

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Bulkhead Seal**

with type designation(s)

ND (split and non-split version), WFB1-F-M (split and non-split version), WFB1-F-MS (split and non-split version)

Issued to

Wartsila UK Ltd.

HAVANT HAMPSHIRE, United Kingdom

is found to comply with

DNV GL rules for classification – Ships

DNV GL rules for classification – High speed and light craft

Application :

The seal may be used for a shaft range of 50 - 680 mm.

The seal is not to be used as gastight seal for shaft.

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

This Certificate is valid until **2021-12-31**.

Issued at **Høvik** on **2017-08-17**

DNV GL local station: **Southampton**

for **DNV GL**

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.

Job Id:
Certificate No: **TAM00000B6**

Product description

Bulkhead seal for shafts

Application/Limitation

- The seal may be used for shafts with diameter from 50 mm to 680 mm.
- The seal is not to be used as gastight seal for shaft.

Type Approval documentation

Tests carried out

Engineering report No. 392 and information in letter from Deep Sea Seals dated 18th December 1984.

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.

Other conditions

VL certificate is not required

END OF CERTIFICATE