



CERTIFICATE NUMBER 19-GE1870286-PDA
EFFECTIVE DATE 21-Aug-2019
EXPIRATION DATE 20-Aug-2024
ABS TECHNICAL OFFICE GENOA ENGINEERING

CERTIFICATE OF Product Design Assessment

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

BERMAD INC.

located at

West Little York Road, 77040 Houston, United States

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 Fire Protection Control Valve

Model 400E & 400Y Series Blast Proof, Sizes 1.5, 2, 2.5, 3, 4, 6, 8, 10, & 12 inches.

This Product Design Assessment (PDA) Certificate remains valid until 20 August 2024 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau of Shipping


Cristina Generale, Senior Engineer

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 ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

BERMAD INC

9424 WEST LITTLE YORK ROAD

HOUSTON TX

United States 77040

Telephone:

Fax:

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Web: www.bermad.com

Tier: 2 - PDA Issued

Product: Fire Protection Control Valve**Model:** 400E & 400Y Series Blast Proof, Sizes 1.5, 2, 2.5, 3, 4, 6, 8, 10, & 12 inches.**Intended Service:**

Deluge Valves, Pressure Control Deluge, Remote On-Off, Pressure Control, Hydraulic Monitor Valves, Pressure Reducing Hydrant, Pressure Sustaining and Pump Relief Valves for Water, Seawater and Foam Fire Protection Systems in Marine, Offshore and Industrial Applications.

Description:

Water Control Valves with unobstructed flow path and hydraulically operated diaphragm.

Rating:

Design Pressure: 21 barg.

Design Temperature: 50 deg Celsius.

Blast Over Pressure: 4 barg

Pulse Duration: 1 second

Drag Pressure: 2.05 barg

Service Restriction:

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

Comments:

- The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- The subject deluge valves may be constructed from any of the following materials:
 - ASTM A 536 Grade 65-45-12 Ductile Iron,
 - ASTM A 216 Grade WCB Cast Steel,
 - ASTM B 148-C95800 Cast Ni-Al Bronze,
 - ASTM A494 Grade CW12MW,
 - ASTM A 744 Grade CN7M having UTS>448 MPa and ASTM B 367 Grade C2 Titanium. Internal diaphragm may be constructed from any of the following materials: NR, NBR, EPDM.

Notes/Drawing/Documentation:

Prototype Testing of SW and FW Control & Deluge Valves as per ABS Haifa Survey Report No. HA352996 dated 15 August 2003 (rev. 22 August 2003).

Terms of Validity:

This Product Design Assessment (PDA) Certificate 19-GE1870286-PDA, dated 21/Aug/2019 remains valid until 20/Aug/2024 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.

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STANDARDS

ABS Rules:

Rules for Conditions of Classification, Part I - 2019 - 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:
Steel Vessel Rules 2019, 4-6-2/5.11
Marine Vessel Rules 2019, 4-6-2/5.11

Rules for Conditions of Classification, Part 1 – 2019 - Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:
Mobile Offshore Units Rules 2019, 4-2-2/9.

National:

Burst Pressure Test according to UL - 260:04

International:

Fire test according to ISO 6182-5:2012

Government:

NA

EUMED:

NA

OTHERS:

Bermad's Blast Proof Specification BS-001 Rev. 02:2014