DNV·GL

Certificate No:
MEDB00003M2

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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 GL AS under the authority of the Government of Norway.

This is to certify:

That the "B" Class divisions, fire integrity

with type designation(s)
MMC-600, MMC-550, MMC-500, MMC-450, MMC-400, MMC-350, MMC-300, MMC-250, MMC-200, MMC-150

Issued to
Meta AS
ÅLEN, Norway

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773,**
item No. MED/3.11b. SOLAS 74 as amended, Regulation II-2.3.4 & II-2/9 and IMO 2010 FTP Code

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

This Certificate is valid until **2024-03-27**.

Issued at **Høvik** on **2019-03-28**

DNV GL local station:
Trondheim

Approval Engineer:
Karolina Kusmider

Notified Body
No.: **0575**

for **DNV GL AS**

Roald Vårheim
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.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

NORWEGIAN ACCREDITATION PROD 019

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Product description

"MMC-600, MMC-550, MMC-500, MMC-450, MMC-400, MMC-350, MMC-300, MMC-250, MMC-200 and MMC-150"

Ceiling systems composed of 0.70 mm steel panels suspended below a structural steel core. The panels to be insulated with 25 mm Ultimate SeaProtect Slab nominal density 36 kg/ m³ and additional insulation 50 mm Ultimate SeaProtect Slab , density 66 kg/ m³, on top.

Insulation components are manufactured by Isover Saint-Gobain.

The total thickness of the ceiling construction is 75 mm.

Along the panel length, the panels are jointed together by carrier profiles with screws(4.2x15 mm) and and carrying nabs on the carrier profiles. Along the short ends the panels are jointed together in an end to end connecting profile.

The gap between the short ends of the ceiling panels were covered with an end to end cover profile fixed with screws. The ceiling panels are fixed to the deck by carrier profiles perpendicular to the panel lengths screwed to the panels and connected to hanger rods welded to the deck.

Celling may incorporate:
- diffusers manufactured by Meta AS (Ø 525)
- connecting ducts SRIN (Ø200) manufactured by Lindab
- LED lights DL60-RF155 LED manufactured by Glamox (Ø 158)
- loudspeakers PC-2369EN manufactured by TOA (Ø 203)
- inspection hatch 600 mm x 600 mm (L x W) manufactured by Meta AS

All units to be fitted inside insulation boxes of 0.7 mm steel sheets and 50 mm thick insulation of type Ultimate SeaProtect 66 kg/m³.

Application/Limitation

Approved for use as a class B-15 ceiling panel and when the ceiling is suspended at least 450 mm below a deck the whole construction may be regarded as an "A-30" class deck according to Part 3 of Annex 1.

Max. panel width: 600mm
Max. distance between hangers, longitudinal direction: 530 mm
Max. distance between hangers and connecting profile, longitudinal direction: 150 mm
Max. distance between hangers and bulkhead, longitudinal direction: 300 mm
Max. distance between hangers, transvers direction: 950 mm
Max. distance between hangers and bulkhead, transvers direction: 255 mm

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. 150070-18-T1 dated 1 March 2018 from RISE Fire Research, Trondheim, Norway(basic performance test).

Test Report No. 150070-18-T2 dated 7 March 2018 from RISE Fire Research, Trondheim, Norway.

Assessment report No. 150101-37 dated 01 June 2018 from RISE Fire Research, Trondheim, Norway.

Assessment report No. 150101-46 dated 16 January 2019 from RISE Fire Research, Trondheim, Norway.

Reference test report No. 103020.81 dated 2009-05-20 from SINTEF, Trondheim, Norway.

Drawing no. 118 078 dated 19.01.2018 from META AS, ÅLEN, Norway.

Drawing no. 117988-1 Rev.B dated 10.01.2018 from META AS, ÅLEN, Norway.

Drawing no. 118044-0 (Inspection hatch) dated 11.11.2017 from META AS, ÅLEN, Norway.

Drawing no. MMC 600/575/25 (Komponent list Meta Marine ceilings) dated 10.10.2017 from META AS, ÅLEN, Norway.

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).