

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Class A Bulkhead**with type designation(s)
Fyrewrap Marine BlanketIssued to
Unifrax(Suzhou) Co., Ltd.
Suzhou, Chinais found to comply with
DNV GL offshore standards
DNV GL rules for classification – Ships
DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations**Application :****Approved for use as a fire retarding division of class A-60.****General application: Fire against either side.****This certificate is recognized by Transport Canada.****Product approved by this certificate is accepted for installation on all vessels classed by DNV GL.**This Certificate is valid until **2021-06-23**.Issued at **Høvik** on **2016-06-24**DNV GL local station: **Shanghai**Approval Engineer: **Tomasz Werchowicz**for **DNV GL**

Petter Langnes
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Job Id: **262.1-017646-3**
Certificate No: **TAF00000BD**

Product description

"Fyrewrap Marine Blanket"

Composed of a steel bulkhead insulated on stiffened side with one layer of 55 mm Fyrewrap-I type Fyrewrap marine blanket produced by Unifrax(Suzhou) Co., Ltd with density 96 kg/m³ between the stiffeners. The stiffeners are fitted with one additional layer of 25 mm thick insulation of the same type as above.

The bulkhead insulation is fixed by steel pins and spring washers (approx. 22 set/m²).

For further details, including pinning details, see drawing listed under Type Approval documentation below.

This product can be manufactured at:

- Unifrax(Suzhou) Co., Ltd. – address: No. 51 Shiyang Road, New District, Suzhou City 215151, Jiangsu Province, China
- Unifrax UK – address: Mill Lane, Rainford, St.Helens, Merseyside, WA118LP, United Kingdom
- Unifrax France – address: 17 Rue Antoine Durafour, BP2, 42420 Lorette, France
- Unifrax India – address: 99 k Stone Ahmedabad Surendrangar Hwy Lakhtar, Dist. Surendrangar, 382 775 Gujarat, India
- Unifrax Brasil Ltda – address: Avenida Independencia, 7033 Bairro Sao Matheus Vinhedo, SP13280-000, Brazil
- Unifrax Inc LLC (New Carlisle) – address: 54401 Smilax Road, New Carlisle, Indiana 46552, United States of America

Application/Limitation

Any surface materials used have to be approved for smoke and toxicity and low flame spread characteristics (IMO 2010 FTP Code Parts 2 and 5) when required according to relevant rules.

Each product is to be supplied with its manual for installation and use.

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2015.

Test Report No. FT14059 dated 19 March 2014 from Far East Fire Testing Centre (FEFTC), Shanghai.
Drawing No. FP-14001 from Unifrax(Suzhou) Co., Ltd.

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

Marking of product

The product or packing is to be marked with name of manufacturer, type designation and fire-technical rating.

Transport Canada Approval

Based on the procedures laid down in the Transport Canada Publication entitled "Approval Procedures for, Life Saving Equipment and Structural Fire Protection Products (TP 14612)", DNV GL confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements.



Job Id: **262.1-017646-3**
Certificate No: **TAF00000BD**

Periodical assessment

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Class Programme DNVGL-CP-0338, Section 4.