

Certificate Of Fire Approval

This is to certify that the product(s) detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations for use on offshore units classed with Lloyd's Register, and for use on offshore units and onshore facilities 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	H-60 Bulkhead
Description	Fire Resisting 'H' Class Steel Bulkhead – Type: “H-60 Bulkhead FyreWrap LT Blanket” steel bulkhead insulated on stiffened side with “FyreWrap LT Blanket” Alkaline Earth Silicate (AES) wool insulation (120mm thick and 70kg/m ³ density)
Trade Name	“H-60 Bulkhead FyreWrap LT Blanket”
Specified Standard	UK Department of Energy Hydrocarbon Time/Temperature Relationship; IMO Resolution A.754 (18) Performance Criteria; and IMO Res. MSC.307 (88) – (2010 FTP Code), Annex 1, Part 3 (Integrity Performance Criteria)

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.

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

Ratheesh Rajagopal

Fire & Safety Specialist to Lloyd's Register
EMEA
A member of the Lloyd's Register group

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DESIGN APPRAISAL DOCUMENT

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR22135844SF

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 F170127

APPROVAL DOCUMENTATION

TEST REPORTS

Exova Warringtonfire, Holmesfield Road, Warrington, United Kingdom, Fire Test Report No. 364381, dated 21st October 2016.

CONDITIONS OF CERTIFICATION

1. When applied to the stiffened side of a steel bulkhead, the “H-60 Bulkhead FyreWrap LT Blanket” Alkaline Earth Silicate (AES) wool insulation system described below may be considered as an “H-60 Bulkhead” for hydrocarbon fire risks from either side of the bulkhead.
2. “H-60 Bulkhead FyreWrap LT Blanket” H-60 Class Bulkhead consisting of: three layers of “FyreWrap LT Blanket” AES wool insulation (each 40mm thick, 70kg/m³ density), manufactured by Unifrax Ltd. The first layer is fitted vertically against the bulkhead between stiffener angles. Second layer is fitted horizontally over bulkhead and stiffener angles. Third layer is also fitted horizontally so that the horizontal joints were staggered with respect to those of the second layer.
3. Insulation retained to the steel bulkhead and stiffeners with 3mm diameter welded steel pins and 38mm diameter spring washers: spaced at maximum centres of 300mm horizontally; 350mm vertically; a maximum of 276mm from insulation joints; a maximum of 188.5mm vertical edge boundaries; a maximum of 164mm from the floor edge boundaries; and a maximum of 76mm from ceiling edge boundaries. All butt joints to be staggered at least 300mm vertically between layers.
4. Maximum width of insulation blankets following installation: 600mm.
5. Application in each case to be approved by Lloyd’s Register at the design stage.
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.

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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.

NOTES

For such non-combustible insulation materials the arrangements for this insulation system being fitted on the flat side of a bulkhead may also be considered for H-60 applications, subject to suitable fixing arrangements being separately approved by Lloyd's Register at the design stage.

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).