Certificate no.:
TAF00001YM

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Class A and B Penetration

with type designation(s)
S-LOK Pipe penetration fitting

issued to
Hansun Engineering Co., Ltd.
Busan, **Korea, Republic of**

is found to comply with
DNV rules for classification – Ships
DNV offshore standards
DNV statutory interpretations DNV-SI-0364 – SOLAS interpretations, Edition July 2021

Application:

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

Issued at **Høvik** on **2025-09-23**
This Certificate is valid until **2030-09-22**.
DNV local unit: **Busan, CMC Korea**

for **DNV**

Approval Engineer: **Stefano Russo**

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 USD 300 000.

Product description

"S-LOK pipe penetration fitting"
a single pipe penetration system composed of a 550 mm long stainless steel weld union piece and a steel flange with 220 mm diameter and 15 mm thickness, which is welded to the deck or bulkhead. Stainless steel tubes are joined with connectors on both sides to the weld union piece.

For further details, please see drawing listed under Type Examination documentation below.

Application/Limitation

Approved for use as a single steel pipe penetration system in class A-60 steel bulkheads and decks. 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.

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

Type	Tubes material	Tubes diameter (OD) [mm]	Weld union piece diameter (OD) [mm]	Weld union piece length [mm]	Weld union piece thickness [mm]	Weld union piece position	Weld union piece insulation
S-LOK	Stainless Steel	Ø6 – Ø38	Ø14 – Ø60	550	9.2-13.15	Unexposed	Partially insulated on one side[1)]

1) Insulated 450 mm along weld union piece.

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

Type	Tubes material	Tubes diameter (OD) [mm]	Weld union piece diameter (OD) [mm]	Weld union piece length [mm]	Weld union piece thickness [mm]	Weld union piece position	Weld union piece insulation
S-LOK	Stainless Steel	Ø6 – Ø38	Ø14 – Ø60	550	9.2-13.15	Bottom side	Partially insulated underside[1)]

1) Insulated 450 mm along weld union piece.

Each product is to be supplied with its manual for installation and maintenance. The manual shall include the drawings mentioned under type examination documentation.

Watertightness and gastightness are not covered in this certificate.

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

Penetrations through structural divisions should not impair the structural strength of the division. Special consideration should be given to bulkheads and decks with high stress locations (IMO MSC.1/Circ.1488)."

Type Approval documentation

Tests carried out

Tested according to IMO 2010 FTP Code Part 3.

Marking of product

Based on the procedures laid down in the Transport Canada Publication entitled "Procedures for Approval of Life-Saving Appliances, Fire Safety Systems, Equipment and Products (TP 14612)", Det Norske Veritas confirms that the product/s listed in this certificate is/are 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 DNV-CP-0338, Section 4.