



# ABS

CERTIFICATE NUMBER

08-PR408444-1-PDA

DATE

22 October 2013

ABS TECHNICAL OFFICE

Piraeus Engineering Department

## CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of  
**BERMAD INC - HOUSTON**

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 Series, Sizes 1.5, 2, 2.5, 3, 4, 6, 8, 10 & 12 inches.**

This Product Design Assessment (PDA) Certificate 08-PR408444-1-PDA, dated 22/Oct/2013 remains valid until 21/Oct/2018 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

*Ion G. Koumbarelis*

Ion G. Koumbarelis

Engineer



**BERMAD INC**

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HOUSTON  
TX 77040  
United States  
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Web: www.bermad.com

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**Product:** Fire Protection Control Valve

**Model:** 400E Series, 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.

**Ratings:**

Design Pressure: 21 barg.

Design Temperature: 50 deg Celsius.

**Service Restrictions:**

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.

**Comments:**

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.

**Notes / Drawings / Documentation:**

1) This Product Design Assessment (PDA) is valid only for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

2) 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).

**Term of Validity:**

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**STANDARDS****ABS Rules:**

2013 Steel Vessel Rules 1-1-4/7.7, 4-6-2/5.11

**National:**

Burst Pressure Test according to UL - 260:95

**International:**

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Fire Test according to ISO 6182-5:95

**Government Authority:**

NA

**EUMED:**

NA

**Others:**

NA

