



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-15 Bulkhead
Description	Fire Resisting B-15 Bulkhead Panel System
Trade Name	BIP W-151
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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Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.



ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No.LR2655469SF

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 LR21189564SF.

APPROVAL DOCUMENTATION

TEST REPORTS

Fire Insurers Laboratories of Korea (FILK), 1030, Gyeongchung-daero, Ganam-eup, Yeosu-si, Gyeonggi-do, Republic of Korea; Test Report No. AK2015-0528 dated 16th September 2015.

CONDITIONS OF CERTIFICATION

1. Vertical interlocking panel system "BIP W-151" consisting of: 0.6mm thick galvanised steel sheet panels each side of an insulation core (23.5mm thick, density 140 kg/m³) mineral wool manufactured by KCC Corporation, Korea and density 240 kg/m³ within joints. Bonded with adhesives 'OCUA-1000RC' manufactured by DAI HAN POLYMER IND. Co., Ltd and 'BNUR-1000' manufactured by BN CHEMICAL Co., Ltd.
2. Total thickness of bulkhead system: 25mm
3. Maximum width of panels: 600mm
4. Adjacent panels connected together longitudinally with spline joints 30mm wide x 3mm thick.
5. Panels secured by along edge within 2.3mm thick steel channel frame welded to the support steel.
6. 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.
7. 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.
8. 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.
9. 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.

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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)