

# 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>Unifrax Limited</b>
<b>Address</b>	Mill Lane, Rainford, St. Helens, Merseyside, WA11 8LP, United Kingdom (UK)
<b>Type</b>	Load Bearing Fire-Resisting Bulkhead 60 (Restricted Application)
<b>Description</b>	Fire Resisting Load Bearing Aluminium Bulkhead Insulated on the Stiffened Face (Fire Exposed Side) with Type: "Load Bearing Fire-Resisting Bulkhead 60" system for High-Speed Craft, using "FyreWrap LT" AES wool insulation
<b>Trade Name</b>	Load Bearing Fire-Resisting Bulkhead 60 - FyreWrap LT (Marine) Blanket
<b>Specified Standard</b>	IMO Res.MSC.307(88) – (2010 FTP Code) Annex 1 Part 11

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. SAS F180215-02**

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 Certificate is an amendment of previous Lloyd's Register EMEA Certificate of Fire Approval No: SAS F180215

#### **APPROVAL DOCUMENTATION**

1. Far East Fire Testing Centre (FEFTC), 511 Chuhua Zhi Lu, Shanghai Chemical Industry Park, Fengxian Sub-Zone, Shanghai, People's Republic of China; Fire Test Report No: FT17281, dated 07 December 2017.

#### **CONDITIONS OF CERTIFICATION**

1. **Restricted Application:** When applied to an aluminium Load Bearing Fire-Resisting Bulkhead for High Speed Craft Code applications and major fire hazards, the bulkhead may be classified as a "Load Bearing Fire-Resisting Bulkhead 60" restricted applications with insulation and stiffeners on the fire exposed side of the bulkhead
2. Aluminium structure consists of: 304.8mm x 127mm x 8.9mm I type aluminium profile stiffeners welded to the exposed side of a 2mm thick flat aluminium plate at intervals of 1200mm, and horizontally 30 x 35 x 2mm I type aluminium profile stiffeners welded at intervals of 125mm. Aluminium angle 50 x 50 x 6mm welded to each edge of non-exposed side
3. Insulation consists of: one layer of "FyreWrap LT (Marine) Blanket" AES wool insulation (50mm thick, 70kg/m<sup>3</sup> density), applied to the fire exposed insulated and stiffened side (fire exposed side) of a load bearing aluminium bulkhead, over the stiffeners and structural core retained by 3mm diameter aluminium pins and 30mm diameter aluminium washers at maximum intervals 250mm horizontally and vertically, and 100mm between pins and seams
4. The core temperature of aluminium alloy shall not rise above a maximum 200°C limit above ambient temperature for 60 minute duration of test
5. "FyreWrap LT (Marine) Blanket" AES wool insulation may be considered with alternative facing materials that have been tested for Low Flame Spread Characteristics
6. Application in each case to be approved by Lloyd's Register at the design stage
7. Composition and application of sub components to be maintained in production and use in accordance with originally tested composition formula and method of application, 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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**PLACES OF PRODUCTION**

Unifrax UK  
Mill Lane  
Rainford  
St.Helens  
Merseyside  
WA11 8LP  
United Kingdom (UK)

Unifrax France  
17 Rue Antoine  
Durafour  
BP2  
42420 Lorette  
France

Unifrax I LLC  
54401 Smilax Road  
New Carlisle  
Indiana 46552  
United States of America (USA)



Keith Taylor  
Team Lead, Fire & Safety  
Fire & Safety, Statutory Discipline Team  
UK&I Technical Support Office, Marine & Offshore  
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).*