

CERTIFICATE NUMBER 23-2446761-PDA

EFFECTIVE DATE 20-Sep-2023

EXPIRATION DATE 19-Sep-2028

ABS TECHNICAL OFFICE Yokohama Engineering Services

CERTIFICATE OF

Product Design Assessment

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

EAGLE INDUSTRY CO., LTD. MARINE DIVISION

located at

TAKASAGO CITY

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 Seals, Shaft Seals

Model EVC

Endorsement: Other

This Product Design Assessment (PDA) Certificate remains valid until 19 September 2028 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

Takahiro Shibuya, 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 ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement

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EAGLE INDUSTRY CO., LTD. MARINE DIVISION

2-13-23, SHINHAMA, ARAI-CHO

TAKASAGO HYOGO

Japan 676-0008

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Fax: +81-79-442-3020

Email: dl-tsg-qa@kemel.com Web: www.kemel.com

Tier: 2 - PDA Issued

Product: Seals, Shaft Seals

Model: **EVC**

Endorsements:

Intended Service:

Oil lubricated stern tube seal.

Description:

Oil lubricated stern tube seal.

Rating:

Shaft nominal diameter from 150 mm to 260 mm.

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.

Comments:

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

Notes/Drawing/Documentation:

Drawing No. NB-000754500002 Rev.00 dated 13 May 2008, EVC AFT SEAL,

Drawing No. NB-000754500002 Rev.01 dated 10 May 2012, EVC AFT SEAL,

Drawing No. NB-000754500002 Rev.02 dated 24 April 2018, EVC AFT SEAL,

Drawing No. EVC-006 Rev.00 dated 23 April 2008, EVC STERN TUBE SEAL, Drawing No. EVC-006 Rev.02 dated 24 April 2018, EVC STERN TUBE SEAL,

Drawing No. 90ME-010-12 revised in September 2012, Lubrication Oil List,

Drawing No. 23AA-5085 dated 30 August 2023, INSPECTION REPORT,

Drawing No. ISEVC-006A dated 12 May 2023 Quality control plan for EVC stern tube seal (EKK)

Terms of Validity:

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STANDARDS

ABS Rules:

2023 Rules for Conditions of Classification 1-1-4/7.7, 1-1A3, 1-1-A4, which covers the following:

2023 Rules for Building and Classing Marine Vessels: 4-3-2/1.5.1 and 4-3-2/5.13.1

Electronically published by ABS Yokohama. Reference T2446761, dated 20-SEP-2023.

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Tier: 2 - PDA Issued

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA