

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)

BIP C-562 B-0 Class Continuous Ceiling with Electrical Fittings

Issued to

BIP Industries Co., Ltd.

Yongsan-si, Gyeongsangnam-do, Republic of Korea

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

Regulation **(EU) 2019/1397,**

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

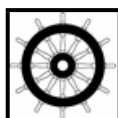
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-11-10.**

Issued at **Høvik** on **2019-11-11**

DNV GL local station:
Gimhae Station

Approval Engineer:
Grzegorz Wolski



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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



Product description

"BIP C-562 B-0 Class Continuous Ceiling with Electrical Fittings"

Is a ceiling made from panels. Each panel is made from 0.6 mm thick steel sheet that is forming U-shape in all crosssections. This U-shape is filled with KCC Mineral Wool produced by KCC Corporation with nominal density of 60 kg/m³.

Total panel thickness: 25 mm

The panels are connected together by grillage main T-bar and cross T-bar and fastened to the deck by slot connection between hanger sets and main T-bar. Panels and T-bars are placed on U-Top profiles which are fitted on the top of the bulkhead.

Max. distance from bulkhead to hanger sets along main T-bar: 610 mm

Max. distance between hanger sets: 1220 mm or 600 mm

Max. distance between main T-bars: 610 mm

The panels may incorporate:

- Ventilation diffusers model HME-160 produced by Halton and approximate weight of 21.6 kg, with cut out dimension in panel of Ø254 mm. Ventilator unit is attached to deck by additional hanger rod as in not supported by ceiling panel.
- Light fittings for LED light model HRLN6060/MRL6060 produced by Eaton and approximate weight of 15 kg, with size of 605 mm by 605 mm (width x length). This unit is put instead of BIP C-562 B-0 panel as described above.
- Light fitting for LED down light model CDLL produced by Eaton and approximate weight of 2.5 kg, with cut out dimension in panel of Ø155 mm. At distance of minimum 150 mm from this unit centre the mineral wool from KCC Corporation with nominal density of 140 kg/m³ is used instead of nominal one. This mineral wool is in between 0.6 mm thick metal sheets. Thickness of layer is consistent with general structure and stays at 25 mm.
- Speaker unit model BF560T-70W produced by DNH and approximate weight of 0.73 kg, with cut out dimension in panel of Ø133 mm. At distance of minimum 150 mm from this unit centre the mineral wool from KCC Corporation with nominal density of 140 kg/m³ is used instead of nominal one. This mineral wool is in between 0.6 mm thick metal sheets. Thickness of layer is consistent with general structure and stays at 25 mm. Additionally speaker unit is closed in a steel box made from 1.6 mm thick steel mounted to the 0.6 mm thick steel sheet.

For further details, see drawings listed under Type Examination documentation below.

Application/Limitation

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

Maximum panel size: 610 mm x 610 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.



Job Id: **344.1-009354-1**
Certificate No: **MEDB00005DE**

Type Examination documentation

Test report No. KOMERI-0402-19T1547 dated 30 August 2019 from KOMERI, Busan, Korea.
Test report No. AK2015-0688 dated 10 December 2015 from FILK, Korea.

Drawing No. F2015-C562-R0 dated 16 September 2015 from the manufacturer.
Drawing No. F2019-C562 W/FIXTURE-R0 dated 12 April 2019 from the manufacturer.

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).