



TYPE APPROVAL CERTIFICATE

Certificate No:
TAF00000HR
Revision No:
3

This is to certify:

That the Class H Fire Wall and Bulkhead

with type designation(s)
H-60 Steel Bulkhead – 2 x 40 mm FireMaster Marine Plus Blanket

Issued to
Thermal Ceramics UK Ltd
Wirral, Merseyside, United Kingdom

is found to comply with
DNV offshore standards

Application :

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

Restricted application: Fire hazard from the insulated side only

Issued at **Høvik** on **2023-05-10**

for **DNV**

This Certificate is valid until **2028-05-09**.
DNV local unit: **UK & Ireland CMC & VMC**

Approval Engineer: **Helge Bjørnarå**

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Jowita Permoda
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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.



Product description

H-60 Steel Bulkhead – 2 x 40 mm FireMaster Marine Plus Blanket, composed of a structural steel bulkhead insulated with two layers of 40 mm thick FireMaster Marine Plus Blanket (manufactured by Thermal Ceramics with density 70 kg/m³) between stiffeners and two layers (minimum 200 mm wide strips) of 40 mm thick FireMaster Marine Plus Blanket (density 70 kg/m³) on the stiffeners.

Total insulation thickness: 80 mm

The blankets are held in place using steel pins (Ø 3 mm / length should be 12 to 25 mm longer than blanket lining thickness) welded to the bulkhead and friction-fit washers. The pins are to be installed on adjacent sides of the stiffeners with a nominal spacing of 350 mm and 450 mm between stiffeners crosswise the blanket. The nominal blanket width is 610 mm and is to be compressed to a width of 600 mm at joints.

The insulation may be treated with a water repellent additive without reducing its performance.

The installation is to be performed according to the manufacturers Method Statement No. FM MS 01 PW and Fire Protection Systems Information No. FM 4.93.

The products may be manufactured at the premises of:

- Morgan Kailong (Jingmen) Thermal Ceramics Co., Ltd., Jingmen, China
- Morgan Thermal Ceramics (Shanghai) Co., Ltd., Shanghai, China
- Thermal Ceramics de France S.A., Saint Marcelin en Forez, France
- Murugappa Morgan Thermal Ceramics Ltd., Gujarat, India
- Murugappa Morgan Thermal Ceramics, Ranipet, India
- Thermal Ceramics Korea, Daegu, Korea
- Grupo Industrial Morgan SA de CV, Pachuca de Soto, Mexico
- Morgan Advanced Materials Industries Ltd, Kizad, United Arab Emirates
- Thermal Ceramics, Augusta, United States

Application/Limitation

Approved for use as a fire retarding bulkhead of class H-60.

Restricted application: Fire hazard from the insulated side only

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

Type Approval documentation

Certification in accordance with Class Programme DNV-CP-0338, September 2021.

Test report No. FT07286 dated 27 December 2007 from Far East Fire Testing Centre, Shanghai, China.

Assessment report No. P105762-1001B, Issue 1, dated 02 December 2016 from BRE Global Ltd., Watford, UK.

Thermal Ceramics Fire Protection Systems Information, reference No. FM MS 01 PW, Rev.9 and No. FM 4.93, Rev.2.

Tests carried out

Tested according to IMO FTP Code Part 3 (IMO Res. A.754(18)) with the hydrocarbon time-temperature curve specified in ISO 834-3.

Marking of product

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

Periodical assessment

DNV'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 DNV-CP-0338, Section 4.