



CERTIFICATE NUMBER
18-HS1760481-PDA

DATE
16 Aug 2018

ABS TECHNICAL OFFICE
Houston ESD - Piping

CERTIFICATE OF Design Assessment

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

CLA-VAL COMPANY

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, Vacuum Relief**

Model: **33A and 33ATD**

This Product Design Assessment (PDA) Certificate 18-HS1760481-PDA, dated 16/Aug/2018 remains valid until 15/Aug/2023 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/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

CLA-VAL COMPANY
1701 PLACENTIA AVENUE
COSTA MESA CA
United States 92627
Telephone: 281-741-4198
Fax: 949-548-9900
Email: dalexand@cla-val.com
Web: www.cla-val.com

Tier: 2 - PDA Issued

Product: Valve, Vacuum Relief

Model: 33A and 33ATD

Intended Service:

Marine Applications - Automatic air/vacuum valves equipped with throttling devices are intended for use with Vertical Turbine Pumps for Freshwater and Seawater Systems.

Description:

Series 33A: High Performance Air Release & Vacuum Breaker Valve.

Series 33ATD: Air Release & Vacuum Breaker Valve (Threaded & Flanged) with Throttling Air Control Device.

Material of construction: Ductile Iron ASTM A536 65-45-12, ASTM A216WCB, ASTM B61 Naval bronze, ASTM B148 NI Aluminum Bronze, 316 Stainless Steel, Duplex Stainless Steel and Super Duplex Stainless Steel.

Seals: Nitrile, Rubber, EPDM.

Rating:

Models: 33A and 33ATD

Sizes: 2", 3" & 4"

Max. Pressure Rating for UL Listed 33ATD = 300 psi

Orifice ϕ (2"): 0.076"

Orifice ϕ (3" & 4"): 0.125"

Temperature Range: Water up to 180°F

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.

- Not to be used in systems where fire testing in accordance with the Rules are required.

- Ductile (Nodular) iron is not permitted for the construction of valves and fittings for temperatures of 350 Deg.C (662 Deg.F) and above. See 4-6-2/3.1.4 of Steel Vessel Rules.

- Ferrous materials used for the valves operating at lower than -18°C are to have adequate notch toughness properties as per 4-6-2/3.1.6 of Steel Vessels Rules.

- The material for the body, Disc, seat and seals are to be suitable for the intended service.

Comments:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

- All valves are to bear permanent identification, such as the manufacturer's name or trademark, material identify, pressure rating, etc. at which the manufacturer guarantees the valves to meet the requirements of the manufacturer' standards. Such markings may be cast or forged integral with, stamped on, or securely affixed by nameplate on the component, and are to serve as a permanent means of identification of the component throughout its service life in accordance with 4-6-1/7.1.3 and 4-6-1/7.1.4 of the Steel Vessels Rules.

- The following tests were conducted in accordance with the UL 2573 standard:

1. Examination of samples
2. Leakage
3. Hydrostatic
4. Cycling
5. Clogging
6. Elastomeric Materials
7. Plastic Parts

Flange connection are to be in accordance with 4-6-2/5.5.4 of the Steel Vessel Rules.

Threaded connections are to be in accordance with 4-6-2/5.5.5 of the Steel Vessel Rules.

- No fire testing was performed on these valves.

- These valves are installed in a safe area.

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Notes/Drawing/Documentation:

209582, EK 03-18-14 3" SCREWED 33A AIR RELEASE & VACUUM VALVE, Revision: -, Pages: 1
209716, 2", 3", 4" & 6" 33A/TD AIR RELEASE AND VACUUM BREAKER ASSEMBLY WITH THROTLING
DEVICE 150 FLAT FACE I, Revision: F, Pages: 1
E-33ATD_Fire, Air Release & Vacuum Breaker Valve (Threaded & Flanged) with Throttling Air Control Device
Sizes 2, Revision: -, Pages: 1
E-33A_Threaded_&_Flanged_Fire, High Performance Combination Air Release & Vacuum Breaker Valve, Revision:
-, Pages: 1
EX26932-20160825-CertificateofCompliance for 33ATD Aug2016, Certificate of Compliance, Revision: -, Pages: 1
EX26932-20160825-DescriptionIR Report for 33ATD Aug 2016, Automatic air release valves in the following
Models, sizes and rated pressures, Revision: -, Pages: 1
EX26932-20160825-TestRecordIR for 33ATD Aug2016, Test Record IR for 33ATD, Revision: -, Pages: 1

Terms of Validity:

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STANDARDS

ABS Rules:

Steel Vessels Rules (2018): 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-2/5.15;
Mobile Offshore Drilling Units Rules (2018): 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-2-2/9;
Rules for Building and Classing Facilities on Offshore Installations (2018): 3-8/5.1.1(b);

National:

NA

International:

UL2573 (2017) - Outline of Investigation for Automatic Air Release, Air/Vacuum and Combination Air Valves for
Fire Protection Service

Government:

NA

EUMED:

NA

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OTHERS:

NA