DNV·GL

Certificate No:
TAF000017S

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class A and B Penetration

with type designation(s)
WR series (Al)

Issued to
WallMax Srl
Milano (MI), Italy

is found to comply with
DNV GL rules for classification – Ships
DNV GL offshore standards
DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations

Application :

Approved for use as pipe penetration system for approved ship pipes in class A-60 aluminium bulkheads and decks.

This certificate is recognized by Transport Canada.

For further details see Application/Limitations on page 2 of this certificate.

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

Issued at **Høvik** on **2019-06-04**

This Certificate is valid until **2024-06-03**.
DNV GL local station: **Milan**

Approval Engineer: **Karolina Kusmider**

for **DNV GL**

Digitally Signed By: Schei-Nilsson, Mårten
Location: DNV GL Høvik, Norway

Mårten Schei-Nilsson
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

"WR series" (Al)
is a single pipe penetration system. WallMax Round (WR) frames are a two-part structure is pre-assembled with a special, single-opening round module that accommodates and seals the passage of one pipe only. The WR frame is installed in an aluminium sleeve welded symmetrically into the structural aluminium core.

The interstices between the modules are lubricated with "WallMax Lubricant".

The transits are fully insulated with two layers of 60 mm thick mineral wool type SeaRox SL 620 or PAROC Fire Slab 100, minimum density 100 kg/m^3 fitted around the coaming, over the EPDM modules and tightening system and between the modules. The mineral wool panels have dimensions ranging from 240 x 240 up to 420 x 420 mm.
The pipe insulation, mineral wool cylinder type ProRox WM960, 30 mm, density 100kg/ m^3 is fitted on both sides of the bulkhead/deck and have length beyond penetration insulation of 350 mm for steel pipes and 450 mm for copper (other metallic pipes).

The products are manufactured at the premises of WallMax India Enterprise Limited, Faridabad, India.

For further details see drawings in the test reports listed under Type Approval documentation below.

Application/Limitation

Approved for use as a pipe penetration system in class A-60 aluminium bulkheads and decks. Other applications are subject to case-by-case approval.

Class A-0, A-15, A-30 shall be insulated as Class A-60 and in addition the division shall be insulated at least 200 mm around the penetration.

Approved sizes:

Penetration system	Aplication	Diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Type of pipes	Pipe outer diam. [mm]	Class
WR	Bulkheads	25 - 200	37 - 65	4,25 – 6,5	Steel	6 - 170	A-60
WR	Bulkheads	25 - 200	37 - 65	4,25 – 6,5	Copper *	6 - 170	A-60
WR	Decks	25 - 200	37 - 65	4,25 – 6,5	Steel	6 - 133	A-60
WR	Decks	25 - 200	37 - 65	4,25 – 6,5	Copper *	6 - 133	A-60

* other metallic piping

Type WR approved for air tightness up to a design pressure of 0.27 MPa (2.67 bar), test pressure - 0.4 MPa (4 bar).

Type WR (except WR 25) approved for water tightness up to a design pressure of 0.27 MPa (2.67 bar), test pressure 0.4 MPa (4.0 bar). WR 25 approved for water tightness up to a design pressure of 0.4 MPa (4 bar), test pressure – 0.6 MPa (6 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.

Job Id: **262.1-031272-1**
Certificate No: **TAF000017S**

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, Type Approval, September 2018 and DNVGL-CP-0165, October 2017.

Fire test report no. 2017CS01761/1 dated 2017-05-03 from RINA test laboratory, Italy.
Fire test report no. 2017CS01761/2 dated 2017-04-27 from RINA test laboratory, Italy.
Fire test report no. 2017CS01761/4 dated 2017-04-27 from RINA test laboratory, Italy.

Pressure test report, 18 pages dated 2018-09-21, stamped by DNVGL Mumbai.
Pressure test report, 1 page dated 2017-12-21, stamped by DNVGL.

Drawing no.,5500001003 dated 2017-04-25 from the manufacturer.
Drawing no. 5500002002 dated 2017-04-25 from the manufacturer.
Drawing no.,5500001004 dated 2017-04-25 from the manufacturer.

Tests carried out

Tested in accordance with IMO 2010 FTP Code Part 3.

Pressure tests with water and air according to Class Programme DNVGL-CP-0165.

Marking of product

The product or packing shall be marked with the name of the manufacturer, type designation and fire technical rating, as applicable.

Transport Canada Approval

Based on the procedures laid down in the Transport Canada Publication entitled "Approval Procedures for, Life Saving Equipment and Structural Fire Protection Products (TP 14612)", DNV GL confirms that the products listed in this certificate are in accordance with Transport Canada's requirements.

Periodical assessment

DNV GL’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.