

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the "A" Class divisions, fire integrity

with type designation(s)

A-60 Steel Bulkhead - FireMaster Marine Plus Blanket 45 mm x 64 kg/m3

Issued to

Thermal Ceramics UK Ltd
WIRRAL MERSEYSIDE, United Kingdom

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2015/559,**

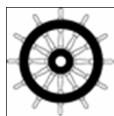
Annex A.1, item No. A.1/3.11a and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation II-2/3.2.5 and IMO 2010 FTP Code.

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2021-11-03.**

Issued at **Høvik** on **2017-01-08**

DNV GL local station:
Manchester



for **DNV GL AS**

Approval Engineer:
Helge Bjørnarå

Notified Body
No.: **0575**

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Vidar Dolonen
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Job Id: **344.1-005430-2**
Certificate No: **MEDB00001NT**

Product description

A-60 Steel Bulkhead - FireMaster Marine Plus Blanket 45 mm x 64 kg/m³
composed of a structural steel bulkhead insulated with a single layer of 45 to 65 mm thick FireMaster Marine Plus Blanket (density 64 kg/m³) applied across the tops of stiffeners following their contours.

The nominal blanket width is 610 mm and to be installed in 600 mm widths to form slight compressed butted joints.

The blankets are held in place using mild steel pins (Ø 3 mm / typically 60 mm long) welded to the bulkhead with friction-fit mild steel washers. The pins are to be installed with a nominal spacing of 300 mm across the blankets and on average 300 mm (maximum 350 mm) along the blankets, whereas pins at the joints between blankets shall have a nominal spacing of 150 mm from the blanket edge. Maximum pin distance to lengthways joint is 250 mm.

The installation is to be performed according to the manufacturers Fire Protection Systems Information, reference No. FM-MS 01 PW and No. FM 4.69.

Application/Limitation

Approved for use as a vertical fire retarding division of class A-60.

Restricted application: Fire hazard from the insulated side only

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity. This requirement may also be applicable for surface materials used, if required by relevant rules and regulations.

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

Type Examination documentation

Test report No. KOMERI-0402-15T4078 dated 01 July 2016 from Korea Marine Equipment Research Institute, Busan, Korea.

Test report No. KOMERI-0402-13T1606 dated 01 November 2013 from Korea Marine Equipment Research Institute, Busan, Korea.

Thermal Ceramics Fire Protection Systems Information, reference No. FM-MS 01 PW and No. FM 4.69 Rev. 2.

Test carried out

Tested according to IMO 2010 FTP Code Part 3.

Marking of product

The product is to be marked with name and address of manufacturer, type designation, fire technical rating, the MED Mark of Conformity and USCG approval number if applicable (see page 1).