EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB00004VD
Revision No:
3

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV 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)
A-60 single door (new concept)

issued to
R & M International GmbH
Hamburg, **Germany**

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2024/1975,**
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 **2029-05-23**.

Issued at **Hamburg** on **2024-11-12**

DNV local unit:
Hamburg – CMC North/East

Approval Engineer:
Meike Grabau

Notified Body
No.: **0098**

for **DNV SE**

Digitally Signed By:
Christine Mydlak-Röder
Location: DNV Hamburg, Germany

Mydlak-Röder, Christine
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 1/2023 dated May 26th, 2023.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

Product description

"A-60 single door (new concept)"
is a single leaf hinged fire door composed of door leaf and frame and various fittings.

Total door leaf thickness (excluding window fixing frame): 53.5 mm.

The door leaf is manufactured from 1.5 mm thick steel sheet which was bent on the unexposed side forming an overlap along the top the vertical edges. The insulation inside the door leaf consists of two layers of 19 mm thick rock wool and a 12 mm thick fire board mounted between them. The three layers are glued together as well as to the steel sheets with an adhesive of approved type. The door leaf is connected to the frame by three steel hinges at one of its vertical edges and fitted with a type C1 lock at the other side.

The three-sided door frame with sill is composed of 4 mm thick steel and either welded or bolted (M10) to the steel bulkhead spaced maximum 300 mm apart.

Variant 1:
Door leaf insulation of type Tizol-Flot 150 (manufactured by Tizol, nominal density: 150 kg/m³) and a fire board of type Promarine PX1 (provided by Promat International, nominal density: 885 kg/m³).

Alternative frame acc. to supplement to test report: U-profile with an extra flange of specification 65 mm x 65 mm x 56 mm x 34 mm and a thickness of 4 mm. This type of frame shall be continuously welded to the steel bulkhead and insulation of the bulkhead shall fill out the hollow frame.

The door may be optionally fitted with fireproof rectangular glass window of one of the following types:
- Type "Pilkington Pyrosrop 60-201" (provided by Pilkington, Germany) of multilayer construction (with the exterior dimensions of 425 mm x 425 mm and total glass pane thickness of 27 mm).
- "Type A-60" (provided by Yuehua Industrial and Technical Glass Factory, Qinghuangdao, P.R. China.), with the exterior dimensions of 425 mm x 425 mm and total glass pane thickness of 32 mm and composed (from the side exposed to fire) of 6 mm toughened glass layer + 20 mm fireproof liquid + 6 mm toughened glass layer.

The door may also be optionally fitted with fireproof circular glass window of one of the following types:
- Type "Pilkington Pyrosrop 60-201" (provided by Pilkington, Germany) of multilayer construction (with the exterior diameter of 425 mm and total glass pane thickness of 27 mm).
- "Type A-60" (provided by Yuehua Industrial and Technical Glass Factory, Qinghuangdao, P.R. China.), with the exterior diameter of 425 mm and total glass pane thickness of 32 mm and composed (from the side exposed to fire) of 6 mm toughened glass layer + 20 mm fireproof liquid + 6 mm toughened glass layer.

The door may be also optionally fitted with self-closing (fitted with chain spring "18") hose port with approx. 150 mm square clear opening (with the door closed). Further fitting: magnetic sensor of type DC124.

The door leaf is mounted with a 1.9 mm x 20 mm intumescent strip of type Promaseal PL (provided by Promat Germany) adhered along the bottom edge of both the door leaf as well as along the top above the hose port and along the hose port vertical edge facing the lock side. Additionally, a 1.9 mm x 20 mm intumescent strip of same type is adhered along the top and the vertical flanges of the door frame profiles.

Variant 2:
Door leaf insulation of type ABM-SR (manufactured by Shanghai ABM Rock Wool, nominal density: 150 kg/m³) and a calcium silicate board of type Cemval PROTECT MARINE (provided by CemTrade, nominal density: 975 kg/m³). Graphite expansion strips type "RM2002" (provided by Shanghai Gallford Fire Sealing Material) are mounted around sides of the leaf.

HK-4000 type marine fireproof sealant is used for sealing edge of the door frame on unexposed side with steel plate of bulkhead structural core.

For further details, see documents listed under Type Examination documentation below.

Application/Limitation

Approved for installation in steel bulkheads of class A-60. Installation of the door in bulkheads made of other materials (aluminium, FRP, etc.) are subject to case-by-case approval.

Maximum door leaf size: 1328 mm x 2235 mm (W x H)
Maximum clear door opening: 1250 mm x 2200 mm (W x H)

Variant 1:
Maximum clear window opening (rectangular): 400 mm x 400 mm (W x H)
Maximum clear window opening (circular): 400 mm in diameter.

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

Each door is to be supplied with its manual for installation, use and maintenance.

Type Examination documentation

Test report no. PGA11283A (Rev. 1) dated 24 September 2018 from DBI Hvidovre, Denmark.
Supplement to test report PGA11283A dated 15 November 2018 from DBI Hvidovre, Denmark.
2nd supplement (Rev. 1) to test report PGA11283A dated 28 February 2019 from DBI Hvidovre, Denmark.
Test report no. FT24293 dated 18 July 2024 from Far East Fire Testing Centre, Shanghai, China.

Drawing “A-60-SINGLE(NEW CONCEPT)_ASSESSMENT-WINDOW-SHAPE_02-02” dated 01 March 2019 from manufacturer.

Tests carried out

Tested according to IMO 2010 FTP Code, Part 3.

Marking of product

The product is to be marked with name and address of manufacturer, type designation, fire technical rating, the 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. For larger windows, USCG shall be contacted.