



Marine & Offshore

Certificate number: 50097/B0 BV

File number: ACI1000/177/122

Product code: 5110H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

BIP INDUSTRIES CO., LTD.

Gyeongsangnam-do - KOREA (REPUBLIC OF)

for the type of product

B15 CLASS CEILINGS

B-15 Class Continuous Ceilings - Type "BIP C-645"

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships, Part C, Chapter 4

SOLAS 74 Convention, as amended, Regulation II-2/3.4.4

IMO Res. MSC.307(88) (2010 FTP Code)

IMO MSC/Circ. 1120, IMO MSC.1/Circ. 1581

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate is a renewal of certificate N° 50097/A0 BV expiring on 03/09/2023

This certificate will expire on: 03 Sep 2028

For Bureau Veritas Marine & Offshore,

At BV PUSAN, on 19 Jun 2023,

Won-jun JANG

This certificate was created electronically and is valid without signature



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=ulqybspzic>

BV Mod. Ad.E 530 June 2017

This certificate consists of 2 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

B-15 Class Continuous Ceilings - Type "BIP C-645"

Composed of steel cassettes suspended below the structural deck by means of hangers. Panel cassettes consist of 40 mm thick "**Mineral Wool #80**" (nominal density 80 kg/m³; manufactured by KCC Corporation, Korea) covered with 0.6 mm thick galvanized steel sheet on exposed side. The steel sheet on the exposed side was with sound-absorbing holes (Ø 1.8 mm, 10 mm spacing) and fabric membrane ("**Non-Woven Fabric**" manufactured by DAE KYOUNG CHEMICAL Co., Ltd.) is laid between steel sheet and mineral wool board.

Ceiling panels are joined together longitudinal edges by means of T-carrier (1 mm thick steel plate) screwed to the panels' steel sheet. T-carrier together with a hanger set form the hanging system. Panels' lateral edges are connected each other without gap.

Maximum distance between hanger sets: 1200 mm

The ceiling framework is connected with bulkhead by means of 1 mm thick steel top profiles or angles.

Minimum distance between steel deck and ceiling: 300 mm

Maximum length of panels: 2360 mm (up to 3000 mm under responsibility of manufacturer's engineering specification)

Maximum width of panels: 300 mm

Total thickness of panels: 45 mm

2. DOCUMENTS AND DRAWINGS:

As per the Manufacturer's drawings N° F2014-C645-R0 rev.ORI dated 31/03/2014.

3. TEST REPORTS:

Test report N° AK2014-0227R dated 29/05/2014, as per IMO 2010 FTP Code Annex 1 Part 3, from FILK, Korea.

4. APPLICATION / LIMITATION:

4.1 - Approval is also valid for non-perforated (without non-woven fabric) or less perforated steel sheet without further testing.

4.2 - The fitting aboard to be the same as used for the test.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The **B-15 Class Continuous Ceilings - Type "BIP C-645"** are to be supplied by **BIP INDUSTRIES Co., Ltd.** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **BIP INDUSTRIES Co., Ltd.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **BIP INDUSTRIES Co., Ltd.** has declared to Bureau Veritas the following production site:

BIP INDUSTRIES Co., Ltd.
67, Baedungongdan-gil, Heohwa-myeon, Goseong-gun
Gyeongsangnam-do
KOREA (REPUBLIC OF)

5.5 - The following components have to be covered by a valid type approval certificate, issued by the Society.

- the insulating material "**Mineral Wool #80**" (nominal density 80 kg/m³), and
- any added finish surface material(s).

6. MARKING OF PRODUCT:

The product or packing is to be marked with Manufacturer name, type designation and fire-technical rating.

7. OTHERS:

7.1 - It is **BIP INDUSTRIES Co., Ltd.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 50097/A0 BV issued on 03/09/2018 by the Society.

*** END OF CERTIFICATE ***