



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 Ltd
Address	Mill Lane Rainford St Helens Merseyside WA11 8LP United Kingdom (UK)
Type	LOAD BEARING FIRE-RESISTING BULKHEAD 60
Description	Fire Resisting Load Bearing Aluminium Bulkhead Insulated on the Exposed Side Type: "FyreWrap LT Blanket HSC 60 Bulkhead" (For Restricted Applications Only)
Specified Standard	IMO Res.MSC.307(88) - (2010 FTP Code) Annex 1 Part 11

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 23 July 2018 Expiry date 22 July 2023

Certificate No. SAS F180215 Signed 

Sheet No 1 of 3 Name J. M. Evans
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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Issue number	1

DESIGN APPRAISAL DOCUMENT

Date	Quote this reference on all future communications
23 July 2018	SOUTSO/SFS/TA/JE/WP31957798

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F180215

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, People's Republic of China; Fire Test Report No: FT17281 dated 7th December 2017.

CONDITIONS OF CERTIFICATION

- 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 to insulation and stiffeners being on the fire exposed side
- 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 \perp type aluminium profile stiffeners welded at intervals of 125mm. Aluminium angle 50 x 50 x 6mm welded to each edge of non exposed side
- Insulation consists of: one layer of "FyreWrap LT Blanket" AES wool insulation (50mm thick, 70kg/m³ density), applied 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
- The core temperature of aluminium alloy shall not rise above a maximum 200°C limit above ambient temperature for 60 minute duration of test
- Application in each case to be approved by Lloyd's Register at the design stage
- 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
- 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

PLACE OF PRODUCTION

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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F180215



Jessica Evans
Senior Surveyor
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 Ltd Mill Lane Rainford St Helens Merseyside WA11 8LP United Kingdom (UK)
Reference	Regulation (EU) 2018/773
Regulation Item (No & Item designation)	MED/3.34 FIRE RESTRICTING DIVISIONS FOR HIGH SPEED CRAFT
Product Type	LOAD BEARING FIRE-RESISTING BULKHEAD 60
Product Description	Fire Resisting Load Bearing Aluminium Bulkhead Insulated on the Exposed Side Type: "FyreWrap LT Blanket HSC 60 Bulkhead" (For Restricted Applications Only)
Specified Standard	IMO Res.MSC.307(88) - (2010 FTP Code) Annex 1 Part 11

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	23 July 2018	Expiry date	22 July 2023
Certificate No.	MED 1850148	Signed	
Sheet No.	1 of 3	Name	J. M. Evans 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.

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.

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DESIGN APPRAISAL DOCUMENT

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ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1850148

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, People's Republic of China; Fire Test Report No: FT17281 dated 7th 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 to insulation and stiffeners being on the fire exposed side
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 \perp 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 Blanket" AES wool insulation (50mm thick, 70kg/m³ density), applied 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. Application in each case to be approved by Lloyd's Register at the design stage
6. 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
7. 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
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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Jessica Evans
Senior Specialist
Statutory Fire & Safety
Southampton Technical Support Office, Marine & Offshore
For and on behalf of Lloyd's Register Verification
LRV EC Distinguishing No. 0038