

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Stern Tube Seal**

with type designation(s)  
**4BL, MK2**

Issued to

**Japan Marine Tech Korea  
Busan, Republic of Korea**

is found to comply with

**DNV GL rules for classification – Ships**

**DNV GL rules for classification – High speed and light craft**

**DNV GL class programme DNVGL-CP-0031 – Type approval – Stern tube sealing arrangement**

**Application :**

**The sterntube seals are approved for oil lubricated shafts.**

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

Issued at **Høvik** on **2019-07-23**

for **DNV GL**

This Certificate is valid until **2024-07-22**.

DNV GL local station: **Gimhae Station**

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.



## Product description

Sternguard sealing system for shafting arrangements with oil lubricated stern tube bearings.  
Propeller shaft diameter 155 mm to 1250 mm.

## Application/Limitation

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

The sealing boxes meets the requirements to sealing boxes for TMON (Tailshaft Monitoring Survey Arrangement).

Environmentally Acceptable Lubricants (EALs) may only be applied according to manufacturer's list. Manufacturer's confirmation should be obtained separately. Oil quality to be regulated as recommended by manufacturer, ref. doc.no JMT-EAL-INS rev 0.

## Type Approval documentation

<b>Document</b>	<b>Rev</b>	<b>Title</b>
JMT-CAT-SEAL	0	JMT Catalogue 2016.9.26
MKII-F600-000	-	FWD seal drawing
4BL-C600-000	-	4BL type sterntube seal (AFT)
MK2-C600-000	-	MK2 Seal drawing
JMT-SEAL-INS	0	Sternguard Sealing System - Instruction manual
JMT-LUB-INS	0	Recommended L.O. List Mineral & Synthetic oil 2017.11.07
JMT-EAT-INS	0	Recommended L.O. List EAL 2017.11.07

## Tests carried out

JMT Korea sternguard Sternube Seal – test report no KOMERI-0314-18T3508 dated 2019-02-20.

## Other conditions

Material test report for sealing rings to be presented to DNV GL 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 GL 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.

- END OF CERTIFICATE -