



Marine & Offshore

Certificate number: 39557/B0 BV

File number: AC11000/177/119

Product code: 5040H

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

B0 CLASS BULKHEADS

B-0 Class Aluminium Wall Panels - Type "BIP WA-451S"

Requirements:

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

SOLAS 74 Convention as amended, Regulations II-2/9, II-2/3.4

IMO Resolution MSC.61(67) - (FTP Code) with IMO Resolution MSC.307(88) - (2010 FTP Code) article 8

IMO MSC/Circ.1120

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 will expire on: 12 Dec 2024

For Bureau Veritas Marine & Offshore,

At BV PUSAN, on 12 Dec 2019,

Chang-Uk HONG



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.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 2 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

B-0 Class Aluminium Wall Panels - Type "BIP WA-451S"

The bulkhead consists of panels composed of "**mineral wool #140**" board (nominal density 140 kg/m³, manufactured by KCC Co., Ltd., Korea), bonded on both sides with 0.6 mm thick aluminium sheets (manufactured by NOVELIS KOREA Ltd., Korea) by "**OCUA-1000RC**" polyurethane adhesive (application 0.15 mm; manufactured by DAE HAN POLYMERS Ind. Co. KOREA).

Alternative polyurethane glue: "**BNUR-1000**" (maximal application rate: 200 g/m²; manufactured by BN Steel Chemical Co.,Ltd.).

Vertical edges of panels are jointed each other by 0.6 mm thick steel M-profiles and steel spline joint profiles (3 mm thick, 30 mm long).

Maximum width of panel: 600 mm

Total thickness of a panel: 25 mm

2. DOCUMENTS AND DRAWINGS:

As per the Manufacturer's drawings N° D00-T11-51100-C11-0 (B-0) dated 06/05/2009.

3. TEST REPORTS:

Test report N° 2009-0282 dated 21/07/2009, as per IMO FTP Code Annex 1 Part 3 [test standard : IMO Resolution A.754 (18)], from FILK, Korea.

4. APPLICATION / LIMITATION:

4.1 - The following components shall comply with the requirements of the relevant Bureau Veritas rules and be type approved:

- the insulating material "**mineral wool #140**" (nominal density 140 kg/m³),
- the adhesive materials "**OCUA-1000RC**" and "**BNUR-1000**",
- any added finish surface material(s).

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

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The **B-0 Class Aluminium Wall Panels - Type "BIP WA-451S"** 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.

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° 39557/A0 BV issued on 10/12/2014 by the Society.

*** END OF CERTIFICATE ***