



Certificate No:
TAF00001GF

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class A and B Penetration

with type designation(s)

A-60 bulkhead and deck penetration piece

Issued to

DONG EUN PRECISION & ENGINEERING CO., LTD.

Gimhae-si, 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 single pipe penetration system in class A-60 steel 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.

Issued at **Høvik** on **2021-03-03**

This Certificate is valid until **2026-03-02**.

for **DNV**

DNV local station: **Gimhae Station**

Approval Engineer: **Helge Bjørnara**

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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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2021-03

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Product description

“A-60 bulkhead and deck penetration piece”

is a single pipe penetration system consisting of a penetration piece (PT 1/4” – 1/2”, SUS316L) and a bite connector (BMC, SUS316L) at each end. The penetration piece is welded symmetrically to the steel division and comes in the sizes Ø6 – Ø15 mm.

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

Application/Limitation

Approved for use as a single 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.

Table 1: Approved single pipe penetration in A-60 steel bulkhead.

Type	Size (OD) [mm]	Pipe material	Pipe diameter (OD) [mm]	Penetration length [mm]	Penetration thickness [mm]	Penetration position	Penetration insulation*
Passing model	18 – 28	Stainless steel	6 – 15	200	5.5 – 6	Symmetrical	Fully insulated, min. 120 mm along pipe on one side.
Cutting model	18 – 28	Stainless steel	6 – 15	200	5.5 – 6	Symmetrical	Fully insulated, min. 120 mm along pipe on one side.

* The insulation must be covered up to the fitting body.

Table 2: Approved single pipe penetration in A-60 steel deck.

Type	Size (OD) [mm]	Pipe material	Pipe diameter (OD) [mm]	Penetration length [mm]	Penetration thickness [mm]	Penetration position	Penetration insulation*
Passing model	18 – 28	Stainless steel	6 – 15	200	5.5 – 6	Symmetrical	Fully insulated, min. 100 mm along pipe on underside.

* The insulation must be covered up to the fitting body.

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

Type Approval documentation

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

Test report No. KOMERI-0402-20T0195(E) dated 12 February 2020 from KOMERI, Busan, Korea.

Test report No. KOMERI-0402-20T3190(E)-A dated 12 October 2020 from KOMERI, Busan, Korea.

Drawing No. DE190812-02 dated 12 August 2019 from maker.

Drawing No. DE190812-03 dated 12 August 2019 from maker.

Drawing No. DE190812-04, Cutting model Ø6, dated 12 August 2019 from maker.

Drawing No. DE190812-05, Cutting model Ø8, dated 12 August 2019 from maker.

Drawing No. DE190812-06, Cutting model Ø10, dated 12 August 2019 from maker.

Drawing No. DE190812-07, Cutting model Ø12, dated 12 August 2019 from maker.

Drawing No. DE190812-08, Cutting model Ø15, dated 12 August 2019 from maker.

Drawing No. DE190812-09, Passing model Ø6, dated 12 August 2019 from maker.

Drawing No. DE190812-10, Passing model Ø8, dated 12 August 2019 from maker.

Drawing No. DE190812-11, Passing model Ø10, dated 12 August 2019 from maker.

Drawing No. DE190812-12, Passing model Ø12, dated 12 August 2019 from maker.

Drawing No. DE190812-13, Passing model Ø15, dated 12 August 2019 from maker.

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

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



Job Id: **262.1-032748-1**
Certificate No: **TAF00001GF**

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 confirms that the product listed in this certificate is in accordance with Transport Canada's requirements.

Periodical assessment

DNV'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.