

CERTIFICATE NUMBER 15-HS1414058-PDA DATE 22 Sep 2015

CERTIFICATE OF

ABS TECHNICAL OFFICE
Houston SED Machinery - Piping
& Electrical Sys.

DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of

ROBERT H. WAGER CO., INC.

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: Valve, Vertical Vent Check

Model: 1500-1

This Product Design Assessment (PDA) Certificate 15-HS1414058-PDA, dated 22/Sep/2015 remains valid until 21/Sep/2020 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING

Tim Kimble

Engineer

ROBERT H. WAGER CO.

570 MONTROYAL ROAD

Rural Hall NC

United States 27045

Telephone: 336-969-6909

Fax: 336-969-6375

Email: lwager@wagerusa.com Web: www.wagerusa.com

Tier: 2 - PDA Issued

Product:

Valve, Vertical Vent Check

Model:

1500-1

Intended Service:

Marine & Offshore Application - Automatic Closing Tank Vent Valves

Inverted Vent Check Valves & Ballast Float Valves for Tanks

Sizes 1.5", 2", 2.5",3", 4", 5", 6", 8", 10", 12" & 14"

Service Restriction:

Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Media carried in the tank is to be compatible with the Closure and Seat Material.

For Fuel Oil Tanks, Flame Screens are to be in compliance with Steel Vessels Rules 4-6-4/9.3.5(b)i of the Rules.

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. To be installed in accordance with all applicable requirements specified in 4-6-4/9 of the Steel Vessels Rules and 46CFR56.50-85.

Notes/Drawing/Documentation:

Dwg. No. 1.5-1500FSG-1, Rev.-, Vent Outlet Closing Device - 1.5" Flanged; Pressure Drop & Tightness Test Report 1.5-1500-D-001 dated 12 Feb. & 18 Jan. 2008;

Dwg. No. 2-1500FSG-1, Rev.-, Vent Outlet Closing Device - 2" Flanged; Pressure Drop & Tightness Test Report 2-1500-D-001 dated 12 Feb. & 18 Jan. 2008; Dwg. No. 2.5-1500FSG-1, Rev.-, Vent Outlet Closing Device - 2.5" Flanged; Pressure Drop & Tightness Test Report 2.5-1500-D-001 dated 12 Feb. & 18 Jan. 2008; Pressure Drop & Tightness Test Report 2.5-1500-D-001 dated 12 Feb. & 18 Jan. 2008;

Compression & Impact Test Report - Non-Metallic Floats FLT-3.5P-D-001, dated 3 Feb.2008;

Dwg. No. 10-1500FSG-1, Rev.-, Vent Outlet Closing Device - 10" Flanged; Pressure Drop & Tightness Test Report 10-1500-D-001 dated 7 & 14 Feb. 2008;

Compression & Impact Test Report - Non-Metallic Floats FLT-12P-D-001, dated 14 Feb.2008;

Compression & Impact Test Report - Non-Metallic Floats FLT-12F-D-001, dated 14 Feb. 2008; Dwg. No. 5-1500FSG-1, Rev.-, Vent Outlet Closing Device - 5" Flanged; Pressure Drop & Tightness Test Report 5-1500-D-001 dated 13 & 14 Feb. 2008; Compression & Impact Test Report - Non-Metallic Floats FLT-6.5P-D-001, dated 3 & 14 Feb. 2008; Dwg. No. 6-1500FSG-1, Rev.-, Vent Outlet Closing Device -6" Flanged; Pressure Drop & Tightness Test Report 6-1500-D-001 dated 14 Feb. 2008; Compression & Impact Test Report 6-1500-D-001 dated 14 Feb. 2008;

Compression & Impact Test Report - Non-Metallic Floats FLT-7.5P-D-001, dated 14 Feb.2008;

Dwg. No. 8-1500FSG-1, Rev.-, Vent Outlet Closing Device -8" Flanged; Pressure Drop & Tightness Test Report 8-1500-D-001 dated 9 Jan & 14 Feb. 2008;

Compression & Impact Test Report - Non-Metallic Floats FLT-9.5P-D-001, dated 3 Feb.2008;

Drawing No. 14-1500FSG-1, 14"-1500 Series Flanged Galvanized Vertical Vent Check Valve, Revision: C, Pages: 1

Drawing No. FLT-15P-D, Float - 14" 1500, Revision: C, Pages: 1

Test Report No. 14-1500FSG-1; Pressure Drop Test, Revision: 3/11/2015, Pages: 1

Document No. WI-PD TEST-01; Pressure Drop Test Instruction; Rev B (11/20/2014), Pages: 1

Test Report No. 14-1500FSG-1; Tightness Test, Revision: 3/10/2015, Pages: 1 & 2 Document No. Wi-Tightness Test-01; Tightness Test Instruction; Rev C (11/20/2014), Pages: 1 to 4 Test Report No. FLT-15P-D-001; Compression Test - Non-Metallic Floats, Revision: 02/25/2015,

ROBERT H. WAGER CO.

