



Lloyd's  
Register

## 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>	Unifrax Limited
<b>Address</b>	Mill Lane Rainford St. Helens Merseyside, WA11 8LP United Kingdom (UK)
<b>Type</b>	<b>A-60 BULKHEAD</b>
<b>Equipment Description</b>	Fire Resisting 'A' Class Bulkhead – Type: "FyreWrap LT Blanket"
<b>Specified Standard</b>	IMO Res. MSC.307(88) – (2010 FTP Code), Annex 1, Part 3

**The attached Design Appraisal Document forms 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.**

Date of issue 22 May 2017 Expiry date 21 May 2022

Certificate No. SAS F170129

Signed

Sheet No 1 of 3

Name

K. Taylor  
Surveyor to Lloyd's Register EMEA  
A Member of the Lloyd's Register Group

**Note:**

**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 of any modification or changes to the equipment in order to obtain a valid Certificate.**

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.



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## Lloyd's Register EMEA

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Document number SAS F170129
Issue number 1

### DESIGN APPRAISAL DOCUMENT

Date 22 May 2017	Quote this reference on all future communications SOUTSO/SFS/TA/KT/WP28113343
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#### ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F170129

This Design Appraisal Document forms part of the Certificate

#### APPROVAL DOCUMENTATION

Far East Fire Testing Centre (FEFTC), 511 Chuhua Zhi Lu, Shanghai Chemical Industry Park, Fengxian Sub-Zone, Shanghai, China; Fire Test Report No. FT16338, dated 24 August 2016

#### CONDITIONS OF CERTIFICATION

1. A-60 bulkhead consisting of 4.5mm thick steel bulkhead insulated on one side with one layer of (50mm thick, density 64 kg/m<sup>3</sup>) 'FyreWrap LT Blanket' Alkaline Earth Silicate (AES) wool insulation fitted to plate and behind stiffeners, followed by one layer of (25mm thick, density 64 kg/m<sup>3</sup>) 'FyreWrap LT Blanket' Alkaline Earth Silicate (AES) wool insulation fitted over the 50mm insulation layer and over stiffeners. Insulation manufactured by Unifrax Ltd. Total thickness of insulation: 75mm
2. 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 250mm 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
3. This arrangement is a "general application" and is suitable for a fire from either side of the bulkhead
4. Maximum width of insulation blankets: 600mm
5. The following variants of 'FyreWrap LT Blanket', with same insulation composition but varying surface facings, and which have been tested and approved separately as non-combustible, may be used: 'LTF', 'LTF2', 'LTFR', 'LTFR2', 'LTG', 'LTG2'
6. Composition and application of insulation material to be maintained in production and use in accordance with originally tested composition formula and method of application, 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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**DESIGN APPRAISAL DOCUMENT**

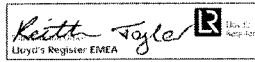
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**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F170129**

**PLACES 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



Keith Taylor  
Senior Specialist  
Aberdeen Technical Support Office  
Marine & Offshore Lloyd's Register

**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).*

## EC TYPE EXAMINATION (MODULE B) CERTIFICATE

This is to certify that:

LLOYD'S REGISTER VERIFICATION LIMITED (LRV), designated as a "notified body" under the terms of the Merchant Shipping (Marine Equipment) Regulations 2016 (S.I. 2016 No. 1025) did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with the essential Fire protection equipment requirements of Marine Equipment Directive (MED) 2014/90/EU and Commission Implementing Regulation (EU) 2017/306 indicating design, construction and performance requirements and testing standards for marine equipment, subject to any conditions in the Design Appraisal Document attached hereto.

