



## 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 Bulkhead
<b>Trade Name</b>	BIP W-106SE(A)
<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 North America, Inc. 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.

1330 Enclave Parkway, Houston, Texas, 77077,  
United States

**Bruce McDonald**

Technical Authority - Statutory to Lloyd's  
Register North America, Inc.  
A member of the Lloyd's Register group

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. LR2304851SF**

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 LR20103376SF

**APPROVAL DOCUMENTATION**

Fire Insurers Laboratories of Korea (FILK), 69-1 Simseok-Ri, Ganam-Myeon, Yeosu-Gun, Gyeonggi-Do, 469-881, Korea; Test Report No. AK2012-0185 dated 20<sup>th</sup> August 2012 .

**CONDITIONS OF CERTIFICATION**

1. Bulkhead panel system, 50mm thick, type "BIP W-106SE(A)" consisting of: steel sheet panels made of 0.6mm thick galvanised steel plate bonded to 0.4mm perforated steel sheet and bonded to both sides of an insulation core comprised of mineral wool (50mm thick, 140 kg/m<sup>3</sup> density) manufactured by KCC Corporation, Korea insulation with type "OCUA-1000RC" urethane adhesive. The mineral wool is separated by vertical strips 20mm thick x 50mm wide insulation at 50mm spacing, forming 20mm deep x 50mm wide vertical air gaps in the core.
2. Bulkhead panels fastened to each other with 3mm thick x 30mm wide steel spline joints. The vertical panel ends and top and bottom of panels are to be fitted with steel screws to prevent joint movement.
3. 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.
4. 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.
5. 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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**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR2304851SF**

**PLACE OF PRODUCTION**

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

Bruce McDonald  
Technical Authority-Statutory  
Lloyd's Register Americas

**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)*