



Certificate no.:
TAM00001FG

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Stern Tube Seal**

with type designation(s)

SCHOTTEL Propeller Sealing System for Large Thrusters Types STS 160 AFT, STS 330 AFT and STS 560 AFT

issued to

SCHOTTEL GmbH
Spay, Rheinland-Pfalz, Germany

is found to comply with

DNV rules for classification – Ships

DNV rules for classification – High speed and light craft

Application:

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

Issued at **Høvik** on **2026-01-16**

This Certificate is valid until **2031-01-15**.

for **DNV**

DNV local unit: **Essen**

Approval Engineer: **Stanislav Avanesov**

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 USD 300 000.

Product description

STS Schottel Stern Tube Seals, Seals for Propulsion and Transverse Thruster

Place of production

SCHOTTEL GmbH
Schottelstraße 1
D-56281 Dörth

Application/Limitation

Oil lubricated SCHOTTEL Sealing system – Type STS 160 AFT, STS 330 AFT, STS 560 AFT

Type Approval documentation

Tests carried out

Tests carried out (>400h) witnessed test by DNV on 01.12.2025 including review of files of long-term measurements as in accordance to DNV-CP-0031. The prototype sealing system STS 330 AFT is adapted to the SCHOTTEL sealing testbench..

Marking of product

Maker's specification (to fulfil maker's quality / logistic system)

Periodical assessment

For retention of the Type Approval, a DNV surveyor shall perform a survey after 2 and 3,5 years after issue of 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.

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.