<b>Manufacturer (Applicant)</b>	Unifrax Limited
<b>Address</b>	Mill Lane Rainford St. Helens Merseyside, WA11 8LP United Kingdom (UK)
<b>Reference</b>	Regulation 2017/306
<b>Regulation Item</b> (No & Item designation)	MED/3.11a 'A' AND 'B' CLASS DIVISION, FIRE INTEGRITY - 'A' CLASS DIVISIONS
<b>USCG Category Number</b>	165.108 - 'A' AND 'B' CLASS DIVISION FIRE INTEGRITY (BULKHEAD PANELS)
<b>Product Type</b>	A-60 BULKHEAD
<b>Product Description</b>	Fire-Resisting 'A' Class Bulkhead – Type: "FyreWrap LT Blanket"
<b>Specified Standard</b>	IMO Res. MSC.307(88) – (2010 FTP Code), Annex 1, Part 3 IMO MSC.1/Circ.1435


The attached Design Appraisal Document (schedule) forms part of this certificate.

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

Date of issue 22 May 2017 Expiry date 21 May 2022

Certificate No. MED 1750101

Signed

  
Lloyd's Register Verification Ltd

Sheet No 1 of 3

Name

K. Taylor  
For and on behalf of Lloyd's Register Verification  
LRV EC Distinguishing No. 0038

Note:

This certificate is issued under the authority of the MCA.

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 the notified body named on this certificate of any modification or changes to the equipment in order to obtain a valid Certificate.

USCG-EU MRA - This product has been assigned a U.S. Coast Guard Module B number: USCG Module B number: 165.108/EC0038 to note type approval to Module B only as it pertains to obtaining U. S. Coast Guard approval as allowed by the "Corrigendum to Council Decision 2004/425/EC of 21 April 2004 on the conclusion of an Agreement between the European Community and the United States of America on the mutual recognition of certificates of conformity for marine equipment."

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### DESIGN APPRAISAL DOCUMENT

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22 May 2017

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#### ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1750101

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions and European Union legislation for the EC Type Examination of Marine Equipment for use on Merchant Ships Registered in the European Economic Area

This Design Appraisal Document (schedule) forms part of the Certificate

#### APPROVAL DOCUMENTATION

Far East Fire Testing Centre (FEFTC), 511 Chuhua Zhi Lu, Shanghai Chemical Industry Park, Fengxian Sub-Zone, Shanghai, China; Fire Test Report No. FT16338, dated 24 August 2016

#### CONDITIONS OF CERTIFICATION

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6. Composition and application of insulation material to be maintained in production and use in accordance with originally tested composition formula and method of application, and manufacturer's instructions
7. This product has been assigned a U.S. Coast Guard Module B number USCG Approval Category 165.108/EC0038 to note type approval to Module B only as it pertains to obtaining U. S. Coast Guard approval as allowed by the "Corrigendum to Council Decision 2004/425/EC of 21 April 2004 on the conclusion of an Agreement between the European Community and the United States of America on the mutual recognition of certificates of conformity for marine equipment"

In those instances where the Notified Body conducting the conformity assessment in accordance with either Module D, E or F of the Marine Equipment Directive is not Lloyd's Register Verification Ltd., such Notified Body would use the above U.S. Coast Guard Module B number to provide the manufacturer with the U.S. Coast Guard approval number by noting it on the Certificate of Conformity, thereby authorizing the manufacturer to mark the product accordingly

Note: For products placed on board U.S. flagged ships there is no declaration of conformity required to meet U.S. Coast Guard requirements

8. Each item, batch or lot of the equipment is to be issued with a "Declaration of Conformity" and have the "Mark of Conformity" affixed after a conformity assessment module is in place



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### DESIGN APPRAISAL DOCUMENT

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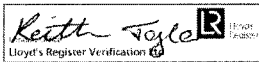
#### ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1750101

9. Production items of the subject equipment are to be manufactured in accordance with either an approved Production Quality Assurance system (Module D), a Product-Quality assurance system (Module E) or a Product Verification Process (Module F). **The wheelmark cannot be affixed to the product until a conformity assessment module is in place**

#### PLACE OF PRODUCTION

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

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17 Rue Antoine Durafour  
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France



Keith Taylor  
Senior Specialist  
For and on behalf of Lloyd's Register Verification  
LRV EC Distinguishing No. 0038