DNV·GL

Certificate No:
MEDB0000051

EC-TYPE EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2014/93/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the "B" Class divisions, fire integrity

with type designation(s)
BIP C-514 continuous ceiling: B-15 Class

Issued to
BIP Industries Co., Ltd.
Gyeongsangnam-do, Republic of Korea

is found to comply with the requirements in the following Regulations/Standards:
Annex A.1, item No. A.1/3.11b and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulation II-2.3.4.4. and IMO 2010 FTP Code.

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

Høvik, 2015-09-16
for **DNV GL AS**

This Certificate is valid until
2019-12-11

Notified Body No.: **0575**

Vidar Dolonen
Head of Department

DNV GL local office:
Pusan

Silje Helene Waagaard
Surveyor

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Product description

"BIP C-514 continuous ceiling: B-15 Class"
Composed of panels suspended below the structural deck. From the exposed side the panels consist of:

- 0.6 mm perforated or non-perforated steel sheet
- "Non-woven fabric", manufactured by Dae Kyoung Chemical Co. Ltd.
- 25 mm mineral wool type "Mineral Wool" of density 60 kg/m^3 (manufactured by KCC Corporation, Korea)
- In addition, 50 mm mineral wool type "Mineral Wool" of density 80 kg/m^3 (manufactured by KCC Corporation, Korea) covers the panels on the unexposed side.

The ceiling panels may incorporate ventilation unit (ø200 mm) and light fixture (1288 x 275 mm), fully covered by 30 mm thick mineral wool of density 180 kg/m^3 on unexposed side.

In the longitudinal direction, the following measures applies:

- Maximum distance between main runners: 1400 mm
- Maximum distance between hanger rods: 2500 mm
- Maximum distance from bulkhead to the nearest main runner: 300 mm

In the transverse direction, the following measures applies:

- Maximum distance between cross runners: 2500 mm

The panels are fastened to deck with P713 Hanger sets.

Total ceiling thickness is 75 mm.

Application/Limitation

Approved for use as a continuous horizontal fire retarding division of class B-15.

Max panel size is 300 x 2190 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, use and maintenance.

Type Examination documentation

Test Report no AK2014-0492 dated 6th October 2014 from FILK, Korea.
Drawings no F2014-C514F-R1 (9 pages), dated 28th April 2014 from BIP.

Test Report no AK2014-0491 dated 6th October 2014 from FILK, Korea.
Drawings no F2014-C514F-R5 (7 pages), dated 28th January 2014 from BIP.

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 of manufacturer, type designation, fire technical rating, the MED Mark of Conformity and USCG approval number if applicable (see below).

Mark of Conformity

The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

Module D: The quality system for production and testing shall be approved by the Notified Body.

Module E: The quality system for inspection and testing shall be approved by the Notified Body.

Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a Certificate of Conformity.

USCG Approval

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.