

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 Norway.

This is to certify:

That the "A" Class divisions, fire integrity

with type designation(s)

A-60 Steel Bulkhead (Fire Either Side) - FireMaster Marine Plus Blanket 80 mm x 48 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) 2017/306,**

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

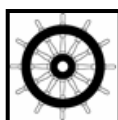
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2023-04-07**.

Issued at **Høvik** on **2018-04-08**

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.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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



Product description

"A-60 Steel Bulkhead (Fire Either Side) - FireMaster Marine Plus Blanket 80 mm x 48 kg/m³", composed of a structural steel bulkhead insulated with two layer of 40 mm thick FireMaster Marine Plus Blanket (density 48 kg/m³). First 40 mm layer is fitted between stiffeners and second 40 mm layer is applied across and over stiffeners. The 40 mm insulation layer over the stiffeners may be compressed to no less than 25 mm.

The blankets are held in place using copper coated mild steel pins (Ø 3 mm / typically 90-100 mm long) welded to the bulkhead and 38 mm friction-fit washers. The pins are to be installed with a maximum spacing of 350 mm. At the joints the blankets should be compressed. Joints between blankets can be placed a maximum of 350 mm from an anchor pin across the blanket width and a maximum of 250 mm from an anchor pin where lengths of blanket are joined together.

The installation is to be performed according to the manufacturers Fire Protection Systems Information, reference No. FM-MS 01 PW and No. FM 4.100.

Application/Limitation

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

General application: Fire hazard from either side

The insulation system is also approved for corrugated bulkheads composed of a minimum 4.5 mm steel.

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. FT12007 dated 19 January 2012 from Far East Fire Testing Centre, Shanghai, China.
Test report No. 227561 dated 16 June 2008 from BRE, Garston, UK.

Thermal Ceramics Fire Protection Systems Information, reference No. FM-MS 01 PW and No. FM 4.100, Rev. 4.

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).