EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB0000BXY
Revision no.:
0

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

that the **A' & 'B' Class divisions fire integrity: - 'B' class division**

with type designation(s)
C50SG - Ceiling panel without/with fixtures

issued to
Rheinhold & Mahla GmbH
Schellerdamm 22-24 21079 Hamburg Germany,

is found to comply with the Implementing Regulation **(EU) 2025/1533** for
Item no. **MED/3.11b** (Row **1 of 1**)
according to the following requirements:
SOLAS 74 Reg. II-2/3.4, SOLAS 74 Reg. II-2/9, IMO MSC.1/Circ.1581, IMO MSC/Circ.1120

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

Date of issue: **2026-03-09**

Expiry date: **2029-08-28**

DNV local unit:
Hamburg – CMC North/East

Approval Engineer:
Meike Grabau

Notified Body
no.: **0098**

for **DNV SE**

Christine Mydlak-Röder
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 European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment, signed February 27th, 2004, and amended by Decision No 1/2023 dated May 26th, 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 SE 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 USD 300 000.

Product description

"C50SG - Ceiling panel without/with fixtures"
is a ceiling panel consisting of a 49 mm mineral wool core covered by 0.6 mm galvanized steel sheets on the exposed side and 0.5 mm galvanized steel sheets on the unexposed side. The mineral wool type "ABM-SR 120", produced by Shanghai ABM Rock Wool with nominal density of 120 kg/m³, is fixed to the steel sheets with adhesive of approved type. The panels are joined to each other with tongue and groove, covered by a 4.5 mm fire board "Cemval Protect Marine", produced by CemTrade with nominal density of 975 kg/m³. The panel joints of start and end panels consist of a 1.5 mm joint cover profile fixed with rivets.

Total panel thickness: 50 mm.

Following optional installations may be included:

Installation 1 "Inspection Hatch"
The inspection hatch is installed into an 840 mm x 628 mm opening in the ceiling using a piano hinge fastened to the hatch frame made of 1.5 mm thick steel. The frame has a clear opening of 585 mm x 585 mm and is fixed to the ceiling panels using steel rivets. The inspection hatch is manufactured from two 0.7 mm steel half-shells and one 0.6 mm steel half-shell. The hatch is insulated in between the three half-shells with 25 mm + 20 mm thick "ABM-SR 200", produced by Shanghai ABM Rock Wool with a nominal density of 200 kg/m³ adhered to the half-shells using an approved adhesive. A 50 mm wide band of 3.5 mm aluminum coated needle mat designated „VitriBond Marine" is adhered to the ceiling panel(s) and hatch frame using aluminum duct table designated "Coroplast 930 Alu SE" around the hatch opening on the unexposed side. Two steel turning locks are installed to close the inspection hatch. A strip of 2 mm x 20 mm "RM2002" intumescent sealing is installed between the frame and hatch on the lock side.

Installation 2 "Cable Penetration"
An Ø8 mm electric cable designated "CJPF/SC" is penetrating the ceiling panel through a Ø30 mm cutout in the panel. A sealant designated "Sika Firesil Marine N" is used on the unexposed side.

Installation 3 "Downlight"
The downlight designated "DL60-RF 155" from Glamox is installed into a Ø155 mm cutout in a ceiling panel. The unexposed side of the sensor is covered with a box (470 mm x 260 mm x 150 mm) made of 3.5 mm aluminum coated needle mat designated "VitriBond Marine" adhered to the ceiling panel(s) using aluminum duct table designated "Coroplast 930 Alu SE".

Installation 4 "Speaker"
The speaker designated "CL-200T" from Zenitel Norway is installed into a Ø171 mm cutout in a ceiling panel. The unexposed side of the sensor is covered with a box (245 mm x 245 mm x 120 mm) made of 3.5 mm aluminum coated needle mat designated "VitriBond Marine" adhered to the ceiling panel(s) using aluminum duct table designated "Coroplast 930 Alu SE".

Installation 5 "Escape Sign"
The escape sign designated "CBD5ML" from Anhui Sunny Electric Group is installed into a 80 mm x 375 mm cutout in a ceiling panel. The unexposed side of the sensor is covered with a box (460 mm x 165 mm x 100 mm) made of 3.5 mm aluminum coated needle mat designated "VitriBond Marine" adhered to the ceiling panel(s) using aluminum duct table designated "Coroplast 930 Alu SE".

Installation 6 "HI-FOG Nozzle"
The fire sprinkler designated "HI-FOG 3000" is installed through a Ø30 mm cutout from the ceiling panel. The sprinkler is sealed to the ceiling panel using the sealant designated "Sika Firesil Marine N". The nozzle is connected to a 90° elbow with a short nipple parallel to the ceiling panel.

For further details, please see documents listed under "Type Examination documentation" below.

Application/Limitation

Approved for use as a continuous horizontal fire retarding division of class B-15.
With a minimum distance between exposed side of the ceiling and the class A structural steel deck of 300 mm, the whole construction may be regarded as a horizontal fire retarding division of class A-30.

Maximum panel size: 350 mm x 3000 mm (W x L).

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 maintenance.

Type Examination documentation

Tests carried out

Tested according to IMO 2010 FTP Code Part 3 and Part 3 Appendix 4.

Marking of product

The product is to be marked with name and address of manufacturer, type designation, fire-technical rating, Mark of Conformity and USCG Approval Number if applicable (see first page).