

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB00008S1

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-1EA Type "A-60" Class 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

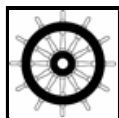
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2029-07-15**.

Issued at **Hamburg** on **2024-07-16**

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) 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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-1EA Type "A-60" Class Fire Door"

Is a double-leaf hinged door composed of left and right leaves and frame.

Each door leaf consists of:

- 0.6 mm thick steel plate,
- 3 mm thick inorganic fire board (ASK type with 1000 kg/m³ density, produced by Zhangjiagang ASK Building Materials Industry),
- 47.8 mm thick rock wool insulation (BSS type with 120 kg/m³ density, produced by Weihai Bosheng Advanced Material),
- 3 mm thick inorganic fire board (ASK type with 1000 kg/m³ density, produced by Zhangjiagang ASK Building Materials Industry),
- 0.6 mm thick steel plate.

The stiffeners with dimension L63 mm x 63 mm x 6 mm are welded along height direction on the steel plate of the structural core.

Total door leaf thickness: 55 mm

Adhesive (YB2002X/YB8001 type, produced by Shanghai Ningrui Adhesive Technology Development) is used in the interior of door leaf for the fixation of insulation. Fireproof seal strips (20 mm x 15 mm and 20 mm x 4 mm) are used in the fire door.

Frame is made of 1.2 mm thick steel plate, and it is welded or bolted to the steel bulkhead by bolts M5x25mm spaced maximum 260 mm apart.

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

The door leaf can be equipped with:

- C-1 type door 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 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:	1016 mm x 2258 mm	(W x H)
Maximum clear door opening:	2000 mm x 2250 mm	(W x H)
Maximum clear view opening size of window:	400 mm x 600 mm	(W x H)
Maximum hose port:	150 mm x 150 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.

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

Type Examination documentation

Test report no. FT24043 dated 20 February 2024 issued by Far East Fire Testing Centre, Shanghai, China.

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



Job ID: **344.1-013038-1**
Certificate no.: **MEDB00008S1**

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.