

TYPE EXAMINATION CERTIFICATE – EC MODULE B

Certificate no.:
MEDB000097X

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

This is to certify:

that the Penetrations through "A" class divisions: electric cable transits

with type designation(s)
FN cable penetration

issued to

Shaoxing Lianyi Machinery & Electricity Manufacture Co., Ltd.
Zhuji, China

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2024/1975**,

item No. MED/3.26a. SOLAS 74 as amended, Regulation II-2/9, IMO 2010 FTP Code and IMO MSC.1/1488

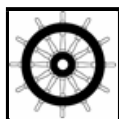
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2030-05-13**.

Issued at **Høvik** on **2025-05-14**

DNV local unit:
Ningbo FIS

Approval Engineer:
Katarzyna Baczewska



for **DNV AS**

Notified Body
No.: **0575**

Mydlak-Röder, Christine
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005, and amended by Decision No 1/2023 dated August 21st, 2023.



The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

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

"FN cable penetration"

consist of rectangular 60 mm long steel sleeve, fitted symmetrically and fully welded to a steel division. The sleeve is filled with "FN type light fireproof clay" manufactured by the client.

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

Application/Limitation

Approved for use as a cable penetration system in class A-0 and A-60 steel bulkheads and decks. Other applications are subject to case-by-case approval.

For A-15 and A-30 the penetration is to be insulated as A-60, and in addition the division is to be insulated at least 200 mm around the penetration.

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

Type	Sleeve size [mm]	Max. cable diameter (OD) [mm]	Filling ratio [%]	Sleeve length [mm]	Sleeve Thickness [mm]	Sleeve position	Penetration insulation
Rectangular	30x30 – 936x406	120	0 -50	60	3	Symmetric	Partially insulated on the underside

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

Type	Sleeve size [mm]	Max. cable diameter (OD) [mm]	Filling ratio [%]	Sleeve length [mm]	Sleeve Thickness [mm]	Sleeve position	Penetration insulation
Rectangular	30x30 – 936x406	120	0 -50	60	3	Symmetric	Partially insulated

Table 3 Approved pipe penetration in A-0 steel deck.

Type	Sleeve size [mm]	Max. cable diameter (OD) [mm]	Filling ratio [%]	Sleeve length [mm]	Sleeve Thickness [mm]	Sleeve position	Penetration insulation
Rectangular	30x30 – 936x406	120	0 -50	60	3	Symmetric	None

Table 3 Approved pipe penetration in A-0 steel bulkhead.

Type	Sleeve size [mm]	Max. cable diameter (OD) [mm]	Filling ratio [%]	Sleeve length [mm]	Sleeve Thickness [mm]	Sleeve position	Penetration insulation
Rectangular	30x30 – 936x406	120	0 -50	60	3	Symmetric	None

Minimum distance between cables and between cable and sleeve is not less than 2 mm.

The insulation material used has to be approved according to the Marine Equipment Directive and bear the Mark of Conformity.

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

Type Examination documentation

Test report no. AJFS2408009441FR dated 20 September 2024 from SGS, Zhejiang, China.

Test report no. AJFS2408009442FR dated 20 September 2024 from SGS, Zhejiang, China.

Drawing no. LY-2024-FN13 dated 1 July 2024 from Shaoxing Lianyi Machinery & Electricity Manufacture Co., Ltd.

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

Marking of product



Job ID: **344.1-013740-1**
Certificate no.: **MEDB000097X**

The product or packing is to be marked with name and address of manufacturer, type designation, fire technical rating, MED Mark of Conformity and USCG approval if applicable (see first page).