

**TYPE APPROVAL CERTIFICATE****This is to certify:****That the Jet Fire Protection**with type designation(s)  
**Jet Fire Resistant Corrugated Fire Wall**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 jet fire barrier of rating JF / fire barrier / 120 °C / 30 min.****Restricted application: Jet fire against the non-insulated steel side**Issued at **Høvik** on **2020-09-21**for **DNV GL**This Certificate is valid until **2024-09-30**.DNV GL local station: **Manchester**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.

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: **262.1-019202-3**  
Certificate No: **TAF00001AX**  
Revision No: **1**

## Product description

"Jet Fire Resistant Corrugated Fire Wall",

Composed of a 3 mm corrugated steel plate insulated on unexposed side with three layers (50 mm + 50 mm + 25 mm) of FireMaster Marine Plus Blanket (70 kg/m<sup>3</sup>).

Minimum total insulation thickness: 125 mm

The recesses in the corrugated panel are to be packed with FireMaster Marine Plus of the same density.

All layers are placed horizontally, perpendicular to the corrugation.

First layer 50 mm, second layer 50 mm and third layer 25 mm.

Horizontal joints between layers to be offset by half blanket.

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

Vertical joints to be offset by 300 mm.

The blankets are held in place by steel pins (Ø 3 mm / typically 12 mm to 25 mm longer than the blanket length) welded to the wall and friction-fit steel washers.

Maximum distance between pins 300 mm. Maximum 150 mm from blanket joints.

The installation is to be performed according to the manufacturers Method Statement No. FM MS 01 PW and Fire Protection Systems Information No. FM 4.109.

The products may be manufactured at the premises of:

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

## Application/Limitation

Approved for use as a jet fire barrier (jet fire against non-insulated side) of rating (Type of fire/Type of application/Critical temperature rise (°C)/Period of resistance (minutes)):

JF / fire barrier / 120 °C / 30 min and;

JF / fire barrier / 140 °C / 30 min and;

JF / fire barrier / 180 °C / 120 min

Any project specific design solutions arrived at on basis of this certificate are to be further validated by project specific approvals carried out by the appointed verifying authority for each project in each case at the detail engineering stage.

The approval refers only to the fire resistance properties of the system.


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

## Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, September 2018.

Test report No. MH/14/153 from Health and Safety Laboratory (HSL), Buxton, UK.

Thermal Ceramics Method Statement No. FM MS 01 PW and Fire Protection Systems Information No. FM 4.109, Rev. 0.



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### **Tests carried out**

Tested according to ISO 22899-1:2007.

### **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.