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January 30, 2015

SCOTT ISLIP
ROUND ENGINEERING INC
10 SEGWUN RD
WATERDOWN ON L0R 2H8
CA

Service Request Type: BPV-Fitting Registration
Service Request No.: 1561958
Your Reference No.: EVOGUARD
Registered to: EVOGUARD GMBH

Dear SCOTT ISLIP,


Technical Standards and Safety Authority (TSSA) is pleased to inform you that your submission has been reviewed and registered as follows:

CRN No.: 0C17443.5
Main Design No.: BUTTERFLY VALVE SERIES: WWV, FVF,
SIZES: 1" THRU 6", DN25 THRU DN150, SCOPE OF REGISTRATION
Expiry Date: 30-Jan-2025

Please be advised that a valid quality control system must be maintained for the fitting registration to remain valid until the expiry date.

The stamped copy of the approved registration and the invoice are mailed separately. Should you have any questions or require further assistance, please contact a Customer Service Advisor at 1.877.682.TSSA (8772) or e-mail customerservices@tssa.org. We will be happy to assist you. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

Yours truly,


Ruiming You, P.Eng.
Mechanical Engineer, BPV
Tel.: 416-734-3428
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KRONES/EVOGUARD Gmbh
BRUCKER STRABE 36
93149 NITTENAU
GERMANY

21-Jan-15

EVOGUARD GMBH - SCOPE OF CRN REGISTRATION

Product Description	Series Number	Connection Type	Size Range	Material Specification	Design Code	MAWP at Temperature
Butterfly Valve	WVW	Weld End	1" OD thru 6" OD	UNS S31603	ASME B31.3, ASME Section VIII-1	145 psig at 302 F
Butterfly Valve	WVW	Weld End	DN25 thru DN150	UNS S31603	ASME B31.3, ASME Section VIII-1	145 psig at 302 F
Butterfly Valve	FVF	Weld End	1" OD thru 6" OD	UNS S31603	ASME B31.3, ASME Section VIII-1	145 psig at 302 F
Butterfly Valve	FVF	Weld End	DN25 thru DN150	UNS S31603	ASME B31.3, ASME Section VIII-1	145 psig at 302 F

THIS IS PART OF
CRN *OC174435*
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program

KRONES / EVOGUARD GmbH

Brucker Strabe 36
93149 Nittenau
Germany

25-Sep-14

DESIGN CALCULATIONS IN ACCORDANCE WITH ASME B31.3 AND ASME SECTION VIII-1.

Product Description: EVOGUARD INTERMEDIATE FLANGE CONNECTION (FVF)
Valve Type: Butterfly
Catalogue Reference: TD10004285 EN 03, Update: 09/2013 (Note 1)
Connection Type: Weld End
Size Range: DN25 thru DN150
Body Construction: 1.4404 / UNS S31603 / ASME SA182-316L

Size	DN25	Drawing No.	0-901-796-675	Note 2
Size	DN40	Drawing No.	0-901-796-676	Note 2
Size	DN50	Drawing No.	0-901-796-677	Note 2
Size	DN65	Drawing No.	0-901-796-678	Note 2
Size	DN80	Drawing No.	0-901-796-679	Note 2
Size	DN100	Drawing No.	0-901-796-720	Note 2
Size	DN125	Drawing No.	0-901-842-246	Note 2
Size	DN150	Drawing No.	0-901-842-248	Note 2

Flange Construction: 1.4401/1.4404 / UNS S31600/S31603 / ASME SA182-316/316L Dual Rated
 Size All Drawing No. 0-902-220-692 Note 3

Bolting Construction: A2-70 / UNS S30430, UNS S30400 Dual Rated / ASME SA-193-B8-1
Seats: Various
Seals: Various
MAWP: 145 psig
at Temperature: 302 F
MDMT: -20 F
NDE: None

Note 1: See Appendix A for catalogue data.
Note 2: See Appendix D for detailed drawings and dimensions.
Note 3: See Appendix E for detailed drawings and dimensions.



