

**UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND
CERTIFICATE OF TYPE APPROVAL**

(EC Certificate of Type Examination-2014/90/EU Directive Module B)

Certificate Number: 164.109/1121/WCL MED0436TE

Applicant:- **Unifrax Limited**

Manufacturer: **Unifrax France**

Address:- **Mill Lane, Rainford
St Helens, Merseyside
WA11 8LP, UK**

**17 Rue Antoine Durafour
42420 Lorette
France**

This is to certify that the applicant has submitted details of a noncombustible product (Item Number A.1/3.13, known and designated as:-

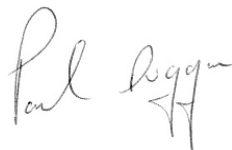
"FyreWrap® SG Blanket"

having the technical specification given in the schedule of equipment on this certificate which has been tested and complies with the recommended criteria given in the following methods, published by the International Maritime Organisation, and which are contained in the relevant parts of the International Code for Application of Fire Test Procedures (FTP Code) namely:-

- IMO Resolution MSC 307(88) Annex 1 Part 1 and Annex 2.
- IMO MSC/Circ.1120, 2 June 2004.

This certificate is issued on behalf of the Maritime and Coastguard Agency (MCA). The system complies with the relevant international testing standards under which legislation (The Merchant Shipping Marine Equipment) Regulations 1999 and also the Marine Equipment Directive 96/98 as amended, the certificate is issued.

This product has been assigned a U.S. Coast Guard Module B number 164.109/EC1121/WCL MED0436TE to note type approval to Module B only as it pertains to obtaining US Coast Guard approval as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 27th, 2004.

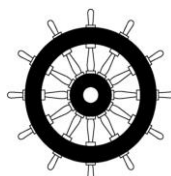


P Duggan
Manager
Warrington Certification
Holmesfield Road
Warrington WA1 2DS

Date of Issue: 15th December 2014

This certificate is valid until: 14th December 2019

**This certificate is not valid for equipment, the design or manufacture
of which, has been varied or modified from the specimens tested.**



Certificate of Type Approval Schedule of Equipment

The applicant declared that the following comprises an accurate description of the system type to which this certificate applies.

General description		AES wool blanket with glass fibre cloth facing
Product reference of overall composite		FyreWrap [®] SG Blanket
Name of manufacturer of overall composite		Unifrax
Thickness of overall		up to 50mm nominal
Glass Cloth Facing	Generic type	E-glass
	Product reference	See note 1 below
	Name of manufacturer	See note 1 below
	Colour reference	White
	Number of coats	One
	Thickness	0.2mm
	Density / weight per unit area	1030kg/m ³ / 206g/m ²
	Type of weave/cell dimensions	17.2yarns/cm 11.8 picks.cm
	Flame Retardant details	See note 2 below
Insulation Blanket	Generic type	AES wool blanket
	Product reference	FyreWrap [®] Blanket
	Name of manufacturer	Unifrax
	Detailed description/composition details	Blanket made from calcium magnesium silicate fibres
	Thickness	up to 50mm
	Density / weight per unit area	96kg/m 4800g/m ²
	Colour reference	White
	Flame Retardant details	See note 2 below
Brief description of manufacturing process	Calcium magnesium silicate fibres produced from a melt by a spinning process which are needed to form a binder free blanket. The glass cloth is then laminated to the face of the blanket with an inorganic silicate adhesive	

Note 1 - The sponsor of the test has provided this information but at the specific request of the sponsor, these details have been omitted from the report and are instead held on the confidential file relating to this investigation.

Note 2 - The sponsor stated that no flame retardants are utilised in the production of this component.

The under noted documents have been approved for compliance with the relevant requirements of International Conventions and European Union Legislation for the EC Type examination of Marine Equipment for use on Ships Registered in the European Economic Area.

Approved Documents - Test Reports

- (1) WF 346678 (dated 8th December 2014). Non combustibility test to IMO Resolution MSC 307(88) Annex 1 Part 1 and Annex 2.

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