

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Stern Tube / Propeller Shaft Seal**with type designation(s)
SeaThigor

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****Application :****The Forward Stern tube / Propeller Shaft Seal is approved for shafting arrangements with water lubricated stern tube / propeller shaft bearings. Survey interval for the propeller shaft: See page 2 of this certificate.****Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.**This Certificate is valid until **2021-06-13**.Issued at **Høvik** on **2016-06-14**DNV GL local station: **Montreal**for **DNV GL**Approval Engineer: **Nadine Grace Mosteiro**
Halvorsen-----
Oddvar Deinboll
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.

Product description

Forward propeller shaft seal for water lubricated stern tube bearing systems.

Application/Limitation

Type: SeaThigor Seal, ST-01 to ST-14
Shaft diameter: 300 mm (12") to - 650 mm (25.625").

Survey interval for the propeller shaft to be according to the Rules Pt.7, Ch.1, Sec.1, 1.6.6.

Type Approval documentation

Tests carried out

Marking of product

The product to be marked with manufacturer's name or trademark and type number identification.

Periodical assessment

For retention of the Type Approval, a DNV GL surveyor shall perform a survey every second year and before the expiry date of this certificate to verify that the conditions of the type approval are complied with.

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.

- END OF CERTIFICATE -