

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	Unifrax Limited
Address	Mill Lane, Rainford, St. Helens, Merseyside, WA11 8LP, United Kingdom (UK)
Type	A-60 Bulkhead
Description	Fire Resisting 'A' Class Bulkhead – Type: "A60 Bulkhead FyreWrap LT Blanket 80" steel bulkhead insulated on stiffened side with Alkaline Earth Silicate (AES) wool insulation (60mm thick and 80kg/m3 density)
Trade Name	"A60 Bulkhead FyreWrap LT Blanket 80"
Specified Standard	IMO Res. MSC.307(88) – (2010 FTP Code), Annex 1, Part 3 IMO MSC.1/Circ.1435

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.

Ratheesh Rajagopal

Fire & Safety Specialist to Lloyd's Register
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DESIGN APPRAISAL DOCUMENT

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR22172286SF

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 F170031/M1

APPROVAL DOCUMENTATION

TEST REPORTS

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. FT16340 dated 24th August 2016

CONDITIONS OF CERTIFICATION

1. When used in conjunction with an approved A Class steel bulkhead.
2. 'A60 Bulkhead FyreWrap LT Blanket 80' A-60 Class bulkhead consisting of: 4.5mm thick steel bulkhead insulated on stiffened side with one layer of (60mm thick, 80 kg/m³ density) "FyreWrap LT Blanket" insulation applied over plate and stiffeners. Insulation manufactured by Unifrax Ltd. Total thickness of bulkhead is 64.5mm.
3. Insulation retained to the steel bulkhead and stiffeners with 3mm diameter steel pins and 38mm diameter steel washers: spaced at maximum centres of 300mm horizontally, 350mm vertically on the bulkhead layer of insulation; a maximum of 350mm from insulation joints; a maximum of 188.5mm from vertical edge boundaries; a maximum of 150mm from the floor edge boundaries; and a maximum of 50mm from ceiling edge boundaries.
4. Maximum width of insulation blankets following installation: 600mm.
5. Insulation fixing method should be same as tested arrangement in all cases.
6. Composition, application and installation of subcomponents, including 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.

DESIGN APPRAISAL DOCUMENT

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR22172286SF

PLACE OF PRODUCTION

Unifrax Limited

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)



Ratheesh Rajagopal
Specialist
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).