DNV·GL

Certificate No:
MEDB00004E7

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the Fire Doors

with type designation(s)
B-15M double

Issued to
R & M International GmbH
Hamburg, Germany

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773,**
item No. MED/3.16. SOLAS 74 as amended, Regulation II-2/9, IMO 2010 FTP Code and IMO MSC.1/Circ.1511

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

This Certificate is valid until **2023-09-11**.

Issued at **Hamburg** on **2018-09-12**

DNV GL local station:
Rostock

Approval Engineer:
Pavel Golyshev

Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudszus
Head of Notified Body

A 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 European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment", signed February 27th, 2004.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.
This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.
Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

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Product description

"B-15M double"
A double-leaved hinged fire door composed of door leaves and frame and various fittings.

Each door leaf is made by 0.7 mm thick steel sheets and 1.5 mm thick reinforcing steel U-profiles of specifications 25 mm x 35 mm x 25 mm placed inside along the edges of both door leaves. Each door leaf is insulated inside with 37.5 mm thick stone wool of type Tizol-Flot 150 (manufactured by Tizol, nominal density: 150 kg/m³). Outside along the edges of door leaves 0.7 mm thick edge trim U-profiles of specifications 15 mm x 43 mm x 15 mm are arranged and fixed to the reinforcing profiles by means of steel rivets. Both door leaves are mounted with a door stopper list 3 mm x 40 mm made by 1.5 mm thick steel sheet and fixed to door leaves and frame by steel screws, acc. to drawing no. B-15M-DOUBLE_FIRETEST_07.2018_02-07.

The door frame is composed of 1.5 mm thick steel Z-profile of specifications 40 mm x 51.5 mm x 40 mm along the vertical edges. Clamping frame 2.0 thick steel L-profiles of specifications 20 mm x 45 mm are mounted along side the frame profiles for the wall connections. At the top of door frame, a 51.5 mm thick top panel of external size of 235 mm in height (255 mm including additional overlap of 20 mm on the side exposed to fire) is installed as one part of it. The top panel is made by 1.5 mm steel sheet. Both vertical frames and top panel are insulated inside with stone wool of type Tizol-Flot 150 (manufactured by Tizol, nominal density: 150 kg/m³). The bottom of the door frame is made by two steel U-profiles mounted inside each other (the lower profile is 1.0 mm thick and the upper profile is 1.5 mm thick) and covered by another 1.0 mm thick U-profile, acc. to drawing no. B-15M-DOUBLE_FIRETEST_07.2018_02-07 detail 4.

Adhesive of approved type is used in the interior of door leaf, frame and frame top panel for fixation of insulation material.
Each door leaf is connected to the frame by three steel hinges. The active door leaf is fitted with a handle and a latch/bolt lock made of steel and the passive door leaf is fitted with two steel flush bolt locks each installed separately at the top and bottom of the door leaf, respectively. The door frame is bolted to the bulkhead (self-drilling 4.2 x 32 mm steel screws are used) and may also be tack- and fully welded to the bulkhead.

Each door leaf may be optionally fitted with:

- Fireproof rectangular glass window of multilayer construction (with the exterior dimensions of 440 mm x 440 mm and total thickness of the glass pane 23 mm) of type Pilkington Pyrosrop 60-101, provided by Pilkington Deutschland AG Gelsenkirchen, Germany. Window frame and fixing details acc. to drawing no. B-15M-DOUBLE_FIRETEST_07.2018_05-07;
- Fireproof circular glass window of multilayer construction (with the exterior dimensions of 440 mm in diameter and total thickness of the glass pane 23 mm) of type Pilkington Pyrosrop 60-101, provided by Pilkington Deutschland AG Gelsenkirchen, Germany. Window frame and fixing details acc. to the supplement to test report PGA11232A with the enclosed drawing no. B-15M-DOUBLE_ASSESSMENT-WINDOW-SHAPE_01-01;
- Escape panel with the exterior dimensions of 630 mm x 630 mm arranged as integrated part of the door leaf with slots cut into the steel sheet under the circumference of cover profile made by 1.5 mm x 30 mm steel plate, further details acc. to drawing no. B-15M-DOUBLE_FIRETEST_07.2018_03-07.
- Ventilation unit with the exterior dimensions of 380 mm x 396 mm (width x height) fitted with automatic closing device (safety fuse), further details acc. to drawing no. B-15M-DOUBLE_FIRETEST_07.2018_04-07.

Total thickness of each door leaf: 39 mm (not including the edge trim profiles).

For further details, see test report and supplement to test report (both with enclosed drawings) listed under Type Examination documentation below.

Application/Limitation

Approved for use as an integrated part of fire retarding division of class B-15.

Maximum size of each door leaf: 1114 mm x 2212 mm (width x height).
Maximum size of clear opening of the fire door: 2200 mm x 2200 mm (width x height).
Maximum size of exposed fire technical glazing unit:
Rectangular window: 400 mm x 400 mm (width x height)
Circular window: 400 mm in diameter
Maximum clear opening of escape panel: 570 mm x 570 mm (width x height).

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity. This requirement may also be applicable for surface materials used, if required by relevant rules and regulations.

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

Type Examination documentation

Test report no.: PGA11255A dated 23rd of July 2018 and supplement to test report PGA11232A (Revision no. 1) dated 7th of September 2018 both issued by Danish Institute of Fire and Security Technology (DBI), Denmark.

Tests carried out

Tested according to IMO Resolution MSC.307(88) – 2010 FTP Code Annex 1, Part 3.

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire-technical rating, MED Mark of Conformity and USCG approval number if applicable (see first page).

USCG approval limitations

The approval is limited to fire doors without windows and doors with total window area of 645 cm², or less, in each door leaf. Doors with a window area exceeding 645 cm² are not part of this certificate and need direct USCG approval.

USCG Approval Category (Module B) number

This product has been assigned a U.S. Coast Guard Module B number 164.136/EC0098 to note type approval to Module B only as it pertains to obtaining US Coast Guard approval 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.