



DET NORSKE VERITAS

EC TYPE-EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2008/67/EC, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This certificate is issued by Det Norske Veritas under the authority of the Government of the Kingdom of Norway.

CERTIFICATE NO. **MED-B-5709**

This is to certify that the
"A" Class divisions, fire integrity


with type designation(s)
A-60 Steel Bulkhead - Fire To Either Side - 45 mm FireMaster Marine Plus Blanket

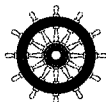
Manufacturer
Thermal Ceramics UK Ltd
WIRRAL, United Kingdom

is found to comply with the requirements in the following Regulations/Standards:
Annex A.1, item No. A.1/3.11a and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulation II-2/3.2.5 and IMO FTP Code.

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

Høvik, 2009-12-14
for Det Norske Veritas AS


Eivind Mykland
Head of Department

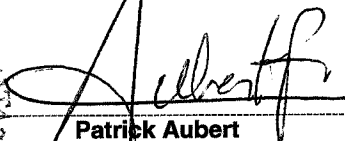


Notified Body No.: **0575**

DNV local office:
DNV Liverpool

This certificate is valid until
2014-12-14




Patrick Aubert
Surveyor



Notice: The certificate is subject to terms and conditions overleaf. Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this certificate invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended.

The Mark of Conformity may only be affixed to the product and a Declaration of Conformity may only be issued when the production/product assessment module referred to in the council directive, is fully complied with.



Certificate No.: MED-B-5709
Item No.: A1/3.11a
Job Id.: 344.1-000502-4

Product description

"A-60 Steel Bulkhead – Fire To Either Side - 45 mm FireMaster Marine Plus Blanket", composed of a 5 mm steel bulkhead insulated on the stiffened side with a single layer of 45 mm thick FireMaster Marine Plus Blanket (density 128 kg/m³) and one layer 25 mm thick FireMaster Marine Plus Blanket of density 128 kg/m³ (300 mm wide strips) on the stiffeners.

The blankets are held in place using copper coated mild steel pins (Ø 3 mm / typically 65 and 105 mm long) welded to the bulkhead and 38 mm friction-fit washers. The pins are to be installed with a nominal spacing of 350 mm / 175 mm (Ref. Data Sheet No. FM 4.81). At the joints the blankets should be compressed and the pins shall have a nominal spacing of 100 mm.

The installation is to be performed according to the manufacturers Method Statement No. FM-MS 01 PW and Fire Protection Systems Information No. FM 4.81.

Application/Limitation

Approved for use as a fire retarding division of class A-60 for general application: Fire hazard from either side.

The insulation material FireMaster Marine Plus Blanket has to be approved according to the Marine Equipment Directive and bear the Mark of Conformity.

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

Type Examination documentation

Test report No. FT09147 dated 21 July 2009 from FAR EAST FIRE TESTING CENTRE, Shanghai, China.

Tested according to IMO FTPC Part 3 (IMO Res. A.754(18)).

Thermal Ceramics Method Statement No. FM-MS 01 PW and Fire Protection Systems Information No. FM 4.81.

Marking of product

The product is to be marked with name of manufacturer, type designation, fire technical rating, the MED Mark of Conformity and USCG approval number if applicable (see below).

Mark of Conformity

The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

Module D: The quality system for production and testing shall be approved by the Notified Body.

Module E: The quality system for inspection and testing shall be approved by the Notified Body.

Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a of Certificate Conformity.

USCG Approval

An 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.

