EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00008RR

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)
CFM-4Z Type A-60 Class Double-Leaf Fire Door

Issued to
Jiangyin Dongrui Decoration Materials Co., Ltd
Jiangyin, JIANGSU, China

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2023/1667,**
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 **2029-01-29**.

Issued at **Hamburg** on **2024-01-30**

DNV local unit:
Jiangyin NB & CMC

Approval Engineer:
Karolina Kusmider

Notified Body
No.: **0098**

for **DNV GL SE**

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This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Product description

"CFM-4Z Type A-60 Class Double-Leaf Fire Door"
is a double-leaf hinged door composed of left and right leaves and frame.

Each door leaf consists of:

- 0.8 mm thick steel plates,
- 5 mm thick fire board (YB type with 1000 kg/m^3 density, produced by Suzhou Youlian Ship Equipment),
- 38mm thick marine rock wool insulation (KDM-Y type with 1000 kg/m^3 density, produced by Tianchang KMD New Insulation Materials),
- 5 mm thick fire board (YB type with 1000 kg/m^3 density, produced by Suzhou Youlian Ship Equipment),
- 0.8 mm thick steel plate,
- one layer of 1 mm thick stainless steel around the leaf as edging material.

Each door leaf contains 2 longitudinal stiffeners of the size 20 x 20 x 2 mm.

Total door leaf thickness: 50 mm

Adhesive (YB8001 type, produced by Shanghai Ningrui Adhesive Technology Development) is used in the interior of door leaf for the fixation of insulation. Fireproof seal strip (20 mm x 16 mm) is on the overlap between the left and right leaves.

Frame is made of 3 mm thick steel plate and insulated inside with ceramic wool of KDM-Y type with 1000 kg/m^3 density and 38 mm thickness produced by Tianchang KMD New Insulation Materials. The door frame is welded or bolted to the steel bulkhead by bolts M6x25 mm spaced maximum 260 mm apart.

The door leaf is connected to the four-sided frame by 3 steel hinges at one of its vertical edges.

The door leaf can be equipped with:

- C1 type fire lock (manufactured by Nantong Hujiang Marine Technology),
- Square window composed of 1.5 mm thick frame and glass (two layers of 8mm thick tempered glass with 20 mm thick fireproof fluid between, produced by Yixing Yushi Special Glass),
- Hose port.

For further details, please see documentation 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:	1238 mm x 2237 mm	(W x H)
Maximum clear door opening:	2400 mm x 2200 mm	(W x H)
Maximum clear view opening size of window:	400 mm x 400 mm	(W x H)
Maximum hose port:	160 mm x 160 mm	(W x H)

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.

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.

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

Type Examination documentation

Tests carried out

Tested according to IMO 2010 FTP Code Part 3.

The door has been successfully tested for extended test period of 68 minutes.

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 cm, or less, in each door leaf. For larger windows, USCG shall be contacted.