DNV·GL

Certificate No:
MEDB00004GA

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)
WDF-M21 Type Class A-60 Double-leaved Fire Door

Issued to
Wuxi Dongzhou Marine Equipment Co., Ltd
Wuxi, China

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 **2023-11-06**.

Issued at **Hamburg** on **2018-11-07**

DNV GL local station:
Jiangyin

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

"WDF-M21 Type Class A-60 Double-leaved Fire Door"
A double-leaved hinged fire door composed of left and right door leaves and frame and various fittings.

Each door leaf consists of:

- Face sheet I: 1.2 mm thick steel plate
- Fireboard I: 8 mm thick YB type inorganic fireproof board (nominal density 1000 kg/m³) produced by Suzhou Youlian Ship Fitting Co., Ltd.
- Insulating core: 40 mm ceramic wool (two layers with each nominal 20 mm thick) of type TG-2 (nominal density 170 kg/m³) produced by Yixing Yuanyang Ship Material Co., Ltd.
- Fireboard II: 8 mm thick YB type inorganic fireproof board (nominal density 1000 kg/m³) produced by Suzhou Youlian Ship Fitting Co., Ltd.
- Face sheet II: 1.2 mm thick steel plate

The four-sided door frame is made by 1.5 mm thick steel plate and stiffener made by 55 mm x 3 mm steel plate inside, and is filled inside with ceramic wool insulating material of type TG-2 (nominal density 170 kg/m³, nominal thickness 20 mm) produced by Yixing Yuanyang Ship Material Co., Ltd, acc. to drawing 262WDF1801-01.

Each door leaf is connected to the frame by four steel hinges at one of its vertical edge (three hinges are fixed at the upper half of the door) and is fitted with a steel lock at the other edge. The door was tested with the door frame fixed to the bulkhead with GB/T818 M6 x 30 mm steel bolts and may also be tack- and fully welded to the bulkhead.

Continuous groove is fixed at the perimeter of each door leaf for the expansion fireproof seal strips (of F8282 and F8989 types with the specifications of 14 mm x 21.2 mm and 14 mm x 10 mm and installed at the inside and outside of door frame, respectively) to fill in. The F8989 type seal strip is also installed at the right side of the left door leaf. Further seal strip of specification 20 mm x 4 mm is installed at the right side of the left door leaf as well as at the perimeter of glass window (from both exposed and unexposed sides). The seal strips are provided by Shanghai Jiaer Fu Decoration Material Co., Ltd.

From the side unexposed to fire, fireproof rubber strip of specification 26 mm x 5 mm (provided by Jiangyin Dingyan Seals Co., Ltd) is installed along the perimeter of the bolted connection between the door frame plate and the steel bulkhead.

Each door leaf may be optionally fitted with rectangular glass window of specification 540 mm x 640 mm in external size (width x height), composed (from the side exposed to fire) of 5 mm toughened glass + 6 mm dry fireproof solution + 5 mm toughened glass + 6 mm dry fireproof solution + 5 mm thick toughened glass + 6 mm dry fireproof solution + 5 mm toughened glass + air gap + 12 mm main toughened glass plate (total thickness 51 mm), provided by Vetrotech Saint-Gobain Kinon GmbH (left door leaf) or Yaohua Glass Corporation of China (right door leaf), acc. to drawings 262WDF1801-02-4 and 262WDF1801-03-4, respectively.

Total thickness of door leaf (not including the edge cover): 60 mm.

For further details, see test report with included drawings and drawings listed under Type Examination documentation below.

Application/Limitation

The door is 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 size of door leaf: 1145 mm x 2457 mm (width x height).
Maximum clear opening door size: 2200 mm x 2400 mm (width x height).
Maximum clear view opening size of window: 500 mm x 600 mm (width x height).

Doors with windows shall not be fitted in the boundaries of machinery spaces of category A.

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.

Note that this is a fire safety certificate which only covers fire technical properties (i.e. not to cover any evaluations related to watertightness, weathertightness etc.).

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

Type Examination documentation

Test report no. FT18117 dated 19th of June 2018 and modification notice to test report dated 31st of October 2018, both issued by Far East Fire Testing Centre (FEFTC), Shanghai, China.
Drawings 262WDF1801-00, 262WDF1801-01, 262WDF1801-02, 262WDF1801-02-1, 262WDF1801-02-4, 262WDF1801-03, 262WDF1801-03-1, 262WDF1801-03-4, 262WDF1801-00CB, 262WDF1801-04 from manufacturer.

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.