



TYPE APPROVAL CERTIFICATE

Certificate no.:
TAM0000018
Revision No:
3

This is to certify:
that the Stern Tube Seal

with type designation(s)
SUPREME: Stern tube seal type; STA, STF, SVA, SG, SGV, LDA, LDF, SAA, SGA, Standard, Seaguard, Ventus, Low Duty Seaguard Ventus, Athmos, Seaguard Athmos, Thruster seal type: TS3, TS4, TS4-2, TSV4, Ventus, Athmos

issued to
Lagersmit Sealing Solutions B.V.
ALBLASSERDAM, Netherlands

is found to comply with
DNV rules for classification – Ships
DNV rules for classification – 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. The Supreme STF-WL is approved for water lubricated shafts.

Products approved by this certificate are accepted for installation on all vessels classed by DNV.


Issued at **Høvik** on **2023-11-29**

This Certificate is valid until **2028-11-28**.

DNV local unit: **Netherlands FIS**

Approval Engineer: **Stanislav Avanesov**

for **DNV**

 Digitally Signed By: Schuetz, Wolfgang
Location: DNV GL SE Hamburg, Germany
..... on behalf of

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 AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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.



Product description

Seal for oil lubricated propeller shafts.

Seal type Supreme LD for oil or grease lubricated shafts

Seal type STF-WL for water lubricated shafts

Application/Limitation

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

Shaft survey interval as specified in the Rules Pt.7 Ch.1 Sec.1 [1.6.6].

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

The following drawings :

TA-SUP-X01, rev.C	(STA)	Arrangement SUPREME standard aft seal
TA-SUP-X05, rev.E	(SVA)	Arrangement SUPREME stern tube aft seal Ventus
TA-SUP-X10, rev.C	(SG)	Arrangement SUPREME Seaguard
TA-SUP-X15, rev.C	(SGV)	Arrangement SUPREME Seaguard Ventus
TA-SUP-X20, rev.C	(STF)	Arrangement SUPREME standard forward seal
TA-SUP-B30, rev.D	(LDA)	Arrangement SUPREME stern tube aft seal - low duty
TA-SUP-B31, rev.D	(LDF)	Arrangement SUPREME stern tube forward seal - low duty
TA-SUP-X40, rev.C	(TS3)	Arrangement SUPREME Thruster seal 3 lips execution
TA-SUP-X41, rev.D	(TS4)	Arrangement SUPREME Thruster seal 4 lips execution
TA-SUP-X46, rev.A	(TS4-2)	Arrangement SUPREME Thruster seal 4 lips execution, split type
TA-SUP-X43, rev.D	(TSV4)	Arrangement SUPREME Thruster seal Ventus, 4 lips execution
TA-SUP-X60, rev.B	(SAA)	Arrangement SUPREME aft seal Athmos
TA-SUP-X65, rev B	(SGA)	Arrangement SUPREME Seaguard Athmos
TA-SUP-X81, rev A	(STF-WL)	Arrangement Stern tube forward seal, water lubricated
TA-FWD-OT, rev. B		Forward oil tank
TA-SUP-OPT, rev.C		Optional extras

Lagersmit information letter – "Lagersmit VGP information letter", rev. 15-06-2023.

Supreme Athmos sealing verification letter – "Verification of non oil-to-sea sealing systems: SUPREME Athmos sealing solution", dated 2015-01-12

STF-WL 280 test setup Svenska bearing, dated 10-05-2023

Other conditions

Material test report for sealing rings to be presented to DNV per installation, ref. Pt.4 Ch.4 Sec.1 [3.1.1] Table 8 (applicable from January 2019).

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 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.

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.



Job ID: **262.1-015913-4**
Certificate no.: **TAM0000018**
Revision No: **3**

- END OF CERTIFICATE -