

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Class A and B Penetration**with type designation(s)
WR series (steel)

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 steel 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**for **DNV GL**Approval Engineer: **Karolina Kusmider**

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" (steel)

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 a steel sleeve welded symmetrically into the structural steel core.

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

The transits are fully insulated, with one layer of 30 mm fitted around the coaming, and two layers of 60 mm thick mineral wool blankets of approved type, minimum density 100 kg/ m³ over the EPDM modules and tightening system. The mineral wool panelshave dimensions ranging from 240 x 240 up to 380 x 380 mm.

For further details see drawings listed under Type Approval documentation below.

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

Application/Limitation

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

Class A-0, A-15 and 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 - 150	37 - 65	4,25 - 6,5	Steel	10-114	A-60
WR	Decks	25 - 150	37 - 65	4,25 - 6,5	Steel	12-114	A-60

Type WR approved for air tightness up to a design pressure of 0.27 MPa (2.67 bar), test pressure - 0.4 MPa (4.0 bar).

Type WR approved for water tightness up to a design pressure of 0.4 MPa (4.0 bar), test pressure - 0.6 MPa (6.0 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

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

Fire test report no. 2016CS01481/5 dated 2017-01-19 from RINA test laboratory, Italy.

Fire test report no. 2016CS01481/6 dated 2017-01-19 from RINA test laboratory, Italy.

Pressure test report, 1 page dated 2017-12-21, stamped by DNVGL.

Pressure test report, 17 pages dated 2018-09-21, stamped by DNVGL.

Drawing no. WDVpc16A60SBHA01, Rev. 1, dated 2016-12-16 from the manufacturer.

Drawing no. WDVpc16A60SDA01, Rev. 1, dated 2016-12-16 from the manufacturer.

Tests carried out

Tested in accordance with IMO 2010 FTP Code Part 3.



Job Id: **262.1-031273-1**
Certificate No: **TAF000017R**

Pressure tests with water and air according to Class 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 "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.