

TYPE APPROVAL CERTIFICATE

Certificate No:
TAF000004X
Revision No:
1

This is to certify:

That the Class A and B Penetration

with type designation(s)
WRF, WRFF, WRFR6

Issued to

Wallmax India Enterprise Pvt. Limited
Faridabad, Haryana, India

is found to comply with

DNV offshore standards
DNV rules for classification – Ships
DNV GL class programme DNVGL-CP-0165 – Type approval – Cable and pipe penetrations

Application :

Approved for use as a cable penetration system in A-60 class steel bulkheads and decks.

This certificate is recognized by Transport Canada.

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

Issued at **Hamburg** on **2021-10-08**

This Certificate is valid until **2026-10-07**.

DNV local station: **Mumbai NB & CMC**

Approval Engineer: **Carsten Hunsalz**



for **DNV**

Digitally Signed By: Schaarmann, Arne
Location: DNV GL SE Hamburg, Germany
Signing Date: 2021-10-08

Arne Schaarmann
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.

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 300,000 USD.



Product description

“WRF, WRFF, WRFR6”

Cable penetration system consists of a 10 mm thick and 60 mm long rectangular / oval coaming. The space between the coaming and cables is filled with EPDM modules. A screw expander is fitted on the upper half of the system to tighten the cables and filling material. The interstices between the cables and modules and between the modules are lubricated with “Wallmax Lubricant”.

“WRF”:

The coaming is welded to the deck/bulkhead on both sides of the deck/bulkhead.

Insulation details: Two layers of 60 mm thick mineral wool blankets of approved type, minimum density 100 kg/m³ is fitted around the coaming, over the EPDM modules and tightening system and between the cables. The size of the blankets is 400 x 600 mm (w x h). The insulation is fitted on both sides of the bulkhead/deck.

Application	Size (mm) (W x H)	Minimum filling rate (%)	Maximum filling rate (%)	Coaming position in deck/bulkhead
Bulkhead	140 x 118	0,08	33,4	Exposed side, symmetrically or unexposed side
Bulkhead	140 x 298	0,03	39	Exposed side, symmetrically or unexposed side
Deck	140 x 118	0,08	33,4	Exposed side, symmetrically or unexposed side
Deck	140 x 298	0,03	33,5	Exposed side, symmetrically or unexposed side

“WRFF”:

The coaming is welded to a flange with dimensions as specified below. The flange is welded to both sides of the deck/bulkhead.

Insulation details: Two layers of 60 mm thick mineral wool blankets of approved type, minimum density 100 kg/m³ is fitted around the coaming, over the EPDM modules and tightening system and between the cables. The size of the blankets is 400 x 600 mm (w x h). The insulation is fitted on both sides of the bulkhead/deck.

The flange is fully covered by insulation.

Application	Size (mm) (W x H)	Size of flange (mm) (W x H)	Minimum filling rate (%)	Maximum filling rate (%)	Coaming position in deck/bulkhead
Bulkhead	140 x 238	261 x 358	7	7	Unexposed side
Bulkhead	140 x 298	261 x 418	6	6	Exposed side, symmetrically or unexposed side
Deck	132 x 110	252 x 230	0,08	33,4	Exposed side, symmetrically or unexposed side
Deck	132 x 290	252 x 410	0,03	33,5	Exposed side, symmetrically or unexposed side

“WRFR6”:

The coaming is welded to the deck/bulkhead on both sides of the deck/bulkhead.

Insulation details: Two layers of 60 mm thick mineral wool blankets of approved type, minimum density 100 kg/m³ is fitted around the coaming, over the EPDM modules and tightening system and between the cables. The size of the blankets is 400 x 600 mm (w x h). The insulation is fitted on both sides of the bulkhead/deck.

Application	Size (mm) (W x H)	Minimum filling rate (%)	Maximum filling rate (%)	Coaming position in deck/bulkhead
Bulkhead	140 x 238	0,04	24,8	Exposed side, symmetrically or unexposed side
Bulkhead	140 x 298	0,07	23	Exposed side, symmetrically or unexposed side
Deck	140 x 238	0,08	23	Exposed side, symmetrically or unexposed side
Deck	140 x 298	0,07	22,5	Exposed side, symmetrically or unexposed side

Application/Limitation

Approved for use as a cable penetration system in class A-60 steel bulkheads and decks. Other applications are subject to case-by-case approval. Approved for use in class A-0, A-15 and A-30 when the penetration system is insulated as A-60. In addition the division is to be insulated with A-60 insulation at least 200 mm around the penetration.

Approved maximum cable diameter: 81 mm.

Type WRF + WRFF

Approved for air tightness up to a design pressure of 0.27 MPa (2.7 bar), test pressure - 0.4 MPa (4 bar).

Approved for water tightness up to a design pressure of 0.4 MPa (4 bar), test pressure - 0.6 MPa (6.0 bar).

Type WRFR6

Approved for air tightness up to a design pressure of 0.2 MPa (2 bar), test pressure - 0.3 MPa (3 bar).

Approved for water tightness up to a design pressure of 0.2 MPa (2 bar), test pressure - 0.3 MPa (3.0 bar).

Penetration systems are not to be used for penetrating boundaries of tanks.

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

Type Approval documentation

Fire test report no. 2013CS013559/1, 2013CS013559/2 and 2013CS013559/3 dated 2014-03-17, 2017CS01761/3 dated 2017-09-20, 2017CS01761/6 dated 2017-09-22 from RINA test laboratory, Italy.

Pressure test report, 16 pages dated 2015-08-28 and 17 pages dated 2021-06-22/23 stamped by DNV Mumbai.

Penetration details:

Drawing no. 701000002 (WRF) and 7010100001 (WRFF) both dated 2015-06-19.
 7014306003 (WRFR6) and 7014308003 (WRFR6) both dated 2017-06-21.

Insulation details:

Drawing no. WIDVppc14A60dBHA-01/01 and WIDVppc14A60dBHA-01/02 both dated 2014-02-12.
Drawing no. WIDVppc14A60dBHA-02/01 and WIDVppc14A60dBHA-02/02 both dated 2014-02-12.
Drawing no. WIDVppc14A60dDHA-01/01 and WIDVppc14A60dDHA-01/02 both dated 2014-02-15 (deck).
Drawing no. 5500002001 dated 2017-08-01 and 5500001001 dated 2017-06-28.

Tests carried out

Tested in accordance with IMO 2010 FTP Code part 3.

Pressure tests with water and air in accordance with DNV Type Approval Programme DNVGL-CP-0165.

Marking of product

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

Transport Canada Approval

Based on the procedures laid down in the Transport Canada Publication entitled " Procedures for Approval of Life-Saving Appliances, Fire Safety Systems, Equipment and Products (TP14612)", DNV confirms that the products listed in this certificate are in accordance with Transport Canada's requirements.

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 DNVGL-CP-0338 Section 4.