EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00008MT

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)
Class B-15 Ceiling with shadow gap

Issued to
Marine Interiors Cabins S.p.A.
Trieste TS, TS, Italy

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 **2028-09-19**.

Issued at **Høvik** on **2023-09-20**

DNV local unit:
Italy/Malta CMC

Approval Engineer:
Tessa Biever

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 1/2023 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

Product description

'Class B-15 Ceiling with shadow gap'
are ceiling panels constructed of an insulation core of 35 mm thick mineral wool of type 'Paroc Marine Fire Slab 120' with density 120 kg/m^3 (manufactured by Paroc) with a 0.7 mm thick steel sheet on the exposed side /underside, fixed by means of an adhesive. The unexposed face of the mineral wool insulation core was covered by a non-combustible glass fiber sheet designated 'Paroc N1' (manufactured by 'Paroc Polska Sp. z o.o). The two end heads of the ceiling panel are insulated with 25 mm thick mineral wool of type 'Paroc Marine Slab 140' with density 140 kg/m^3 (manufactured by Paroc).

An intermediate support is built from 1.2 mm thick steel U-profiles with the dimensions 26.2 x 40 x 26.2 mm. The ceiling panels were connected to the support member using one self-drilling screw 3.9 x 19 mm per ceiling panel.
The intermediate support was suspended from a steel beam placed 2000 mm from one short edge. The steel beam was a steel U-profile made of 1.2 mm steel with the dimensions 26.2 x 26.2 mm.

The suspension profiles were made of two steel U-profiles with a thickness of 2 mm and the dimensions 200 x 58 mm. The two pieces of U-profile were connected to each other using a threaded rod and nuts. The distance between the suspension profiles is 1000 mm. The middle one had a rubber block between the two U-profiles while the two outer suspensions were without rubber. The ceiling panels are suspended 494 mm below the structural steel deck.

The ceiling construction was fixed directly onto the bulkhead frame on all four sides using 1.2 mm thick perimetral profiles with the dimensions 40 x 50 x 26.2 mm. The fixation was made with self-tapping screws with a c/c distance of 100 mm. The ceiling panels were connected to the perimetral profile using one self-drilling screw 3.9 x 13 mm per ceiling panel applied in the shadow gap only. All perimetral profiles were insulated using 25 mm thick mineral wool of type 'Paroc Marine Fire Slab 140' with density of 140 kg/m^3 (manufactured by Paroc).

For further details see drawing under Type Examination documentation.

Application/Limitation

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

Max. panel size (length x width): 2860 mm x 600 mm

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the MED 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 maintenance.

Type Examination documentation

Test Report No. PGB10285A dated 26 July 2023 from DBI, Hvidovre, Denmark.

Tests carried out

Tested according to IMO 2010 FTP Code Part 3.

Marking of product

The product 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 page 1).