EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB00008S2

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)
CGFM-1A Type A-60 Class Single Leaf Fire Door

issued to
Jiangsu Hailu Technology Incorporated Corporation
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 **2029-05-05**.

Issued at **Hamburg** on **2024-05-06**

DNV local unit:
Jiangyin NB & CMC

Approval Engineer:
Karolina Kusmider

Notified Body
No.: **0098**

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

"CGFM-1A Type A-60 Class Single Leaf Fire Door"
Is a single leaf hinged door composed of one leaf, frame, locking arrangement and sealing materials.

The door leaf consists of:

- 0.6 mm thick galvanized steel plate,
- 3 mm inorganic fire board (ASK type with 1000 kg/m^3 density, produced by Zhangjiagang ASK Building Materials Industry),
- 50 mm thick rock wool insulation (BSS type with 120 kg/m^3 density, produced by Weihai Bosheng Advanced Material),
- 3 mm inorganic fire board (ASK type with 1000 kg/m^3 density, produced by Zhangjiagang ASK Building Materials Industry),
- 0.6 mm galvanized steel plate.

On upper part of the door leaf there is a 1.8 mm thick reinforcement plate.

Total door leaf thickness: 55 mm

Adhesive (YB2002X/YB8001 type, produced by Shanghai Ningrui Adhesives Science & Technology Development) is used inside the leaf for the fixation of insulation. Fireproof seal strip (12 mm x 6 mm) is installed around the door leaf, (20 mm x 15 mm) is on inner side of the door leaf and (13 mm x 2 mm) is used in between window press frame and glass.

Four-sided frame is made of 1.2 mm thick galvanized steel plate and is welded or bolted to the steel bulkhead by bolts M5x25 mm spaced maximum 260 mm apart.

The door leaf is connected to the frame by 4 steel hinges at one side of the leaf.

The door leaf can be equipped with:

- CT-Z type fire lock (manufactured by Nantong Hujiang Marine Technology),
- Rectangular window composed of 0.6 mm thick frame and glass (two layers of 5 mm thick tempered glass with 22 mm thick fireproof fluid between, produced by Yixing Yushi Special Glass) and sealing strips (13 mm x 2 mm) between window press frame and glass.
- Three access holes.

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:	1267 mm x 2265 mm	(W x H)
Maximum clear door opening:	1200 mm x 2200 mm	(W x H)
Maximum clear view opening size of window:	400 mm x 600 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

Test report No. FT23495 dated 02 January 2024 from FEFTC, Shanghai, China.

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 doorswithout windows and doors with total window area of 645 cm², or less, in each door leaf. For larger windows, USCG shall be contacted.