

TYPE APPROVAL CERTIFICATE

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

with type designation(s)

SQF, SQA, SQT, IWSS, Forward seal: MDL (none-split), MDX (split), MLX (semi-split), Aft seal: KL (none-split), KR (split), KLR (semi-split)

Issued to

WÄRTSILÄ IBERICA S.A
Bermeo, VIZCAYA, Spain

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 shafting arrangements with oil lubricated sterntube bearings.****The sealing boxes SeaQual (SQA, SQF), Sternguard(IWSS), KR and KLR meets the requirements to sealing boxes for TMON (Tailshaft Monitoring Survey Arrangement). Survey interval for the propeller shaft: see page 2 of the certificate.****Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2019-08-08**This Certificate is valid until **2024-08-07**.for **DNV GL**DNV GL local station: **Vigo**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

Stern tube seal for oil lubricated propeller shafts and thruster shafts.

Application/Limitation

Lubricant: Oil (specification issued by Wärtsilä Sweden).
Oil temperature: max 65°C degrees

SeaQual SQA, SQF, SQT

Shaft diameter: 200-1000 mm
Oil pressure: max 2,5 bar

MDL, MDX, MLX, KL, KR, KLR

Shaft diameter: 53-1064 mm
Oil pressure: max 3 bar

Sternguard IWSS

Shaft diameter: 98-1000 mm
Oil pressure: max 4 bar

Survey interval for the propeller shaft to be according to the Rules Pt.7 Ch.1 Sec.1 [1.6.6].

The stern tube seal is approved for mineral oils.

Environmentally Acceptable Lubricants (EALs) may only be applied according to manufacturer's list.
Manufacturer's confirmation should be obtained separately.

Place of manufacture

Wärtsilä Iberica S.A., Porriño (Pontevedra), Spain.

Type Approval documentation

Tests carried out

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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.