

Type Approval Certificate



[Stern Tube & Thruster Sealing Device]

Initial Approval 30th July, 1997
Manufacturer Lagersmit Sealing Solutions BV
 PO Box 176, 2950 AD Alblasserdam, The Netherlands

Product Description Model : SUPREME Series
 Type : STA, SVA, SG, SGV, STF, LDA, LDF,
 TS3, TS4, TSV4, TS4-2, SAA, SGA
 Intended for : Oil and/or Grease Lubricated Shafts

" See Appendix 1 "

Approval Condition " See Appendix 1 "

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt 5, Ch 3, Art 206 of the Rules for the Classification of Steel Ships

This Certificate is valid until 7th December, 2024

Issued at Busan, Korea on 4th May, 2021



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME21011838436) and certificate No.(RTD03789-SE001).



KOREAN REGISTER

**General Manager of
Marine & Ocean Equipment Team**

- Note :**
1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
 2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
 3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
 4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

Product Description and/or Approval Condition

Date of Issue : 4th May, 2021

A. Product Description

1. Product Specification

Type	Size (mm)	Approved Drawing No.	P&ID	Datasheet (Spec. No.)	Remark
STA	110 ~1250	TA-SUP-X01_B	PID-ST_D	04-10-100 (04/10/19)	Aft seal ass'y
SVA	110 ~1250	TA-SUP-X05_D	PID-SVA-MK0217_H	04-12-100 (20/07/15)	Aft seal ass'y
SG	110 ~1250	TA-SUP-X10_B	PID-SG_E	04-20-100 (07/10/19)	Aft seal ass'y
SGV	110 ~1250	TA-SUP-X15_B	PID-SGV-MK2017_G	04-25-100 (07/10/19)	Aft seal ass'y
STF	110 ~1250	TA-SUP-X20_B	PID-ST_D	04-15-100 (04/07/19)	Fwd seal ass'y
LDA	110 ~ 260	TA-SUP-X30_C	PID-LD_C PID-LD-G_A	04-30-100 (21/07/15)	Aft seal ass'y
LDF	110 ~ 240	TA-SUP-X31_C	PID-LD_C PID-LD-G_A	04-35-100 (05/10/20)	Fwd seal ass'y
TS3	155 ~ 850	TA-SUP-X40_B	PID-TS3_B	-	Thruster seal
TS4	155 ~ 850	TA-SUP-X41_C	PID-TS4_B	-	Thruster seal
TSV4	155 ~ 850	TA-SUP-X43_C	PID-TSV-AZIM_A	-	Thruster seal
TS4-2	155 ~ 850	TA-SUP-X41_C	PID-TS4_B	-	Thruster seal
SAA	110 ~ 380	TA-SUP-X60_A	PID-SAA-MK2017_C	04-60-100 (07/10/19)	Aft seal ass'y
SGA	110 ~ 380	TA-SUP-X65_A	PID-SGA-MK2017_C	04-65-100 (07/10/19)	Aft seal ass'y

2. Approved Drawings and Documents

As above.

3. Test Reports, etc.

- 1) Type test report intended for SUPREME seals dated from 5 Nov. to 18 Dec. 2015 at Lagersmit manufacturing facility.

B. Approval Condition

1. Application & Limitation

- 1) The onboard installation test and survey are to be carried out in accordance with the Rules of the Society and to be satisfied by the attending Surveyor.
- 2) Environmentally Acceptable Lubricants (EALs) may only be used according to manufacturer's standard lubricant list.

2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual product certification is not required.

3. Marking

- 1) The product or packing is to be marked with manufacturer's name or trademark and type number designation on a suitable position.

4. Others

- 1) The manufacturer takes the 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.

< End of Certificate >