

**UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND
CERTIFICATE OF TYPE APPROVAL**

(EC Certificate of Type Examination-2014/90/EU Directive Module B)

Certificate Number: 164.108/1121/WCL MED0181TE

Applicant:-	TBA Protective Technologies Ltd	Manufacturer:	TBA Protective Technologies Ltd
Address:-	Unit 3, Transpennine Trading Estate, Gorrells Way, Rochdale OL11 2PX, UK	Address:-	Unit 3, Transpennine Trading Estate, Gorrells Way, Rochdale OL11 2PX, UK

This is to certify that the applicant has submitted details of a A30 & A60 Class Division constructed from a fire protection material known and designated as:-

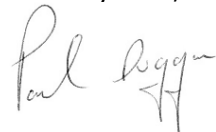
NAUTILUS MFA60SB

having the technical specification given in the schedule of equipment on this certificate which has been tested and complies with the recommended criteria given in the following methods, published by the International Maritime Organisation, and which are contained in the relevant parts of the International Code for Application of Fire Test Procedures (FTP Code) namely:-

IMO Resolution MSC 61(67) Annex 1 Part 3, and Annex 2.
IMO Resolution A.754(18) MSC/Circ 1005
IMO Resolution MSC 61(67) Annex 1 Part 1, and Annex 2.
IMO Resolution A.799(19)

This certificate is issued on behalf of the Maritime and Coastguard Agency (MCA). The system complies with the relevant international testing standards under which legislation (The Merchant Shipping Marine Equipment) Regulations 1999 and also the Marine Equipment Directive 96/98 amended by Directive 98/95 and Directive 2001/53) the certificate is issued.

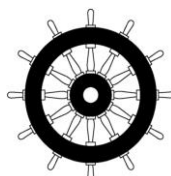
The manufacturer is allowed to affix the U.S. Coast Guard approval number 164.108/1121/WCL MED0181TE as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 27th, 2004.



P Duggan
Manager
Warrington Certification
Holmesfield Road
Warrington WA1 2DS

Date of Issue: 3rd March 2016
Date of Re-Issue: 17th October 2017
This certificate is valid until: 2nd March 2021

This certificate is not valid for equipment, the design or manufacture of which, has been varied or modified from the specimens tested.



Certificate of Type Approval Schedule of Equipment

The applicant declared that the following comprises an accurate description of the system type to which this certificate applies.

The product is to be used to form an A30 & A60 Class Vertical or Horizontal Division

The vertical division consists of:

NAUTILUS MFA60SB Woven Glass Fibre Composite

The specimen bulkhead had overall nominal dimensions of 3000 mm high by 3020 mm wide and conformed with the construction requirements of IMO A.754 (18) for an 'A' Class mild steel bulkhead. The bulkhead was insulated on its stiffened face with three layers of "NAUTILUS MFA60SB" (Item 3 in adjacent figure). Each layer was formed from three vertically jointed sections of the material. The vertical edges of the adjacent sections of material were gathered and stapled together with stainless steel staples to form two vertical joints. Galvanised steel channel sections were fixed across the head and base of the bulkhead and stitch welded in place. The material was fixed over the face of the bulkhead by means of trapping it between the channels and light gauge steel angles which were screw fixed through the material and into the channels such that the material was secured back to the bulkhead at the head and base. The material overlapped the vertical edges of the bulkhead, but was not fixed at these positions.

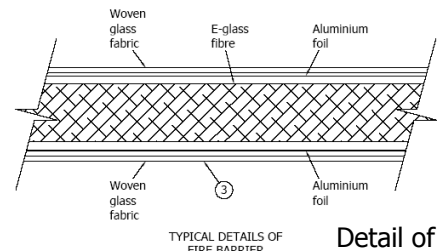
Full details are given in the test report referenced WF Test Report No. 146400.

The horizontal division consists of:

NAUTILUS MFA60SB Woven Glass Fibre Composite below a mild steel deck

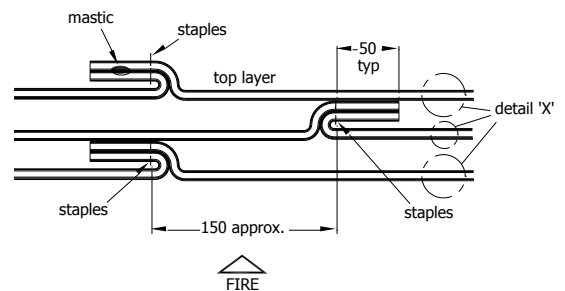
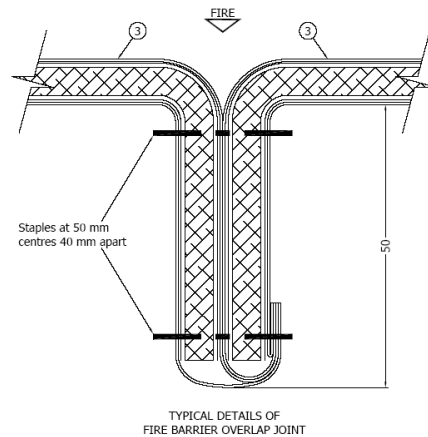
The deck was insulated on its stiffened face with **three layers** of a multiple layered blanket material referenced 'NAUTILUS MFA60SB'. Each layer (shown in the adjacent figure) was formed from three sections of the material laid across the stiffeners and jointed along their adjoining edges. The edges of the adjacent sections of material were gathered and stapled together with stainless steel staples to form two joints. Galvanised steel channel sections were weld fixed around the perimeter of the deck and to the side of the three central stiffeners. The material was fixed to the underside of the deck by means of trapping it against the channels with light gauge steel angles screw fixed through the material and into the channels. The material overlapped the perimeter edges of the deck, and was fixed back to the furnace surround to simulate the continuation of the material into the vertical plane as it would be in practice.

Full details are given in the test report referenced WF Test Report No. 154868.



TYPICAL DETAILS OF FIRE BARRIER

Detail of
NAUTILUS
MFA60SB'



The under noted documents have been approved for compliance with the relevant requirements of International Conventions and European Union Legislation for the EC Type examination of Marine Equipment for use on Ships Registered in the European Economic Area.

Approved Documents

Test Reports

- (1) WARRES No. 144381 (fabric). IMO Resolution MSC 61(67) Annex 1 Part 1 and Annex 2. IMO Resolution A.799(19)
- (2) WARRES No. 144382 (needle fabric): IMO Resolution MSC 61(67) Annex 1 Part 1 and Annex 2. IMO Resolution A.799(19)
- (3) WF Test Report No. 146400: IMO Resolution MSC 61(67) Annex 1 Part 3 and Annex 2. IMO Resolution A.754(18). IMO MSC/CIRC 1005
- (4) WF Test Report No. 154868: IMO Resolution MSC 61(67) Annex 1 Part 3 and Annex 2. IMO Resolution A.754(18). IMO MSC/CIRC 1005

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