



## 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.

<b>Manufacturer</b>	<b>BIP Industries Co., Ltd.</b>
<b>Address</b>	1817, Jungang-Daero, Geumjeong-gu, Busan, Republic of Korea
<b>Type</b>	B-15 Bulkhead
<b>Description</b>	Fire Resisting B-15 Bulkhead Panel System
<b>Trade Name</b>	BIP W-106SE(6)
<b>Specified Standard</b>	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.



**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No.LR23365374SF**

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.

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This Certificate is a Renewal of Certificate Number SAS F180335-M1-03.

**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. AK2012-0931 dated 20<sup>th</sup> February 2013.

BIP Drawing No. W106SE(6)-R0 dated 2<sup>nd</sup> November 2012 pages 1-5.

**CONDITIONS OF CERTIFICATION**

1. Vertical sandwich interlocking panel system 'BIP W-106SE(6)' consisting of: vertical panels of 0.6mm thick galvanised steel sheet + 0.4mm thick perforated steel sheet (diameter of perforations 4mm, distance of centres 8.5mm) + mineral wool insulation (21mm thick, 140 kg/m<sup>3</sup> density) manufactured by KCC Corporation + central air gap of 5mm + mineral wool insulation (21mm thick, 140 kg/m<sup>3</sup> density) manufactured by KCC Corporation + 0.4mm thick perforated steel sheet (diameter of perforations 4mm, distance of centres 8.5mm) + 0.6mm thick galvanised steel sheet panels. Bonded with urethane adhesive 'OCUA-1000RC' manufactured by Dae Han Polymer Industries Co.
2. Maximum width of panels: 600mm wide
3. Total thickness of panels: 50mm
4. Adjacent panels connected together longitudinally with spline joints.
5. Panels secured along perimeter of bulkhead by screws into steel channel 2.0mm thick, dimensions 40mm x 55mm x 40mm. Channel secured by welding to fixing cleats.
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.



**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No.LR23365374SF**

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.

**PLACE OF PRODUCTION**

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

*K B Kim*

Kwang-Baek Kim  
Senior Specialist, Fire & Safety to Lloyd's Register Asia  
Busan Technical Support Office, Marine & Offshore  
Lloyd's Register Group

**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)*