

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Class H Fire Wall and Bulkhead**

with type designation(s)

H-120 Steel Bulkhead – 3 x 50 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-120.**Issued at **Høvik** on **2018-05-28**This Certificate is valid until **2023-05-27**.DNV GL local station: **Manchester**for **DNV GL**Approval Engineer: **Helge Bjørnarå**

**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.



Product description

H-120 Steel Bulkhead – 3 x 50 mm FireMaster Marine Plus Blanket, composed of a structural steel bulkhead insulated with one layer of 50 mm thick FireMaster Marine Plus Blanket (density 70 kg/m³) fitted between stiffeners and two layers of the same insulation material fitted between and over stiffeners with joints staggered by a half blanket.

Total insulation thickness 150 mm.

The nominal blanket width is 610 mm and is to be compressed to a width of 600 mm at joints.

The blankets are held in place using steel pins (Ø 3 mm / 12-25 mm longer than blanket thickness) welded to the bulkhead and friction-fit steel washers. The pins are to be installed with a nominal spacing of 350 mm in vertical direction and max 350 mm in horizontal direction.

The installation is to be performed according to the manufacturers Method Statement No. FM MS 01 PW and Fire Protection Systems Information No. FM 4.94.

Application/Limitation

Approved for use as a fire retarding bulkhead of class H-120

General application: Fire against either side*

* In areas with requirements to maximum steel temperature in load bearing constructions, the bulkhead is approved for restricted application: Fire against insulated 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
- Murugappa Morgan Thermal Ceramics, Ranipet, India
- Murugappa Morgan Thermal Ceramics Ltd., Gujarat, India
- Morgan Thermal Ceramics (Shanghai) Co., Ltd., Shanghai, China
- Morgan Kailong (Jingmen) Thermal Ceramics Co., Ltd., Jingmen, China

Type Approval documentation

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

Test report No. FT08147 dated 13 November 2008 from Far East Testing Centre, Shanghai, China.

Thermal Ceramics Method Statement No. FM MS 01 PW and Fire Protection Systems Information No. FM 4.94, Rev. 3.

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 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.