PRODUCT DESCRIPTION

The Evoguard FVF Butterfly Valve consists of two valve flanges that are thru bolted to a split body wafer style butterfly valve body. See Figure 1

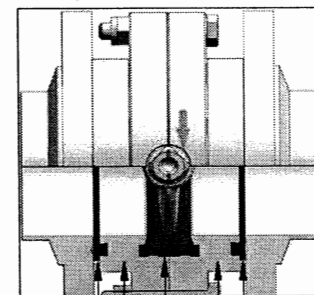
The resulting end connection of the valve for installation is welding end.

The valve flanges are utilized to maintain the split body valve assembly together while under pressure.
Note: Each valve body also has two assembly bolts that are used for assembly/disassembly purposes. These bolts are not considered in the strength calculations.
 The **flanges** are analyzed and found to be in conformance with the requirements of ASME Section VIII-1, Appendix 2.

The **valve body** minimum wall thickness is analyzed and found to be in conformance with the requirements of ASME B31.3.

The welding end wall thickness of the **flanges** are analyzed and found to be in conformance with the requirements of ASME B31.3.

APPENDIX B presents a exploded view of the valve design for further clarification.



- VALVE FLANGE NO. 1
- FLANGE-BODY GASKET NO. 1
- VALVE BODY HALF NO. 1
- VALVE DISC/SEAT
- VALVE BODY HALF NO. 2
- FLANGE-BODY GASKET NO. 2
- VALVE FLANGE NO. 2

KRONES / EVOGUARD GmbH

Brucker Strabe 36
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Germany

01-Dec-14

DESIGN CALCULATIONS IN ACCORDANCE WITH ASME B31.3 AND ASME SECTION VIII-1.

Product Description: EVOGUARD INTERMEDIATE FLANGE CONNECTION (FVF)
 Valve Type: Butterfly
 Catalogue Reference: TD10004285 EN 03, Update: 09/2013 (Note 1)
 Connection Type: Weld End
 Size Range: 1" OD thru 6" OD
Body Construction: 1.4404 / UNS S31603 / ASME SA182-316L

Size	1"	Drawing No.	0-902-492-246	Note 2
Size	1.5"	Drawing No.	0-902-492-247	Note 2
Size	2"	Drawing No.	0-902-492-248	Note 2
Size	2.5"	Drawing No.	0-902-492-249	Note 2
Size	3"	Drawing No.	0-903-708-491	Note 2
Size	4"	Drawing No.	0-902-492-281	Note 2
Size	6"	Drawing No.	0-901-842-248	Note 2

Flange Construction: 1.4401/1.4404 / UNS S31600/S31603 / ASME SA182-316/316L Dual Rated

Size	All	Drawing No.	0-902-220-692	Note 3
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Bolting Construction: A2-70 / UNS S30430, UNS S30400 Dual Rated / ASME SA-193-B8-1

Seats: Various
 Seals: Various
 MAWP: 145 psig
 at Temperature: 302 F
 MDMT: -20 F
 NDE: None

Note 1: See Appendix A for catalogue data.
Note 2: See Appendix D for detailed drawings and dimensions.
Note 3: See Appendix E for detailed drawings and dimensions.



PRODUCT DESCRIPTION

The Evoguard FVF Butterfly Valve consists of two valve flanges that are thru bolted to a split body wafer style butterfly valve body. See Figure 1

The resulting end connection of the valve for installation is welding end.

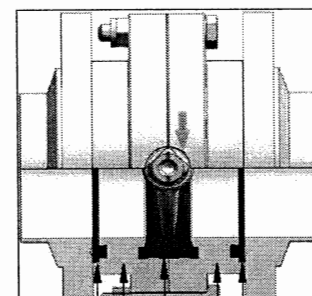
The valve flanges are utilized to maintain the split body valve assembly together while under pressure.
Note: Each valve body also has two assembly bolts that are used for assembly/disassembly purposes. These bolts are not considered in the strength calculations.

The **flanges** are analyzed and found to be in conformance with the requirements of ASME Section VIII-1, Appendix 2.

