



Certificate Of Fire Approval

This is to certify that the product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

Manufacturer	BIP Industries Co., Ltd.
Address	1817 Jungang-daero, Geumjeong-gu, Busan, Republic of Korea
Type	B-0 Bulkhead
Description	Fire Resisting B-0 Bulkhead Panel System for Restricted Application with cap profile joints on fire unexposed side
Trade Name	BIP W-351
Specified Standard	IMO Res. MSC.307(88) – (2010 FTP Code) Annex 1 Part 3

This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register Asia of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document and its supplementary Type Approval Terms and Conditions form part of this Certificate.

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.

Kwang-Baek Kim

Fire & Safety - Senior Specialist to Lloyd's Register Asia
A member of the Lloyd's Register group

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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR24125185SF

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions, and this Design Appraisal Document forms part of the Certificate.

This Design Appraisal Document forms part of the Certificate.

This Certificate is a Renewal of Certificate Number LR1900727SF-03.

APPROVAL DOCUMENTATION

TEST REPORTS

Fire Insurers Laboratories of Korea (FILK), 69-1 Simseok-Ri, Ganam-Myeon, Yeosu-Gun, Gyeonggi-Do, 469-881, Korea;
Test Report No. AK2013-0238 dated 4th November 2013.

CONDITIONS OF CERTIFICATION

1. **Restricted Application:** Cap profile joints of the bulkhead to be unexposed to the fire risk side in all cases.
2. Vertical sandwich interlocking panel system "BIP W-351" consisting of: vertical panel of 0.6mm thick galvanised steel sheet bonded on both sides of an insulation core (23.5mm thick, 140kg/m³ density) mineral wool insulation manufactured by KCC Corporation, Korea using urethane adhesive 'OCUA-1000RC' manufactured by Dai Han Polymer Ind. Co., Ltd. or 'BNUR-1000' manufactured by BN Steel Chemical Co., Ltd.
3. Maximum bulkhead panel width: 550mm
4. Total Thickness of bulkhead: 25mm
5. Adjacent panels connected together longitudinally with 0.6mm thick steel cap profile joint on fire unexposed side.
6. Panels secured by along edge within 2.3mm thick steel channel frame system with self-tapping steel screws at 300mm centres.
7. For use in escape routes in ro-ro passenger ships, B Class bulkhead panel system is to be subjected to strength tests where handrails are to be attached, in accordance with IMO MSC/Circ.910 under independent witness and test reports submitted to final design Project Approval Authority for approval on a case-by-case basis.
8. Composition, application and installation of sub components, including any adhesives, seals and any fire retardants, to be maintained in production and use in accordance with originally tested composition formula and method of application and installation, and manufacturer's instructions.
9. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure that items are of the same standard as the approved prototype.
10. The certificate holder is solely responsible for the products supplied under this Certificate and to ensure that their products, whether manufactured by themselves or their licensee manufacturers, if agreed by Lloyd's Register, are fully compliant with the relevant statutory regulations and Lloyd's Register Class rules as applicable and designed, manufactured and installed to the same quality and specifications as the prototype tested, including components that are designed and manufactured by third parties.



DESIGN APPRAISAL DOCUMENT

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Certificate No: LR24125185SF
Issue Date: 02/09/2024
Expiry Date: 01/09/2029
Reference: GTSO/F&S/TA/KBK/CHA2402575/PRJ11100444710

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR24125185SF

PLACE OF PRODUCTION

BIP Industries Co Ltd
67, Baedungongdan-gil
Hoehwa-myeon, Goseong-gun
Gyeongsangnam-do
Republic of Korea

Kwang-Baek Kim
Senior Specialist, Fire & Safety to Lloyd's Register Asia
Global Technical Support Office
Lloyd's Register Operations

Supplementary Type Approval Terms and Conditions

This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s)

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