

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Stern Tube Bearing Material**

with type designation(s)
JMT Rubber Bearing

Issued to

Japan Marine Tech Korea
Busan, Republic of Korea

is found to comply with

DNV GL class programme DNVGL-CP-0081 – Type approval – Synthetic bearing bushing materials

DNV GL rules for classification – Ships

DNV GL rules for classification – High speed and light craft

Application :

The bearing material is approved for use as water lubricated propeller shaft bearing material. The Type Approval is valid only when the installation/application of the product is according to the DNV GL Rules and the Manufacturer's recommendations. Length/breadth ratio of not less than 2:1 for the aft most bearing. Maximum nominal bearing pressure: 0.6 MPa.

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

Issued at **Høvik** on **2019-09-17**

This Certificate is valid until **2024-09-16**.

DNV GL local station: **Gimhae Station**

for **DNV GL**

Approval Engineer: **Gisle Hersvik**

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Rikard Törnqvist
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.



Product description

JMT Rubber Bearing; Water lubricated chloroprene rubber based bearing material.

- JS Type; straight type bearing (JS40 – JS500)
- JF Type; flange type bearing (JF100 – JF500)

Application/Limitation

Fields of Application:	- Stern Tube Bearings - Propeller Shaft Bracket Bearings
Lubricants;	- Water
Surface Pressure;	- 0.6 MPa, maximum, for minimum length to diameter (L/D) ratio of 2:1 for the bearing next to propeller. For all the other positions, L/D ratio as per Manufacturer's recommendations.
Max. service temperature;	- +45°C
Installation;	- Press fit - Interference freeze fit
Dimensions;	- As per DNV GL Rules and Manufacturer's recommendations - Min – max diameters (ID): 40 - 500 mm - Min – max thicknesses (WT): 10 – 35 mm Reference is made to "Water Lubricated Shaft Rubber Bearing", Doc. No. JMT-CAT-RB. Rev.0, 2017-11-07.

The Type Approval is valid only when the installation/application of the product is according to the specified DNV GL Rules and the Manufacturer's recommendations. Reference is made to "Instruction Manual", Doc. No. JMT-RB-INS Rev. 0, 2017-11-14 and "Specification for Water lubricated Rubber bearing", Doc. No. JMT-SPEC-RB. Rev.0, 2018-01-18.

Any significant changes in design and/or quality of the material will render the approval invalid.

Type Approval documentation

Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**.

Marking of product

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

The marking is to be carried out in such a way that it is visible, legible and indelible. The marking of product is to enable traceability to the DNV GL Type Approval Certificate.

Periodical assessment

The scope of the Retention/Renewal Survey is to verify that the conditions stipulated for the Type Approval is complied with and that no alterations are made to the product design or choice of materials.

Periodical assessments (for Certificate Retention and Certificate Renewal) shall be performed according to DNVGL-CP-0338.



Job Id: **262.1-028010-1**
Certificate No: **TAM0000143**

This certificate is only valid if required Periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnvgl.com>

END OF CERTIFICATE