

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB00005NM
Revision No:
3

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)
BIP C452: B-0 Class Continuous Ceiling

issued to

BIP Industries Co., Ltd. Goseong
Goseong-gun, Gyeongsangnam-do, Korea, Republic of

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

Regulation **(EU) 2024/1975,**

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

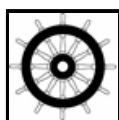
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2029-11-11**.

Issued at **Høvik** on **2024-11-12**

DNV local unit:
Gimhae Station

Approval Engineer:
Karolina Kusmider



Notified Body
No.: **0575**



for **DNV AS**

Digitally Signed By:
Christine Mydlak-Röder
Location: **DNV Høvik, Norway**
Mydlak-Röder, Christine
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.

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

"BIP C452: B-0 Class Continuous Ceiling", ceiling composed of square shaped panels suspended below the structural steel deck, constructed of an insulation core of 25 mm thick mineral wool of density 60 kg/m³ (manufactured by KCC Corporation, Korea), covered with a 0.37 mm thick non-woven fabric (vapour barrier/shatter proof) and 0.6 mm thick perforated or non-perforated galvanized steel sheets on exposed side. The perforated sheets have a hole Ø of 1.8 mm and the c/c in both length/height direction is 5 mm and 3.5 mm measured on the diagonal (porosity = 20%).

The panels are fastened together by 0.6 mm thick steel clip bars. The clip bars are fastened to the carrying channels by 1.0 mm thick steel clip bar clip.

For suspension to deck the hanger sets are welded to the structural steel deck in upper end and fastened by screws or welded to the carrying channels in the lower end.

The panels are connected to the bulkhead by 1 mm steel profile.

Total thickness of panels is 27 mm.

For further details, see the drawings mentioned under Type Examination documentation.

Application/Limitation

Approved for use as a horizontal fire retarding division of class B-0.

| | |
|--|--------------------------|
| Max panel size: | 600 mm x 600 mm (W x L). |
| Distance between clip bars: | 600 mm |
| Max. distance between carrying channels: | 1200 mm |
| Max. distance between hanger sets along carrying channels: | 1200 mm |
| Max. distance between bulkhead and the nearest carrying channel: | 300 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 use.

Type Examination documentation

Test Report No. KOMERI-0402-21T5147(E) dated 28 February 2022 from KOMERI, Busan, Korea.

Drawing No. F2014-C452-R0 (8 pages) dated 10 December 2021 from BIP Industries Co., Ltd.

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 first page).