The **valve body** minimum wall thickness is analyzed and found to be in conformance with the requirements of ASME B31.3.

The welding end wall thickness of the **flanges** are analyzed and found to be in conformance with the requirements of ASME B31.3.

APPENDIX B presents a exploded view of the valve design for further clarification.



- VALVE FLANGE NO. 1
- FLANGE-BODY GASKET NO. 1
- VALVE BODY HALF NO. 1
- VALVE DISC/SEAT
- VALVE BODY HALF NO. 2
- FLANGE-BODY GASKET NO. 2
- VALVE FLANGE NO. 2

KRONES / EVOGUARD GmbH

Brucker Strabe 36
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12-Dec-14

DESIGN CALCULATIONS IN ACCORDANCE WITH ASME B31.3 AND ASME SECTION VIII-1.

Product Description: EVOGUARD WELDED END CONNECTION (WVW)
Valve Type: Butterfly
Catalogue Reference: TD10004285 EN 03, Update: 09/2013 (Note 1)
Connection Type: Weld End
Size Range: DN25 thru DN150
Body/Flange Construction: 1.4404 / UNS S31603 / ASME SA182-316L

Size	DN25	Drawing No.	0-902-081-797	Note 2
Size	DN40	Drawing No.	0-902-081-799	Note 2
Size	DN50	Drawing No.	0-902-081-844	Note 2
Size	DN65	Drawing No.	0-902-081-845	Note 2
Size	DN80	Drawing No.	0-902-081-846	Note 2
Size	DN100	Drawing No.	0-902-081-847	Note 2
Size	DN125	Drawing No.	0-902-081-848	Note 2
Size	DN150	Drawing No.	0-902-081-849	Note 2



Bolting Construction: A2-70 / UNS S30430, UNS S30400 Dual Rated / ASME SA-193-B8-1/2
Seats: Various
Seals: Various
MAWP: 145 PSIG
at Temperature: 20 F
MDMT: None
NDE: None

Note 1: See Appendix A for catalogue data.

Note 2: See Appendix E for detailed drawings and dimensions.



PRODUCT DESCRIPTION

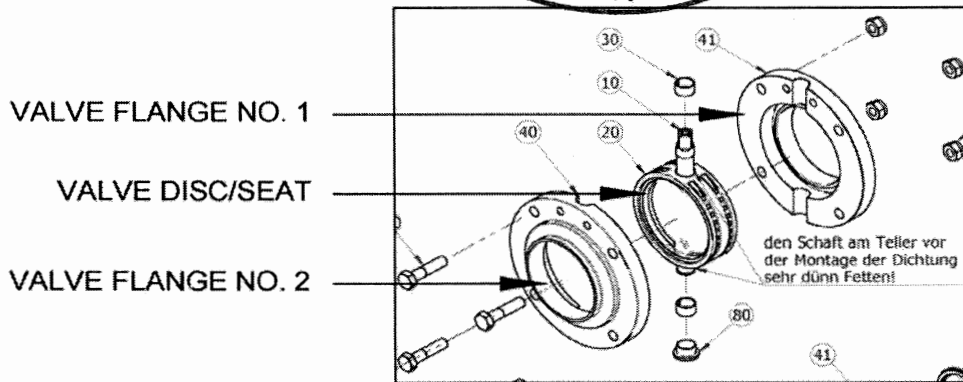


FIGURE 1

The Evoguard WVW Butterfly Valve consists of two valve flanges that are bolted together to form the valve body. These flanges retain the valve seat, disc and stem. After assembly metal to metal contact exists outside the bolt circle diameter. **See Figure 1.**

The resulting end connection of the valve for installation is welding end.

The flanges are analyzed in accordance with the requirements of ASME Section VIII-1 using two methods.

Method 1: Flanges analyzed in accordance with Appendix Y of ASME Section VIII-1.

Method 2: Flanges analyzed in accordance with Appendix 2 of ASME Section VIII-1.

In addition, the welding end wall thickness of the flanges are analyzed in accordance with the requirements of ASME B31.3.

APPENDIX B presents a exploded view of the valve design for further clarification.

