

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Stern Tube Seal**

with type designation(s)

SUPREME: Stern tube seal type; Standard, Ventus, SeaGuard, LD, Thruster seal type; TS, Atmos

Issued to

Lagersmit Sealing Solutions B.V.
ALBLASSERDAM, Netherlands

is found to comply with

Det Norske Veritas' Rules for Classification of Ships/High Speed and Light Craft**Application :****The stern tube and thruster seals are approved for oil lubricated propeller shafts. Type LD is approved for oil or grease lubricated shafts.****Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.**This Certificate is valid until **2018-06-30**.Issued at **Høvik** on **2014-05-14**DNV GL local station: **Rotterdam**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.

Job Id: **262.1-015913-2**
Certificate No: **TAM0000018**

Product description

Seal for oil lubricated propeller shafts.

Seal types Supreme LD for oil or grease lubricated shafts

Application/Limitation

The sealing boxes type STA, SVA, SG, SGV and STF satisfies the requirements to sealing boxes for TMON (Tailshaft Condition Monitoring Survey Arrangement).

Shaft survey interval as specified in the Rules Pt.7, Ch.7, Sec.1, A606/607

The Stern Tube seal is approved for mineral oils.

Environmentally Acceptable Lubricants (EALs) may only be applied according to manufacturer's list. Manufacturer's confirmation should be obtained separately.

Type Approval documentation

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 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 -