88	20.20	20.25	19.25	0.50	
24	32.00	1.81	1.88	26.12	24.00	3.19	4.38	5.94	3.25	24.25	24.25	23.25	0.50	
		WN	BLD	**ASME B16.47 Series A**										
30	38.75	2.88	2.88		30.75	30.00		5.32						
36	46.00	3.50	3.50		36.75	36.00		6.13						
42	53.00	3.75	3.75		43.00	42.00		6.69						
48	59.50	4.19	4.19		49.12	48.00		7.50						
		WN	BLD	**ASME B16.47 Series B**										
30	34.94	1.69	1.94		31.00	30.06		3.88						
36	41.62	2.00	2.25		37.19	36.06		4.57						
42	48.25	2.25	2.65		43.38	42.12		5.19						
48	54.81	2.50	3.00		49.50	48.12		5.82						

WELDBEND NOTES

1. Standard flange facings on page 146.
6. Thread standards on page 156.

* A taper shall not exceed 7 degrees on threaded, slip-on and lapped flanges.