

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB00008WC

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)
NM-NTG 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) 2023/1667**,

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

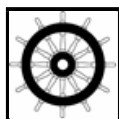
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2029-06-11**.

Issued at **Høvik** on **2024-06-12**

DNV local unit:
Ningbo FIS

Approval Engineer:
Marcin Tobiasz



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 300,000 USD.



Product description

“NM-NTG Cable Penetration”, consists of a steel sleeve welded to a steel division. The steel sleeve is filled with NTG type fireproof sleeve (sheet) and sealed with 15 mm NM type fireproof sealant on each side.

For further details see drawings in test reports mentioned 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 cable penetration in A-60 steel bulkhead.

Type	Max. cable diameter [mm]	Filling ratio %	Sleeve size [mm]	Sleeve length [mm]	Sleeve Thickness [mm]	Sleeve position	Penetration insulation
Rectangular	120	0-50.1	30x30 - 1056x456	120	3	Symmetric	Partially insulated
Round	80	0-50.6	Ø18 - Ø436	120	2-3	Symmetric	Partially insulated

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

Type	Max. cable diameter [mm]	Filling ratio %	Sleeve size [mm]	Sleeve length [mm]	Sleeve Thickness [mm]	Sleeve position	Penetration insulation
Rectangular	120	0-50.1	30x30 - 1056x456	120	3	Symmetric	Partially insulated on the underside
Round	80	0-50.6	Ø18 - Ø436	120	2-3	Symmetric	Partially insulated on the underside

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

Type	Max. cable diameter [mm]	Filling ratio %	Sleeve size [mm]	Sleeve length [mm]	Sleeve Thickness [mm]	Sleeve position	Penetration insulation
Rectangular	120	0-50.1	30x30 - 1056x456	120	3	Symmetric	None
Round	80	0-50.6	Ø18 - Ø436	120	2-3	Symmetric	None

Table 4 Approved cable penetration in A-0 steel deck.

Type	Max. cable diameter [mm]	Filling ratio %	Sleeve size [mm]	Sleeve length [mm]	Sleeve Thickness [mm]	Sleeve position	Penetration insulation
Rectangular	120	0-50.1	30x30 - 1056x456	120	3	Symmetric	None
Round	80	0-50.6	Ø18 - Ø436	120	2-3	Symmetric	None

Minimum distance between cables and between cable and sleeve is 2 mm.

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

Type Examination documentation

Test report no. FT23483 dated 21 December 2023 from Far East Testing Center (FEFTC), Shanghai, China.
Test report no. FT23485 dated 21 December 2023 from Far East Testing Center (FEFTC), Shanghai, China.

For bulkhead

Drawing no. LY-NNC-BZT01 dated 26 July 2023 from manufacturer.
Drawing no. LY-NNC-BZT02 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC01 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC02 dated 26 July 2023 from manufacturer.

Drawing no. LY-2023-NNC03 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC04 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC05 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC06 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC07 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC08 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC09 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC10 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC11 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC12 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC13 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC14 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC15 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC16 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC17 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC18 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC19 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC20 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC21 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC22 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC23 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC24 dated 26 July 2023 from manufacturer.

For deck

Drawing no. LY-NNC-BZT03 dated 26 July 2023 from manufacturer.
Drawing no. LY-NNC-BZT04 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC25 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC26 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC27 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC28 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC29 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC30 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC31 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC32 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC33 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC34 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC35 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC36 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC37 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC38 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC39 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC40 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC41 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC42 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC43 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC44 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC45 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC46 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC47 dated 26 July 2023 from manufacturer.
Drawing no. LY-2023-NNC48 dated 26 July 2023 from 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 and address of manufacturer, type designation, fire technical rating, MED Mark of Conformity and USCG approval if applicable (see first page).

Appendix

Additional application/information for watertightness/gastightness (Not part of the Marine Equipment Directive requirement)

Product description

"NM-NTG Cable Penetration",
consists of a steel sleeve welded to a steel division. The steel sleeve is filled with NTG type fireproof sleeve (sheet) and sealed with 15 mm NM type fireproof sealant on each side.

Application/Limitation

Approved for penetration in steel bulkheads or decks limited to a pressure of 3.2 bar watertightness and 3.2 bar gastightness.

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

Type Approval documentation

Test report No. SXLY2023112103 dated 21 November 2023 from manufacturer.

Tests carried out

Pressure tests with water and helium according to DNV-CP-0165 Sec.2 Ch.4.