DNV·GL

Certificate No:
**TAF00000VE**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Class H Fire Wall and Bulkhead**

with type designation(s)
**H-60 Steel Bulkhead Fire Either Side – 130 mm FireMaster Marine Plus Blanket**

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

is found to comply with
**DNV GL offshore standards**

## Application :

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

**General application: Fire against either side**

Issued at **Høvik** on **2017-12-21**
This Certificate is valid until **2022-12-20**.
DNV GL local station: **Manchester**

Approval Engineer: **Helge Bjørnarå**

for **DNV GL**

**Mårten Schei-Nilsson**
**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.


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Job Id: **262.1-005937-9**
Certificate No: **TAF00000VE**

## Product description

"H-60 Steel Bulkhead Fire Either Side – 130 mm FireMaster Marine Plus Blanket",
composed of a structural steel bulkhead insulated with 130 mm FireMaster Marine Plus Blanket (density 70 kg/m$^3$) applied in 3 layers (50 mm + 40 mm + 40 mm). The stiffeners to be packed with same blanket.

First 50 mm layer is fitted vertically between stiffeners. The second and third layers 40 mm thick are fitted horizontally across and over stiffeners with joints staggered by half a blanket width. The nominal blanket width is 610 mm and is to be compressed to a width of 600 mm to ensure compression at joints.

The blankets are held in place using copper coated mild steel pins (Ø 3 mm / minimum 140 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 may be placed at any place in between the anchor pins.

The installation is to be performed according to the manufacturers Method Statement No. FM-MS 01 PW and Fire Protection Systems Information No. FM 4.106.

## Application/Limitation

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

General application: Fire against either side

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

The products may be manufactured at the premises of:

- Thermal Ceramics de France S.A., Saint Marcelin en Forez, France
- Thermal Ceramics, Augusta, United States
- Thermal Ceramics Korea, Daegu, Korea
- Morgan Kailong (Jingmen) Thermal Ceramics Co,. Ltd., China
- Morugappa Morgan Thermal Ceramics, Ranipet, India

## Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2017.

Test report No. KOMERI-0402-12T140 dated 14 March 2013 from Korea Marine Equipment Research Institute, Busan, Korea.

Thermal Ceramics Method Statement No. FM-MS 01 PW and Fire Protection Systems Information No. FM 4.106, Rev. 2.

## Tests carried out

Tested in accordance with IMO 2010 FTP Code Part 3 with the hydrocarbon time-temperature curve specified in ISO 843-3.

## Marking of product

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

## Periodical assessment

DNV 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.