

## 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-0 Ceiling
<b>Description</b>	Fire Resisting 'B' Class Continuous Ceiling
<b>Trade Name</b>	"BIP C-511"
<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 EMEA 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. LR21347660SF**

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 No. SAS F164075-02

**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. AK2015-0627 dated 16<sup>th</sup> November 2015.

**CONDITIONS OF CERTIFICATION**

1. Panel interlocking system consisting of: 0.6mm thick perforated (perforations 0.18mm diameter) or non-perforated steel sheet panels formed into trays 25mm deep filled on non-exposed upper side with one sheet of (25mm thick, 60 kg/m<sup>3</sup> density) mineral wool insulation manufactured by KCC Corporation, Korea. Total thickness of ceiling 25mm.
2. Adjacent panels connected together longitudinally with overlapping joints and self-tapping screws.
3. Panels suspended by seating at sides and securing with screws onto steel support continuously welded to bulkhead, and to steel main runner suspended from steel deck with hanger sets.
4. Maximum ceiling panel width x length: 300mm x 5000mm.
5. Maximum distance between ceiling hangers: 1200mm.
6. Maximum distance between support runners: 1400mm.
7. Minimum distance between top of ceiling and bottom of overhead steel deck: 300mm.
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.

**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR21347660SF****PLACE OF PRODUCTION**

BIP Industries Co., Ltd.  
67 Baedun-gong Dangil  
Hoehwa-myeon, Goseong-gun  
Gyeongsangnam-do  
Republic of Korea



Jessica Evans  
Senior Specialist  
Statutory Fire & Safety  
Marine Technology and Engineering Services  
Global Technology Centre  
Lloyd's Register EMEA

**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).*