DNV·GL

Certificate No:
TAM000016A

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Stern Tube Seal

with type designation(s)
BlueWater Seal

Issued to
Thordon Bearings Inc.
Burlington, ON, Canada

is found to comply with
DNV GL rules for classification – Ships
DNV GL rules for classification – High speed and light craft
DNV GL rules for classification – Yachts
DNV GL class programme DNVGL-CP-0031 – Type approval – Stern tube sealing arrangement

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Issued at **Hamburg** on **2020-11-05**
This Certificate is valid until **2025-11-04**.
DNV GL local station: **Montreal**

Approval Engineer: **Olaf Richter**

for **DNV GL**

Olaf Drews
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

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Product description

Water lubricated fore sterntube seal, with split or non-split sealing ring, with static emergency seal

Application/Limitation

Sizes 01 – 14 for shaft diameters 300 – 1000 mm

For class notation TMON(Open loop water) and TMON(Closed loop water), split sealing rings are available for replacement of the initial ring.

See "BlueWater Seal – Product Definition" Rev.02

Type Approval documentation

Tests carried out

See "Performance Evaluation Test Report" Rev.02

Marking of product

Manufacturer's name or trademark, type designation.

Periodical assessment

For retention of the Type Approval, a DNV GL surveyor shall perform an assessment after 2 years and after 3.5 years to verify that the conditions of the type approval are complied with. A renewal assessment will be performed at renewal of the certificate.

The objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval Certificate was issued. The main scope of the Periodical Assessment will normally include:

- Verification of the Type Approval applicant's production and quality system w.r.t. ensuring continued consistent production of the Type Approved products at the Type Approval applicant's own premises and at other companies that are given the responsibility for manufacturing of the products
- Review of the Type Approval documentation and that this is still used as basis for the production
- Review of possible changes to the design, the material and the performance of the product
- Verification of the product marking

In cases where the Type Approved product is manufactured at other companies, the Periodical Assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore Periodical Assessment shall be carried out randomly at these companies.
When a Type Approved product is manufactured at other companies, the Type Approval applicant takes the sole responsibility for the conformity of the product to the applicable requirements.

END OF CERTIFICATE.