

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB000072Y

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)
JFN

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) 2020/1170,

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

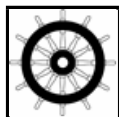
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2026-05-17**.

Issued at **Høvik** on **2021-05-18**

DNV local station:
Ningbo FIS

Approval Engineer:
Helge Bjørnara



Notified Body
No.: **0575**

for **DNV AS**

.....
Sverre Olav Bergli
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 1/2019 dated February 22nd, 2019.



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

“JFN”

consists of 2 mm thick Ω -shaped GJ type fixture(s) made of steel. The GJ type fixture(s) is filled with 40 mm deep “NT type light fireproof stuffing” and 10 mm thick “FM type fireproof sealant” on each side of the stuffing layer working as a plugging material. The “FM type fireproof sealant” also covers the outside of the GJ type fixture(s) on both sides. The Ω -shaped GJ type fixture(s) is pressed on to the division. Total thickness of the penetration is 60 mm.

The distance between cable and cable frame and distance between cables shall be ≥ 2 mm.

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

Application/Limitation

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

Class A-15 and A-30 shall be insulated as class 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	Size [mm]	Max. cable diameter (OD) [mm]	Filling ratio [%]	Fixture thickness [mm]	Penetration length [mm]	Penetration position	Penetration insulation
JFN circular	$\varnothing 18 - \varnothing 300$	80	0 – 50	2	60*	Symmetrical	Partly insulated on one side
JFN rectangular	30 x 30 – 1000 x 350	120	0 – 50	2	60*	Symmetrical	Partly insulated on one side

* Total thickness of the penetration is 60 mm, i.e. fixture is covered with sealant on both sides.

Table 2: Approved cable penetration in A-0 steel bulkhead.

Type	Size [mm]	Max. cable diameter (OD) [mm]	Filling ratio [%]	Fixture thickness [mm]	Penetration length [mm]	Penetration position	Penetration insulation
JFN circular	$\varnothing 18 - \varnothing 300$	80	0 – 50	2	60*	Symmetrical	None
JFN rectangular	30 x 30 – 1000 x 350	120	0 – 50	2	60*	Symmetrical	None

* Total thickness of the penetration is 60 mm, i.e. fixture is covered with sealant on both sides.

Table 3: Approved cable penetration in A-60 steel deck.

Type	Size [mm]	Max. cable diameter (OD) [mm]	Filling ratio [%]	Fixture thickness [mm]	Penetration length [mm]	Penetration position	Penetration insulation
JFN circular	$\varnothing 18 - \varnothing 300$	80	0 – 50	2	60*	Symmetrical	Partly insulated on underside
JFN rectangular	30 x 30 – 1000 x 350	120	0 – 50	2	60*	Symmetrical	Partly insulated on underside

* Total thickness of the penetration is 60 mm, i.e. fixture is covered with sealant on both sides.

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

Type	Size [mm]	Max. cable diameter (OD) [mm]	Filling ratio [%]	Fixture thickness [mm]	Penetration length [mm]	Penetration position	Penetration insulation
JFN circular	$\varnothing 18 - \varnothing 300$	80	0 – 50	2	60*	Symmetrical	None
JFN rectangular	30 x 30 – 1000 x 350	120	0 – 50	2	60*	Symmetrical	None

* Total thickness of the penetration is 60 mm, i.e. fixture is covered with sealant on both sides.

Each product is to be supplied with installation manual, use and maintenance.

Type Examination documentation

Test report No. FT20334 dated 18 November 2020 from FEFTC, Shanghai, China.

Test report No. FT20335 dated 18 November 2020 from FEFTC, Shanghai, China.

Test report No. FT20332 dated 20 November 2020 from FEFTC, Shanghai, China.

Test report No. FT20333 dated 20 November 2020 from FEFTC, Shanghai, China.

Drawing No. LY-2020-GJ dated 17 January 2020 from maker.



Job Id: **344.1-011054-1**
Certificate No: **MEDB000072Y**

Drawing No. LY-2020-JFN07 dated 17 January 2020 from maker.
Drawing No. LY-2020-JFN17 dated 17 January 2020 from maker.
Drawing No. LY-2020-JFN19 dated 17 January 2020 from maker.
Drawing No. LY-2020-JFN27 dated 17 January 2020 from maker.

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 number if applicable (see first page).

APPENDIX

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

Product description

“JFN”

consists of 2 mm thick Ω -shaped GJ type fixture(s) made of steel. The GJ type fixture(s) is filled with 40 mm deep “NT type light fireproof stuffing” and 10 mm thick “FM type fireproof sealant” on each side of the stuffing layer working as a plugging material. The “FM type fireproof sealant” also covers the outside of the GJ type fixture(s) on both sides. The Ω -shaped GJ type fixture(s) is pressed on to the division. Total thickness of the penetration is 60 mm.

The distance between cable and cable frame and distance between cables shall be ≥ 2 mm.

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

Application/Limitation

JFN circular ($\varnothing 18 - \varnothing 300$) and JFN rectangular ($30 \times 30 - 1000 \times 350$):

Approved for penetration in steel bulkheads or decks limited to a pressure of 2.67 bar watertightness and 2.67 bar gastightness (test pressure 4 bar).

Penetration systems are generally not to be used for penetrating boundaries of tanks.

Type Approval documentation

Test report No. SXLY2021042901 dated 29 April 2021.

Tests carried out

Pressure tested according to Class Programme DNVGL-CP-0165.