

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-645 / B-15 Class Continuous ceiling

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

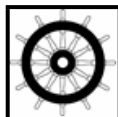
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-11-18.**

Issued at **Høvik** on **2019-11-19**

DNV GL local station:
Gimhae Station

Approval Engineer:
Jasna Jovovic-Lainis



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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-645 / B-15 Class Continuous ceiling"

composed of an insulation core made of 40 mm thick mineral wool (manufactured by KCC Corporation, Korea) of nominal density 80 kg/m³ put on the 0.6 mm thick perforated or non-perforated steel sheets with "Non-woven fabric" (manufactured by Dae Kyoung Chemical Co., Ltd.).

The ceiling panels are joined together with an insert type profile system and connected to deck with P754 Hanger sets and T-carriers.

Max. distance between T-carriers: 2360 mm
Max. distance between Hanger sets: 1200 mm

Total ceiling panel thickness is 45 mm.

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-15.

Max. panel size is 300 mm x 2360 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

Test Report No. AK2014-0227R, dated 29th May 2014 (revised 16th September 2015) from FILK, Korea.

Drawing No. F2014-C645-R0, dated 31st March 2014 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, the MED Mark of Conformity and USCG Approval Number if applicable (see first page).