DNV·GL

Certificate No:
TAM0000031

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Stern Tube Seal

with type designation(s)
ManeSeal MA, MX9 Inboard

Issued to
Wartsila UK
HAVANT HAMPSHIRE, United Kingdom

is found to comply with
DNV GL rules for classification – Ships

Application :

The sterntube seals are approved for water lubricated shafts.

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

This Certificate is valid until **2020-10-20**.

Issued at **Høvik** on **2015-10-21**

for **DNV GL**

DNV GL local station: **Southampton**

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.

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Product description

Seal for water lubricated stern tube bearings, split version

Application/Limitation

For shaft diameter of 161-1140mm

Type Approval documentation

Marking of product

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

Other conditions

Material tests and final testing have to be carried out, so far as required. Each application has to be notified in written form to the Society.

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