



## 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 installations classed with Lloyd's Register, and for use on offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

<b>Manufacturer</b>	Unifrax Ltd
<b>Address</b>	Mill Lane Rainford St Helens Merseyside WA11 8LP United Kingdom (UK)
<b>Type</b>	<b>H-60 BULKHEAD</b>
<b>Description</b>	Fire Resisting Bulkhead - Type: "Steel Bulkhead insulated on one side with 'FyreWrap® Blanket'" (75mm thick, 128kg/m <sup>3</sup> density)
<b>Specified Standard</b>	IMO Resolution A.163(ES IV) as amended by IMO Resolution A.215(VII) and a Hydrocarbon Time/Temperature Curve

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	26 October 2017	Expiry date	25 October 2019
Certificate No.	SAS F180116	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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## DESIGN APPRAISAL DOCUMENT

Date	Quote this reference on all future communications
30 April 2018	SOUTSO/SFS/TA/JE/WP31400036

### ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F180116

This Design Appraisal Document forms part of the Certificate.

#### APPROVAL DOCUMENTATION

Fire Insurers' Research and Testing Organisation (FIRTO), Borehamwood, United Kingdom, Fire Test Report No. TE 3759 dated 11<sup>th</sup> November 1980.

#### CONDITIONS OF CERTIFICATION

1. Previously known as 'FIBERFRAX DURABLANKET S' or 'INSULFRAX BLANKET'
2. Consisting of: H60 steel bulkhead insulated on one side with three layers of FyreWrap® Blanket (25mm thick, 128kg/m<sup>3</sup> density) insulation, retained to bulkhead by welded steel pins 3mm diameter and steel washers 38mm diameter, spaced at maximum 260mm centres and 50mm from all edges of the top layer of insulation. Only 2 layers of insulation are applied to the bulkhead stiffeners
3. 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

#### NOTE

1. The bulkhead plate insulation may alternatively be accepted as 2 layers of (38mm thick, 128 kg/m<sup>3</sup> density) FyreWrap® Blanket insulation with staggered joints, with the same insulation retention arrangements.



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**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F180116**

**PLACE OF PRODUCTION**

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

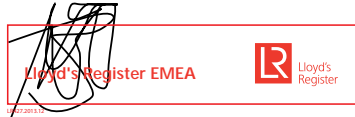
Unifrax France  
17 Rue Antoine Durafour  
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42420 Lorette  
France

Unifrax Brazil Ltd.  
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Bairro Sao Matheus  
Vinhedo, SP 13280-000  
Brazil

Unifrax (Suzhou) Co. Ltd  
59 Shiyuang Road  
Xushuguan New Zone  
215151 Suzhou  
China

Unifrax India Private Ltd  
99 k Stone  
Ahmedabad Surendrangan Hwy  
Lakhtar, Dist. Surendrangan  
382 775 Gujarat  
India

Unifrax I LLC  
54401 Smilax Road  
New Carlisle  
Indiana 46552  
United States of America (USA)



Jessica Evans  
Senior Surveyor  
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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).*