



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 (STANDARD FIRE TEST)
Equipment Description	Steel Bulkhead Insulated on the fire exposed side with Type: A-60 Class "FyreWrap LT" AES wool insulation system for Restricted Applications
Specified Standard	IMO Resolution 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 25 October 2018 Expiry date 24 October 2023

Certificate No. SAS F180175 Signed 

Sheet No 1 of 3 Name B. Geary
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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DESIGN APPRAISAL DOCUMENT

Date 27 June 2018	Quote this reference on all future communications SOUTSO/SFS/TA/BG/WP32824817
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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F180175

This Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

Exova Warringtonfire, Warrington, United Kingdom, Fire Test Report No. WF 327448, dated 22 May 2013.

CONDITIONS OF CERTIFICATION

1. When applied to the fire exposed stiffened side of a steel bulkhead, the "FyreWrap LT" AES wool insulation system described below, may be considered as an A-60 Bulkhead Restricted to fire risks on the insulated side of the bulkhead
2. Consisting of: one layer of "FyreWrap LT" AES wool insulation (45mm thick, 64kg/m³ density), applied vertically on the plate between stiffeners and a strip layer of same insulation (45mm thick, 64kg/m³ density) applied over stiffeners and overlapping the plate insulation, all retained with 3mm diameter welded steel pins and spring washers. Pins spaced at 225mm panels and 150mm over stiffeners horizontally to retain both layers, and spaced 700mm vertically on panels and 350mm on stiffeners, and at 50mm from all insulation joints and boundaries
3. 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 A-60 applications, subject to suitable fixing arrangements being separately approved by Lloyd's Register at the design stage
4. "FyreWrap LT" AES wool insulation may be considered with alternative facing materials that have been tested for Low Flame Spread Characteristics
5. Application in each case to be approved by Lloyd's Register at the design stage
6. 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



Lloyd's
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Lloyd's Register EMEA

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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F180175

PLACE OF PRODUCTION

Unifrax Limited
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Merseyside, WA11 8LP
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Ben Geary
Technical Manager
Statutory Fire & Safety
Southampton 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).



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) 2018/773 indicating design, construction and performance requirements and testing standards for marine equipment, subject to any conditions in the Design Appraisal Document attached hereto.

Manufacturer (Applicant) Address	Unifrax Limited Mill Lane Rainford
Authorised Representative* Address	St. Helens Merseyside, WA11 8LP United Kingdom (UK)
Reference Regulation Item (No & Item designation USCG Category Number)	Regulation 2018/773 MED/3.11a 'A' AND 'B' CLASS DIVISION, FIRE INTEGRITY - 'A' CLASS DIVISIONS 164.107 'A' AND 'B' CLASS DIVISION, FIRE INTEGRITY (Structural Insulation)
Type	A-60 BULKHEAD (STANDARD FIRE TEST)
Equipment Description	Steel Bulkhead Insulated on the fire exposed side with Type: A-60 Class "FyreWrap LT" AES wool insulation system for Restricted Applications
Specified Standard	IMO Resolution MSC.307(88) - (2010 FTP Code) Annex 1, Part 3

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 25 October 2018 Expiry date 24 October 2023

Certificate No. MED 1850134 Signed 

Sheet No 1 of 3 Name 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: 164.107EC0038 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."

Lloyd's Register Verification Limited (Reg. no. 4929226) is a limited company registered in England and Wales. Registered office: 71 Fenchurch Street, London, EC3M 4BS, UK. A subsidiary of Lloyd's Register Group Limited.

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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DESIGN APPRAISAL DOCUMENT

Date 27 June 2018	Quote this reference on all future communications SOUTSO/SFS/TA/BG/WP32824817
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ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1850134

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

Exova Warringtonfire, Warrington, United Kingdom, Fire Test Report No. WF 327448, dated 22 May 2013.

CONDITIONS OF CERTIFICATION

1. When applied to the fire exposed stiffened side of a steel bulkhead, the "FyreWrap LT" AES wool insulation system described below, may be considered as an A-60 Bulkhead Restricted to fire risks on the insulated side of the bulkhead
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4. "FyreWrap LT" AES wool insulation may be considered with alternative facing materials that have been tested for Low Flame Spread Characteristics
5. Application in each case to be approved by Lloyd's Register at the design stage
6. 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
7. Production items are to be manufactured in accordance with either an approved Production Quality Assurance system
8. (Module D) or Product Quality Assurance (Module E) or Product Verification (Module F) of the Marine Equipment Directive
9. Each item, batch or lot of the equipment is to have the "Mark of Conformity" affixed and be issued with a "Declaration of Conformity"



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ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1850134

10. This product has been assigned a **U.S. Coast Guard Module B number USCG Approval Category 164.107/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

PLACE OF PRODUCTION

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