DNV·GL

Certificate No:
TAF0000138

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class A and B Penetration

with type designation(s)
A-60 Pipe Penetration Sealing System RRS-15/RS-105

Issued to
Remitite Co., Ltd.
Gimhae-si, Gyeongsangnam-do, Republic of Korea

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

Application :

Approved for use as a plastic pipe penetration in class A-60 bulkheads.

This certificate is recognized by Transport Canada.

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

Issued at **Høvik** on **2019-03-04**
This Certificate is valid until **2024-03-03**.
DNV GL local station: **Gimhae Station**

Approval Engineer: **Marcin Tobiasz**

for **DNV GL**

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.

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Product description

"A-60 Pipe Penetration Sealing System RRS-15/RS-105"
is a single pipe penetration system composed of a 180 mm deep steel sleeve welded symmetrically to the bulkhead. RRS-15 (Remitite Rubber Sleeve 15) is wrapped around the pipe and filling the remaining space between sleeves and pipes. The sleeve is dammed on both ends with 20 mm of RS-105 (Remitite Silicone Sealant 105).

The steel sleeve is to be partially insulated with A-60 insulation.

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

Application/Limitation

Approved for use as a pipe penetration system in class A-60 steel bulkheads. 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 and in addition the division is to be insulated with A-60 insulation at least 200 mm around the penetration.

Approved sizes:

Plastic pipe type	Min/Max Pipe outer diameter, [mm]	Min/Max Steel sleeve outer diameter [mm]	Min/Max Steel sleeve thickness [mm]	Min/Max Filling ratio [%]
PP-R	Ø 20 -125	Ø 48.6 - 216.3	3.25 – 5.85	16 – 42
PVC	Ø 20 - 140	Ø 48.6 – 216.3	3.25 – 5.85	16 – 42

The penetration system shall not be used for penetrating boundaries of tanks.

Watertightness and gastightness is not covered in this certificate.

The pipe penetrations are not approved for use in watertight bulkheads on passenger ships and special purpose ships (SPS).

Each product shall be supplied with its manual for installation and maintenance.

Type Approval documentation

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

Test reports No. KOSORI-EFRC-TR-1805-065-01 dated 15 June 2018 from The Korea Ship and Offshore Research Institute, Gyeongnam-do, Korea.

Document No. RM-TEST-RS105-1803B01 Rev. 2 dated 16 April 2018 (6 sheets) from manufacturer.

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

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 product/s listed in this certificate is/are in accordance with Transport Canada's requirements.

Periodical assessment

Job Id: **262.1-028366-1**
Certificate No: **TAF0000138**

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 Class Programme DNVGL-CP-0338, Section 4.