DNV·GL

Certificate No:
TAF00000UU

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class A and B Penetration

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

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

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

Application :

Approved for use as a cable penetration system in class A-60 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 GL.

Issued at **Høvik** on **2018-08-31**
This Certificate is valid until **2023-08-30**.
DNV GL local station: **Gimhae Station**

Approval Engineer: **Helge Bjørnarå**

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
"Cable Penetration Sealing System A-60 RS-105 & RRS-15"
composed of 180 mm long steel coaming with thickness of at least 6 mm welded to the division. Remitite Rubber Sleeve15 is wrapped around the cables and filled in the remaining space between coaming and cables. The coaming is dammed on both ends with 20 mm Remitite Silicone Sealant #105.

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

For further details, see drawings in test report listed under Type Approval documentation below.

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

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.

Application	Min. size [mm] (W x H x D)	Max. size [mm] (W x H x D)	Min. filling rate [%]	Max. filling rate [%]	Coaming position in division	Max. cable diameter [mm]
Bulkhead	50 x 50 x 180 Ø50 x 180	670 x 360 x 180 Ø360 x 180	2.3	38.8	Symmetrically	59.1
Deck	50 x 50 x 180 Ø50 x 180	670 x 360 x 180 Ø360 x 180	1.5	39.1	Symmetrically	52.5

Approved for air tightness up to a design pressure of 0.33 bar (test pressure 0.5 bar) and water tightness up to a design pressure of 1.67 bar (test pressure 2.5 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, October 2017 and DNVGL-CP-0165, October 2017.

Fire test(s):
Test report No. KOMERI-0402-17T0303 dated 27 September 2017 from KOMERI, Busan, Korea.
Test report No. KOMERI-0402-17T1494 dated 27 September 2017 from KOMERI, Busan, Korea.
Test report No. KOMERI-0402-17T2383 dated 27 September 2017 from KOMERI, Busan, Korea.

Gas tightness and water tightness test(s):
Test report No. RTQ0202-1601Q01, dated 20 January 2016 from manufacturer.

Tests carried out
Tested in accordance with 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.

Job Id: **262.1-013353-3**
Certificate No: **TAF00000UU**

Certificate Retention Survey

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.