



CERTIFICATE NUMBER
15-HS1338123-1-PDA

DATE
01 Dec 2017

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**

Model: **50B-4KG1(Globe) 2050B-4KG1(Angle) 50B-4KG1KOL(Globe) 2050B-4KG1KOL(Angle) 50-49: 50G-49 (Globe) 50A-49 (Angle) 50G-49KX (Globe) 50A-49KX (Angle)**

This Product Design Assessment (PDA) Certificate 15-HS1338123-1-PDA, dated 01/Dec/2017 remains valid until 15/Apr/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.

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AMERICAN BUREAU OF SHIPPING

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Tier: 2 - PDA Issued

Product: Valve
Model: 50B-4KG1(Globe)
2050B-4KG1(Angle)
50B-4KG1KOL(Globe)
2050B-4KG1KOL(Angle)
50-49: 50G-49 (Globe)
50A-49 (Angle)
50G-49KX (Globe)
50A-49KX (Angle)

Intended Service:

Marine and Offshore Applications - Seawater and Fire Water Piping System

Description:

The Cla-Val Model 50B-4KG1(Globe), 2050B-4KG1(Angle), 50B-4KG1KOL(Globe), and 2050B-4KG1KOL(Angle) Pressure Relief Valves are designed specifically to automatically relieve excess pressure in seawater or fire protection pumping systems.

The 50B-4KG1KOL and 2050B-4KG1KOL valves are designed with a KOL anti-cavitation seat to eliminate the damaging effects of cavitation.

The Model 50-49 Pump Start/Pressure Relief Valve is designed to provide pump and pipeline protection during pump start sequence and pump operation when discharge pressure rises to unsafe levels.

U.L. Listed: Sizes 3", 4", 6", and 8"

F.M. Approved: Sizes 3", 4", 6", and 8"

ULC Listed: Size 10" for models 50B-4 KG1 (Globe) and 2050B-4 KG1 (Angle), Ductile Iron Body ASTM A 536

Optional UL Listed Materials for Seawater and Severe Service Applications:

- Nickel Aluminum Bronze (NAB) - ASTM B148 Alloy C95800 (See Service Restriction 2)
- Monel - QQ-N-288 Comp B - ASTM A494 Grade M30H
- Cast Steel - ASTM A216 Grade WCB
- 316 Stainless Steel - ASTM A743 Grades CF3M and CFM8
- Super Austenitic Stainless Steel - ASTM A351 Grade CK3MCuN (SMO 254)
- Super Duplex Stainless Steel - ASTM A890 Grade 5A (CE3MN)

Rating:

Pressure:

Class - 175 psi Max (Model 50B-4KG1, 2050B-4KG1, 50-49 in the 8" size)

Class - 300 psi Max (Model 50B-4KG1 and 2050B-4KG1 in the 3", 4" and 6" size; 50B-4KG1KOL, 2050B-4KG1KOL and 50-49 in the 3", 4", 6" and 8" size)

For ULC Listed: Size 10" for models 50B-4 KG1 (Globe) and 2050B-4 KG1 (Angle), Ductile Iron Body ASTM A 536, Pressure Ratings Class 150 - 250 psi Max and for Class 300 - 400 psi Max;

Design Temperature (Water): up to 180 °F Max;

Adjustment Range: 20-200 psi (150 Class), 100-300 psi (300 Class).

Valve Capacity: See attached "pdf"

Service Restriction:

1. 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.

2. Where the valves are used in fire water piping system, materials rendered ineffective by heat are not to be used in the construction of the valves or the closure mechanism unless protected adequately, as per 4-7-3/1.11 of ABS Rules for Bulding and Classing Steel Vessels 2015. This restriction is applicable to Nickel Aluminum Bronze (NAB) -

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Tier: 2 - PDA Issued

ASTM B148 Alloy C95800.

Comments:

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

- 1). The pressure relief valve is to be set, sealed and installed in accordance with the manufacturer's instructions.
- 2). The pilot control loop plays an important role for the valve functions and is to be well protected against all possible mechanical damage on the drilling rig.

Notes/Drawing/Documentation:

Drawing No. ABS application (003), ABS TA application for revision of PDA certificate , Revision: -, Pages: 1
Drawing No. Correspondence, Email 10-Nov-2017 subj: Application and Quote needed: Model 4KG1 ULC, Revision: -, Pages: -
Drawing No. ULC Test Report 10in 90G-21 (Globe), 90-21 (Angle) 19 August 1998, ULC Test Report, Revision: -
Drawing No. Catalog 50B-4KG1 Globe and 2050B-4KG1 Angle - fire protection Relief Valve; Revision:-
Drawing No. 99500 - 1 1/2" Thru 10" 50B-4KG1/2050B-4KG1 - pressure relief valve 150 LB/300LB Flanges per ANSI 16.42; Rev-P:-

Supporting Documentation (previous task T1338123):

Drawing No. E-50B-4KG1 Bronze, Product Information Sheet, Revision: -
Drawing No. FM Approval Report 50B-4KG1 for Split Case Fire Pumps May1982, FM Report, Revision: -
Drawing No. FM Approval Report 50B-4KG1 for Vertical Shaft Split Case Fire Pumps Oct, FM Report, Revision: -
Drawing No. FM Approval Report for 50B-4KG1 with CRL60 20-200 100-300 Dec2012, FM Report, Revision: -
Drawing No. FM Test Report for 50B-4KG1 with CRL60 Proof Pressure Results Dec2012, FM Report, Revision: -
Drawing No. UL Test Report 50B-4KG 3 to 6in Mar1973, UL Test Report, Revision: -
Drawing No. UL Test Report 8in 50B-4KG Nov1993, UL Test Report, Revision: -
Drawing No. E-50B-4KG1KOL, Product Information Sheet, Revision: -
Drawing No. FM Approval Report for Water Pressure Relief Valves, Model 50B-4KG1KOL and 2050B-4KG1KOL, Revision: -
Drawing No. E 50-49 and 50-49KX, Product Information Sheet, Revision: -

Terms of Validity:

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STANDARDS

ABS Rules:

2015 Steel Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-7-3, 4-6-2/5.11;
2015 Rules for Building and Classing Mobile Offshore Drilling Units 1-1-4/9.7, 1-1-A2, 1-1-A3
2015 Rules for Building and Classing Facilities on Offshore Installations 3-8/5.1.1

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National:
2013 NFPA No. 20
2004 UL1478

International:
NA

Government:
NA

EUMED:
NA

OTHERS:
NA