

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB0000465
Revision No:
1

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-15K

Issued to
R & M International GmbH
Hamburg, Germany

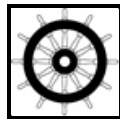
is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2019/1397**,
item No. MED/3.16. SOLAS 74 as amended, Regulation II-2/9, IMO 2010 FTP Code and IMO MSC.1/Circ.1511, IMO MSC.1/Circ.1319

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

This Certificate is valid until **2023-06-25**.

Issued at **Hamburg** on **2020-07-02**

DNV GL local station:
Hamburg CMC



for **DNV GL SE**

Approval Engineer:
Roland Priebe

Notified Body
No.: **0098**

Gerhard Aulbert
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, and amended by Decision No 1/2018 dated February 18th, 2019.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.



Job Id: **344.1-008249-2**
Certificate No: **MEDB0000465**
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Product description

The **B-15K** is a three hinged single door manufactured of 0.7 mm galvanised steel sheets. A door leaf inlay of 0.7 mm galv. steel sheets is installed in addition. The inlay steel sheets were mounted with an air gap of 23 mm. Steel shell and steel inlay are isolated between with an 6.5 mm thick stone wool insulation (Tizol-Flot 200 manufactured by Tizol, Density: 200 kg/m³). The insulation is glued with an adhesive of approved type.

The door leaf

Is mounted with two ventilation grills, each containing an automatic closing device. On the exposed side the ventilation grill is mounted 240 mm from the bottom edge of the door leaf and on the unexposed side 238 mm from the top edge. In the upper part inside the door leaf, to the opposite side of the exposed grill, a 6 x 225 x 460 mm fire board type "Promina M" (density 1000 kg/m³) from Promat Shanghai Ltd. has been placed. Alternatively a fire board type "Cemval Protect MARINE" (density 980 kg/m³) from ChemTrade GmbH may be used – see assessment No. 20190459 from MPA Dresden.

The Inside frame of the door leaf was insulated with a 32 mm thick stone wool (Tizol-Flot 150, Manufactured by Tizol, density: 150 kg/m³). The insulation was held in place by a 25 x 35 x 25 mm U-profile which was fixed to the door leaf frame with steel pop-rivets along all edges. A bottom gap profile 7 x 15 x 1 mm was mounted along the bottom of the door leaf. The profile was fixed by means of 5 pcs. of steel pop-rivets along all edges.

Along all edges of the door leaf a 15 x 43 x 15 mm galv. steel U-profile was mounted. The galv. steel profile was folded inwards along the 15 mm edges.

Ventilation Labyrinth

In the 23 mm cavity between the internal layers of 0.7 mm steel sheets various sized pieces of 23 mm thick Tizol-Flot 150, has been glued in a staggered position to the steel sheets forming a channel between the ventilation grill at the top and the bottom of the door leaf.

Kickout Panel:

The door may also be fitted with an escape panel 600 x 600 mm (height x width) with ventilation louver in lower part of door blade.

Door Frame

The frame profiles consisting of galv. steel Z-profile along the vertical sides with a thickness of 1.5 mm, folded inwards at both ends and insulated with 48.5 mm thick stone wool (Tizol-Flot 150, manufactured by Tizol, Density: 150 kg/m³).

The bottom of the door frame consisted of a 51.5 x 17 x 1039 x 1.5 mm galv. steel U-profile .

The frame profiles is fixed to the bulkhead with 4.2 x 16 mm self drilling steel screws

An intumescent sealing of Promaseal PL was placed at the bottom between the frame profile and the U-profile

The top frame consisted of a panel manufactured from 1.5 mm galv. steel sheet insulated with one layer of stone wool (Tizol-Flot 200, Density: 200 kg/m³). The insulation was glued on both sides with an adhesive of approved Type.

The height of the top panel was 335 mm on the unexposed side and 355 mm including 20 mm overlap on the exposed side.

Door Assesoires:

Steel lock. The lock case made of 1.5 mm thick steel.

Three steel hinges which were screwed to the door leaf and frame.

Steel handle.

The spy eye designated Beijing OuPu 4014 The spy eye was placed mid-width in the upper part of the door.

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Total thickness of door 39mm.

For further details, see test report and assessments listed under Type Examination documentation below.

Application/Limitation

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

Max. clear opening door size (as tested) : 1000 x 2100 mm (height x width).

Max. clear opening escape panel (as tested): 600 x 600 mm (height x width)

The door has been successfully tested with extended test period for at least 18 minutes for insulation and 36 minutes for fire integrity in compliance with IMO MSC.1/Circ.1319.

A fire door of marginally larger dimensions than a fire-tested fire door may be individually assessed and accepted by Flag Administration (or Recognized Organization acting on its behalf) for a specific project with the same classification, provided documented compliance with IMO MSC.1/Circ.1319.

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. Report No. PGA11198A dated 18 April 2018 from Danish Institute of Fire and Security Technology, Denmark.

Assessment Report No. 20190459 dated 23rd September 2019 from MPA Dresden, Dresden, Germany.

Tests carried out

Tested according to IMO 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.