Certificate no.:
TAF00001W4

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Class H Penetration

with type designation(s)
IBMO Flex Fire Seal

issued to
IBMO B.V.
Bleiswijk, Zuid-Holland, **Netherlands**

is found to comply with
DNV offshore standards

Application:

Approved for use as a single or multi pipe penetration system in H-class bulkheads and decks.

Issued at **Høvik** on **2025-03-19**
This Certificate is valid until **2030-03-18**.
DNV local unit: **Netherlands CMC**

for **DNV**

Approval Engineer: **Helge Bjørnarå**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

Product description

"IBMO Flex Fire Seal",
consists of a 250 mm long steel sleeve welded symmetrically to the steel division. A 400 mm long Flex Fire Seal is fitted on the exposed side for bulkheads and underside for decks. The Flex Fire Seal is 30 mm thick filled with various layers including insulation and faced on both sides with coated glass fabric. Two stainless steel bands (one band may be used for 60 mm pipe) are used to clamp the Flex Fire Seal around sleeve and one stainless steel band is used to clamp the Flex Fire Seal around pipe.

Max. distance between sleeve and pipe (gap): 41 mm

Seals are made by:
Isolatiebedrijf C.J. Van Waas B.V., Barendrecht, Netherlands.

Application/Limitation

Approved for use as a single or multi pipe penetration system in H-class bulkheads and decks. Other applications are subject to case-by-case approval.

Table 1: Approved pipe penetration in H-0 steel bulkhead.

Type	Pipe material	Pipe diameter (OD) [mm]	Sleeve size (OD) [mm]	Sleeve length [mm]	Sleeve Thickness [mm]	Sleeve position	Insulation specifications
Single pipe	Steel	60 – 406	114 – 508	250	6 – 10	Symmetrical	None.

Table 2: Approved pipe penetration in H-0 steel deck.

Type	Pipe material	Pipe diameter (OD) [mm]	Sleeve size (OD) [mm]	Sleeve length [mm]	Sleeve Thickness [mm]	Sleeve position	Insulation specifications
Single pipe	Steel	60 – 406	114 – 508	250	6 – 10	Symmetrical	None.
Multi pipe	Steel	60 – 273	508	250	10	Symmetrical	None.

Each product is to be supplied with its manual for installation, use and maintenance.

Type Approval documentation

Certification in accordance with Class Programme DNV-CP-0338, September 2021.

Test report No. PGB10241A dated 18 September 2023 from DBI, Hvidovre, Denmark.
Test report No. PGB10298A dated 8 November 2023 from DBI, Hvidovre, Denmark.

Statement No. PHD10106A dated 28 November 2023 from DBI, Hvidovre, Denmark.

Tests carried out

Tested according to IMO 2010 FTP Code part 3 with the hydrocarbon time-temperature curve specified in ISO 834-3.

Marking of product

The product or packing is to be marked with name of manufacturer, type designation and fire technical rating.

Periodical assessment

DNV's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Class Programme DNV-CP-0338, Section 4.