CERTIFICATE NUMBER	24-00T2520677-PDA
EFFECTIVE DATE	30-Apr-2024
EXPIRY DATE	29-Apr-2029
ABS TECHNICAL OFFICE	Houston ESD

CERTIFICATE OF

Product Design Assessment

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

CLA-VAL COMPANY

located at

1701 PLACENTIA AVENUE, , COSTA MESA, CA, United States, 92627

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, Pressure Reducing**
Model:	**Model 90-21: 90G-21 (Globe), 90A-21 (Angle) and end connection variations.** **Model 90-42: 90G-42 (Globe), 90A-42 (Angle) and end connection variations.**
Endorsements:	
Tier:	**2 - PDA Issued**

This Product Design Assessment (PDA) Certificate remains valid until 29/Apr/2029 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

John Vincent Ulep

John Vincent Bog-Acon Ulep, Senior Principal 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)

Sensitivity: Internal & Restricted

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

Tier: 2 - PDA Issued

Product: **Valve, Pressure Reducing**
Model: **Model 90-21: 90G-21 (Globe), 90A-21 (Angle) and end connection variations.**
Model 90-42: 90G-42 (Globe), 90A-42 (Angle) and end connection variations.
Endorsements:

Intended Service:
Marine and Offshore Applications - Seawater and Fire Water Piping System.

Description:
Cla-Val Models 90G-21 (Globe), 90A-21 (Angle), 90G-42 (Globe) and 90A-42 (Angle) are pressure reducing control valves for pressure control hydraulically operated, diaphragm-actuated, globe or angle pattern valve.

Available Materials for 90G-21, 90A-21, 90G-42 and 90A-42 Valves:
• Ductile Iron Body ASTM A-536 (65-45-12)
• Nickel Aluminum Bronze (NAB) - ASTM B148 Alloy C95800 (See Service Restriction 2)
• Monel - QQ-N-288 Comp B - ASTM A494 Grade M30H (UNS N24030)
• Cast Steel - ASTM A216 Grade WCB (UNS J03002)
• 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)

Gaskets made of EPDM, FKM, BUNA-N or equivalent.
Connection: Threaded, Flanged and Grooved.

Rating:
Models 90-42:

Alignment pattern: Globe and Angle
End Connection types: Flange, Threaded and Grooved
Max rated inlet pressure: 250 psi (*) (class #150) to 400 psi (class #300).
Pressure Adjustment Range: 15 psi - 75 psi or 30 psi - 300 psi.
Design Temperature (Water): up to 180 ^{o}F Max.

Size ranges:
Flange: 1 1/2" to 36"
Threaded: 1" to 3"
Grooved: 1 1/2" to 10"

Models 90-21:

Alignment pattern: Globe and Angle
End Connection types: Flange, Threaded and Grooved
Maximum rated inlet pressure: 250 psi (*) (class #150) to 300 psi (class #300).
Pressure Adjustment Range: 50 psi -175 psi or 30 psi - 165psi (see product catalogue for limitations).
Design Temperature (Water): up to 180 ^{o}F Max.

Size ranges:
Flange: 1 1/2" to 12"
Threaded: 1" to 3"
Grooved: 1 1/2" to 8" or 2" - 6" (Angle)

(*) Refer to specific design pressure and temperature relationships for each material type.

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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.
- 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, as per 4-7-3/1.11 of ABS Rules for Building and Classing Marine Vessels.
- Models 90G-42 (Globe) and 90A-42 (Angle) are not UL listed valves. Hence, not to be used in services requiring UL Listing.

Comments:
1. The manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. All valves are to bear permanent identification, such as the manufacturer's name or trademark, material identity, 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 ABS Rules for Building and Classing Marine Vessels.
3. The application and installation of the valves is to be in accordance with the manufacturer's specifications, instructions and recommendations.
4. Underwriters Laboratories requires the installation of pressure gauges upstream and downstream of the Pressure Reducing Valve.

Notes/Drawing/Documentation:
Drawing No. 17301, 1 1/2in - 12in - 90-21, Screwed/Flanged 150/300 Pressure Reducing Valve U.L. Listed, Revision: K, Pages: 1
Drawing No. 212357, 1.5in-16in 90-42A Pressure Reducing Valve Seawater Service 150/300LB Flanges, Revision: -, Pages: 1
Drawing No. 90-21 Brochure, 90G-21, 90A-21 Fire Protection Pressure Reducing Valve, Revision: -, Pages: 1
Drawing No. 90-21 Test procedure, Test procedure, Revision: -, Pages: 1
Drawing No. 90-42 Brochure, 90-42 Seawater Service Pressure Reducing Valve, Revision: -, Pages: 1
Drawing No. 90A-21 UL Listed to UL 1739, 90A-21 UL Listed to UL 1739, Revision: -, Pages: 1
Drawing No. 90G-21 UL Listed to UL 1739, 90G-21 UL Listed to UL 1739, Revision: -, Pages: 1
Drawing No. File EX2534, Test Record Index 2022-07-20, Date: 07/20/2022, Revision: -, Pages: 53

Terms of Validity:
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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.

STANDARDS

ABS Rules:
2024 Rules for Conditions of Classification: 1A-1-4/7.7, 1A-1-3/A3 and A4, which covers the following:

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2024 Rules for Building and Classing Marine Vessels: 4-6-1/7.1.4, 4-6-2/3.1.4, 4-6-2/3.1.6, 4-6-2/5.11, 4-6-2/5.15, 4-6-2/5.17

2024 Rules for Conditions of Classification – Offshore Units and Structures: 1B-1-4/9.7, 1B-1-2/A2 and A3, which covers the following:
2024 Rules for Building and Classing Mobile Offshore Units: 4-2-2/9

National:
2017 UL 1739 6th edition - UL Standard for Safety Pilot-Operated Pressure-Control Valves for Fire-Protection Service.
2016 UL 1468 5th edition - UL Standard for Direct Acting Pressure Reducing and Pressure Restricting Valves.

International:
NA

Government:
NA

EUMED:
NA

OTHERS:
NA