

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00000Y7
Revision No:
2

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 Norway.

This is to certify:

That the "A" Class divisions, fire integrity

with type designation(s)

A-60 Steel Bulkhead - Fire To Either Side - 45 mm FireMaster Marine Plus Blanket

Issued to

Thermal Ceramics UK Ltd
Wirral, Merseyside, United Kingdom

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

Regulation **(EU) 2019/1397,**

item No. MED/3.11a. SOLAS 74 as amended, Regulation II-2/3.2 & II-2/9, IMO 2010 FTP Code, IMO MSC/Circ.1120 and IMO MSC.1/Circ.1434, IMO MSC.1/Circ.1435.

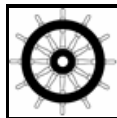
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2025-04-02.**

Issued at **Høvik** on **2020-04-03**

DNV GL local station:
Manchester

Approval Engineer:
Helge Bjørnarå



Notified Body
No.: **0575**

for **DNV GL AS**

Roald Vårheim
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, and amended by Decision No 1/2019 dated February 22nd, 2019.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Job Id: **344.1-000502-104**
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Product description

"A-60 Steel Bulkhead – Fire To Either Side - 45 mm FireMaster Marine Plus Blanket", composed of a structural steel bulkhead insulated with a single layer of 45 mm thick or two layers with total thickness of 68 mm (30 mm + 38 mm) of FireMaster Marine Plus Blanket (density 128 kg/m³) between stiffeners and a layer of 25 mm thick, 300 mm wide strips of FireMaster Marine Plus Blanket (density 128 kg/m³) on the stiffeners, alternatively insulated with a single layer of 45 mm thick FireMaster Marine Plus Blanket (density 128 kg/m³) applied across and wrapped around the stiffeners.

The blankets are held in place using copper coated mild steel pins (Ø 3 mm / typically 65 and 105 mm long) welded to the bulkhead and 38 mm friction-fit washers. The pins are to be installed with a nominal spacing of 350 mm / 175 mm (Ref. Data Sheet No. FM 4.81). At the joints the blankets should be compressed and the pins shall have a nominal spacing of 100 mm.

For alternative arrangement, the pins are to be installed with maximum spacing of 350 mm (maximum distance to lengthways joint is 250 mm) across the blankets and nominal spacing 300 mm (maximum 350) along the blankets, whereas pins at the joints between blankets shall have a nominal spacing of 150 mm (maximum 250 mm) from the blanket edge.

The installation is to be performed according to the manufacturers Fire Protection Systems Information, reference No. FM MS 01 PW and No. FM 4.81.

Application/Limitation

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

General application: Fire hazard from either side

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. FT09147 dated 21 July 2009 from Far East Fire Testing Centre, Shanghai, China.

Thermal Ceramics Fire Protection Systems Information, reference No. FM MS 01 PW and No. FM 4.81, Rev. 4.

Assessment Report No 16/12281-943 dated 12 May 2016 from Applus+ Laboratories, Barcelona, Spain.

Tests carried out

Tested according to IMO FTP Code Part 3 (IMO Res. A.754(18)) and in compliance with IMO 2010 FTP Code Ch. 8.

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 front page).