570 MONTROYAL ROAD

Rural Hall NC

United States 27045

Telephone: 336-969-6909

Fax: 336-969-6375

Email: lwager@wagerusa.com Web: www.wagerusa.com

Tier: 2 - PDA Issued

Pages: 1 & 2 Document No. WI-Compression Test -01; Compression Test Instruction, Revision: A (04/24/2007), Pages: 1 & 2 Test Report No. 14-1500-FSG-1; Vacuum Test, Revision: 3/9/2015, Pages: 1 Document No. WI-V Test 01; Vacuum Test Instruction, Revision: B (10/06/2014), Pages: 1 Test Report No. FLT-15P-D-001; Impact Test - Non-Metallic Floats; Revision 04/09/2015, Pages 1 to 4 Drawing No. WI-Impact Test -01; Impact Test Instruction; Rev B (03/01/2011), Pages: 1 & 2 Drawing No. 1.5 Tightness Test, Tightness Test 1.5, Revision: -, Pages: 1

Drawing No. 1.5 Vacuum Test, Vacuum Test 1.5, Revision: -, Pages: 1
Drawing No. 10-1500 Tightness Test, Tightness Test 10-1500, Revision: -, Pages: 1
Drawing No. 10-1500 Vacuum Test, Vacuum Test 10-1500, Revision: -, Pages: 1 Drawing No. 12-1500 Tightness Test, Tightness Test 12-1500, Revision: -, Pages: 1 Drawing No. 12-1500 Vacuum Test, Vacuum Test 12-1500, Revision: -, Pages: 1 Drawing No. 12-1500 Vacuum Test, Vacuum Test 12-1500, Revision: -, Pages: 1 Drawing No. 2-1500 Tightness Test, Tightness Test 2-1500, Revision: -, Pages: 1 Drawing No. 2-1500 Vacuum Test, Vacuum Test 2-1500, Revision: -, Pages: 1 Drawing No. 2.5 Tightness Test, Tightness Test 2.5, Revision: -, Pages: 1 Drawing No. 2-5-1500 Vacuum Test, Vacuum Test, Revision: -, Pages: 1 Drawing No. 3-1500 Tightness Test, Tightness Test 3-1500, Revision: -, Pages: 1 Drawing No. 3-1500 Vacuum Test, Vacuum Test 3-1500, Revision: -, Pages: 1 Drawing No. 4-1500 Tightness Test Tightness Test 4 1500 Payision: - Pages: 1 Drawing No. 4-1500 Tightness Test, Tightness Test 4-1500, Revision: -, Pages: 1 Drawing No. 4-1500 Vacuum Test, Vacuum Test 4-1500, Revision: -, Pages: 1 Drawing No. 5-1500 Tightness Test, Tightness Test 5-1500, Revision: -, Pages: 1 Drawing No. 5-1500 Vacuum Test, Vacuum Test 5-1500, Revision: -, Pages: 1

Drawing No. 6-1500 Tightness Test, Tightness Test 6-1500, Revision: -, Pages: 1 Drawing No. 6-1500 Vacuum Test, Vacuum Test 6-1500, Revision: -, Pages: 1 Drawing No. 8-1500 Tightness Test, Tightness Test 8-1500, Revision: -, Pages: 1

Drawing No. 8-1500 Vacuum Test, Vacuum Test 8-1500, Revision: -, Pages: 1

Terms of Validity:

This Product Design Assessment (PDA) Certificate 15-HS1414058-PDA, dated 22/Sep/2015 remains valid until 21/Sep/2020 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

STANDARDS

ABS Rules:

Steel Vessels Rules (2015): 1-1-4/7.7, 1-1-A3 & A4, 4-6-4/9.3.5, and 4-6-4/9.3.7. Rules for Building and Classing Mobile Offshore Drilling units (2015): 1-1-4/9.7, 1-1-A2 & A3 and 4-2-3/1.9

National:

NA

ROBERT H. WAGER CO.

570 MONTROYAL ROAD

Rural Hall NC

United States 27045 Telephone: 336-969-6909

Fax: 336-969-6375

Email: lwager@wagerusa.com Web: www.wagerusa.com

Tier: 2 - PDA Issued

International:

IACS Unified Requirements P3 (Rev.3, dated 3 March 2012).

Government: 46 CFR 56.50-85(a)(7) (USCG Approval Pending)

EUMED:

NA

OTHERS:

Manufacturer's Specifications