DNV·GL

Certificate No:
TAF000013M

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class A and B Penetration

with type designation(s)
A-0 Penetration Piece

Issued to
DONG EUN PRECISION & ENGINEERING CO., LTD.
Gimhae-si, 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
DNV GL class programme DNVGL-CP-0165 – Type approval – Cable and pipe penetrations

Application :

Approved for use as pipe penetration system in A-0 class 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 **2018-12-28**
This Certificate is valid until **2023-12-27**.
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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Job Id: **262.1-029261-1**
Certificate No: **TAF000013M**

Product description
"A-0 Penetration Piece"
Stainless steel pipe penetration system composed of 100 mm long steel sleeve welded to the bulkhead or deck simmetrically. The pipe is sealed at two ends with the bite connector.

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

Application/Limitation
Approved for use as single-pipe penetration system in class A-0 steel bulkheads and decks. Other applications are subject to case-bycase approval.

Pipe outer diameter, [mm]	Steel sleeve outer diameter, maximum [mm]	Steel sleeve thickness, minimum [mm]
Min 6	18	5.5
Max 12	25	6.0

Watertightness and gastightness is not covered in this certificate.

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

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

Type Approval documentation
Certification in accordance with Class Programme DNVGL-CP-0338, September 2018.

Test reports Nos. KOMERI-0402-18T1730 dated 10 September 2018 from Korea Marine Equipment Research Institute, Busan, Korea.
Test reports Nos. KOMERI-0402-18T1731-1 dated 20 September 2018 from Korea Marine Equipment Research Institute, Busan, Korea.

Drawings Nos.: DE180308, DE180307 dated 20 January 2018 from the manufacturer.
Drawings Nos.: DE170212, DE170212-3, DE170212-4, DE170212-5, DE170212-6, DE170212-7, DE170212-8, DE170212-9, DE170212-10 dated 20 March 2018 from the 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
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.