

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	A-60 Deck
Description	Fire Resisting 'A' Class Deck (Floating Floor)
Trade Name	"BIP F-A60S"
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 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.



Jessica Evans

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A member of the Lloyd's Register group

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DESIGN APPRAISAL DOCUMENT**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR21347528SF**

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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APPROVAL DOCUMENTATION**TEST REPORTS**

Korea Marine Equipment Research Institute (KOMERI), 435, Haeyang-ro Yeongdo-gu, Busan, Korea, Fire Test Report No. KOMERI-0402-17T2715-1 dated 20th November 2017.

CONDITIONS OF CERTIFICATION

1. A-60 deck consisting of: 4.5mm steel 'A' Class deck insulated on upperside with one layer of (50mm thick, 240 kg/m³ density) mineral wool manufactured by KCC Corporation, Korea, covered on top by one layer of 3.2mm thick steel sheet panels. Bonded with adhesives type 'BNUR-1000' manufactured by BN Chemical Co., Ltd and 'OCUA-1000-RC' manufactured by Dai Han Polymer Co., Ltd.
2. Total thickness of floating floor: 53.2mm
3. Maximum panel width: 590mm.
4. Adjacent panels connected together longitudinally with 1.6mm thick steel angle locking pieces spot welded at maximum 300mm intervals.
5. Panels suspended between bulkheads and insulated at perimeter with strip of 20mm wide, (50mm thick, 140 kg/m³ density) mineral wool manufactured by KCC Corporation.
6. 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.
7. 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.
8. 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. LR21347528SF**PLACE OF PRODUCTION**

BIP Industries Co., Ltd.
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Republic of Korea



Jessica Evans
Senior Specialist
Statutory Fire & Safety
Marine Technology and Engineering Services
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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).