KRONES / EVOGUARD GmbH

Brucker Strabe 36
93149 Nittenau
Germany

12-Dec-14

DESIGN CALCULATIONS IN ACCORDANCE WITH ASME B31.3 AND ASME SECTION VIII-1.

Product Description: EVOGUARD WELDED END CONNECTION (WVW)
Valve Type: Butterfly
Catalogue Reference: TD10004285 EN 03, Update: 09/2013 (Note 1)
Connection Type: Weld End
Size Range: 1" OD thru 6" OD
Body/Flange Construction: 1.4404 / UNS S31603 / ASME SA182-316L

Size	1"	Drawing No.	0-903-178-544	Note 2
Size	1.5"	Drawing No.	0-903-178-545	Note 2
Size	2"	Drawing No.	0-903-467-854	Note 2
Size	2.5"	Drawing No.	0-903-178-547	Note 2
Size	3"	Drawing No.	0-903-708-388	Note 2
Size	4"	Drawing No.	0-903-178-604	Note 2
Size	6"	Drawing No.	0-903-707-614	Note 2



Bolting Construction: A2-70 / UNS S30430, UNS S30400 Dual Rated / ASME SA-193-B8-1/2
Seats: Various
Seals: Various
MAWP: 145 psig
at Temperature: 302 F
MDMT: -20 F
NDE: None

Note 1: See Appendix A for catalogue data.
Note 2: See Appendix E for detailed drawings and dimensions.

PRODUCT DESCRIPTION

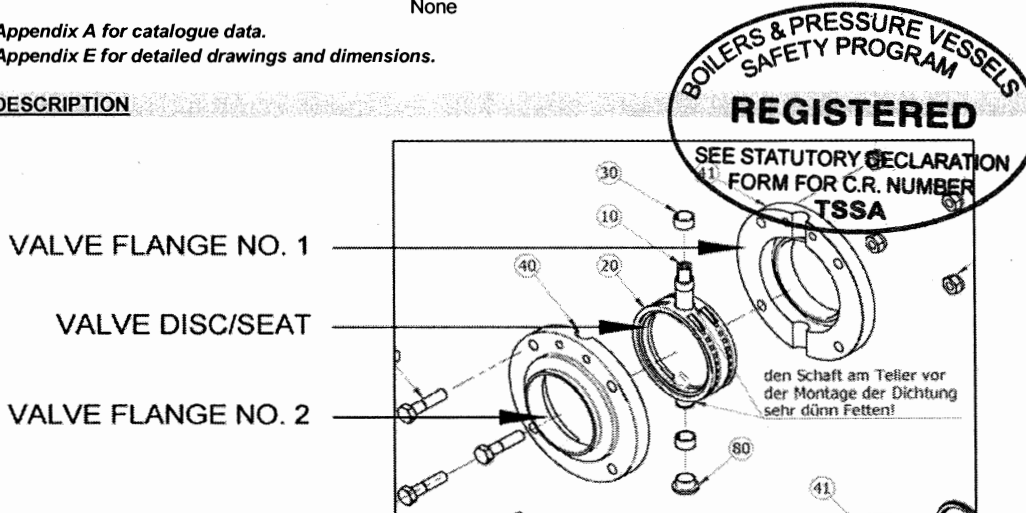


FIGURE 1

The Evoguard WVW Butterfly Valve consists of two valve flanges that are bolted together to form the valve body. These flanges retain the valve seat, disc and stem. After assembly metal to metal contact exists outside the bolt circle diameter. **See Figure 1.**

The resulting end connection of the valve for installation is welding end.

The flanges are analyzed in accordance with the requirements of ASME Section VIII-1 using two methods.

Method 1: Flanges analyzed in accordance with Appendix Y of ASME Section VIII-1.

Method 2: Flanges analyzed in accordance with Appendix 2 of ASME Section VIII-1.

In addition, the welding end wall thickness of the flanges are analyzed in accordance with the requirements of ASME B31.3.

APPENDIX B presents a exploded view of the valve design for further clarification.