

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB000089X

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 **A & B Class divisions fire integrity: B class divisions.**

with type designation(s)

The Marine class B-15 Ceiling TNF-C72/C68 Type II (with hatch, light and other electrical equipment) and A class deck core

Issued to

INEXA Interiors (Nantong) Co., Ltd.
Nantong City,, Jiangsu Province,, China

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

Regulation **(EU) 2022/1157,**

item No. MED/3.11b. SOLAS 74 as amended, Regulation II-2/3.4 & II-2/9, IMO 2010 FTP Code, IMO MSC/Circ.1120 and IMO MSC.1/Circ.1581

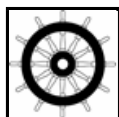
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2028-02-20**.

Issued at **Høvik** on **2023-02-21**

DNV local unit:
Nantong

Approval Engineer:
Timo Linn



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

"The Marine class B-15 Ceiling TNF-C72/C68 Type II (with hatch, light and other electrical equipment) and A class deck core " consists of ceiling panels of type TNF-C68 or TNF-C72 or a combination of both.

- The ceiling TNF-C68 consists of panels composed of 28 mm thick rock wool, covered with 0.56 mm thick galvanized steel sheets on both sides. The steel sheets are fixed to the ABM-SR rock wool (density: 200 kg/m³) with an approved adhesive. Total panel thickness: 30 mm.
- The ceiling TNF-C72 is a ceiling composed of upper and lower panels. The upper panels consist of 29 mm thick mineral wool of type 'ABM-SR' (density 150 kg/m³, manufactured by Shanghai ABM Rock Wool Co., Ltd) with 0.56 mm steel sheets on both sides. The lower panels consist of 20 mm thick mineral wool of type 'ABM-SR' (density: 150 kg/m³, manufactured by Shanghai ABM Rock Wool Co., Ltd) with a 0.56 mm steel sheet on the lower side. The upper and lower panels are connected by means of pop rivets (Ø3.2 mm rivet c/c 300 mm). The upper panels are joined by hooks while the lower panels have a spacing of 25 mm. Total panel thickness: 50 mm

The joints of the ceilings are of type C68 and type C72, adjacent ceilings are connected by hooks.

The ceiling TNF-C68 may be fitted with:

Down Light:

BRC1002 down light (external size 280 mm x 45 mm x 49 mm) manufactured by BRINNO.

The light is fixed on the ceiling by screws and covered with a layer of 3.5mm thick glass wool with aluminum foil cloth on the unexposed surface. The cover is fixed through aluminum foil tape around.

Smoke detector:

EV-PH SCI manufactured by SALWIKO, specification IP22 (TAG D 112). With a clear Opening of Ø 30mm.

The ceiling TNF-C72 may be fitted with:

Down Light:

TK-03 grille linear light 603C (external size 1080 mm x 50 mm x 48 mm) manufactured by BRINNO

The light is fixed on the ceiling by screws and covered with a layer of 3.5 mm thick glass wool with aluminum foil cloth on the unexposed surface. The cover is fixed through aluminum foil tape around.

Loudspeaker:

CL-200T, manufactured by Vingtor-Stentofon. Clear size of the opening Ø 171 mm, covered on the unexposed surface with a layer of 3.5 mm ceramic fiber and aluminum foil cloth with a density 220 kg/m³ of produced by Morgan Thermal Ceramics (Shanghai) Co., Ltd.. The covers were fixed through aluminum foil tape around.

Cable: Marine type approved by class, with clear opening in the panel of Ø 30 mm.

Ceiling hatch:

Type: TNF-683 manufactured by INEXA Interiors (Nantong) Co., Ltd. Hatch (external size: 880 x 880 x 20 mm) consists of 20 mm thick rock wool manufactured by Shanghai ABM Rock Wool Co., Ltd, density: 150 kg/m³, covered with 0.5 mm thick galvanized steel sheets on both sides. The steel sheets are fixed to the rock wool with an approved adhesive. Clear opening size on the rock wool panel is 840 mm x 840 mm.

For further details, see drawing and test report listed under Type Examination documentation below.

Application/Limitation

Approved for use as a horizontal fire retarding division of class B-15.

The ceiling mounted below and in combination with a steel structural deck may be regarded as a Class A-30 horizontal division. The air gap is not to be less than 420 mm.

Maximum panel size:

TNF-C68: 3000 x 600 mm x 30 mm (L x W x T)

TNF-C72: 3000 x 600 mm x 50 mm (L x W x T)

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity. This requirement may also be applicable for surface materials used, if required by relevant rules and regulations.

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

Type Examination documentation

Test report No. AJFS2209007328FF dated on 19th of November 2022 from SGS, Nangton, China



Job Id: **344.1-012502-1**
Certificate No: **MEDB000089X**

Drawing No. TNF-C72-1 dated on 08th of June 2022, Page 1-15 from INEXA.

Based on:

Test report No. FT11237 dated 13th of September 2011 from FEFTC, Shanghai, China.

Test report No. FT20024 dated 24th of March 2020 from FEFTC, Shanghai, China.

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, the MED Mark of Conformity and USCG approval number if applicable (see first page).