



Marine & Offshore

Certificate number: 05344/F0 BV

File number: ACM 137/1101/005

Product code: 0725H

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**EAGLE INDUSTRY CO., LTD. MARINE DIVISION**

Takasago - JAPAN

*for the type of product*

**STERN TUBE SEALING GLANDS**

Types: KEMEL CX - KEMEL DX - KEMEL AX.

**Requirements:**

BUREAU VERITAS Rules for the Classification of Steel Ships.

*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 20 Apr 2027**

**For Bureau Veritas Marine & Offshore,**

At BV KOBE, on 20 Apr 2022,

Shinichi Takemoto

***This certificate was created electronically and is valid without signature***



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

## **THE SCHEDULE OF APPROVAL**

### **1. PRODUCT DESCRIPTION:**

Type: **KEMEL CX**

Outer and inner seals; composed of three lip-seals on the outer seal, and two lip-seals on the inner seal.

Size Range, propeller shaft diameters: 80 - 1130.

Type: **KEMEL DX**

Outer and inner seals; composed of four lip-seals on the outer seal, and two lip-seals on the inner seal.

Size Range, propeller shaft diameters: 111 - 1130.

Type: **KEMEL AX**

Outer and inner seals; composed of four lip-seals on the outer seal, and two lip-seals on the inner seal.

Size Range, propeller shaft diameters: 111 - 1130.

### **2. DOCUMENTS AND DRAWINGS:**

- Drawings N° CX-0301 dated 01/07/2017 for type KEMEL CX

- Drawings N° DX-0301 dated 01/07/2017 for type KEMEL DX

- Drawings N° 3A-0001 dated 01/07/2017 for type KEMEL AX

### **3. TEST REPORTS:**

NA.

### **4. APPLICATION / LIMITATION:**

4.1 - Other materials and/or components:

Material of parts for **KEMEL CX, KEMEL DX and KEMEL AX.**

- Liner: Chrome Steel

- Rings and related parts: FC250, CAC301

- Sealing rings: FEPM, FKM(VITON), NBR.

4.2 - Application / Limitation of use:

- The lip-seal can be serviced without dismantling the propeller.

4.3 - On board installation & Maintenance requirements:

- Due consideration is to be paid to the Manufacturer's recommendations concerning the installation, inspection, operation and maintenance of the seal.

### **5. PRODUCTION SURVEY REQUIREMENTS:**

5.1 - The above products are to be supplied by **EAGLE INDUSTRY CO., LTD. - Marine Division** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **EAGLE INDUSTRY CO., LTD. - Marine Division** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **EAGLE INDUSTRY CO., LTD. - Marine Division** has declared to Bureau Veritas the following production site:

**EAGLE INDUSTRY CO., LTD - Marine Division**  
**2-13-23, Shinhama, Arai-cho**  
**676-0008 - Takasago**  
**JAPAN**

**6. MARKING OF PRODUCT:**

- Manufacturer's name/type.
- Size.
- Serial number.
- Bureau Veritas marks.

**7. OTHERS:**

7.1 - It is **EAGLE INDUSTRY CO., LTD. - Marine Division** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate No. 05344/E1 BV issued on 06 July 2018 by the Society.

**\*\*\* END OF CERTIFICATE \*\*\***