DNV·GL

Certificate No:
MEDB000058W

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)
Class A-60 double-leaf door, Type CGFM-1G

Issued to
Jiangsu Hailu Technology Incorporated Corporation
JIANGYIN, JIANGSU, 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 **2024-04-04**.

Issued at **Hamburg** on **2019-04-05**

DNV GL local station:
Jiangyin

Approval Engineer:
Pavel Golyshev

Notified Body
No.: **0098**

for **DNV GL SE**

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

Product description

"Class A-60 double-leaf door, Type CGFM-1G"
A double leaf hinged fire door composed of door leaf and frame and various fittings. Construction and installation are illustrated in figures 1 to 5 of the test report.

The four-edge door frame (i.e. sill is part of the door frame) is constructed from 1.5 mm thick steel plate to form an L-shaped box type structure with flange arranged around its outer perimeter for bolting the frame to the bulkhead. The hollow core of the box type structure is filled with rock wool. A continuous groove of 23 mm x 15 mm and a stepped platform of 13 mm x 10 mm for two rubber sealing strips to fill in is arranged around the inner perimeter of the door frame. The door frame has an external size of 2493 mm in width, 2843 mm in height and 110 mm in depth.

The structure of each door leaf consists of a 55 mm thick inorganic light fireproof board core enclosed with 0.8 mm thick galvanised steel sheets. An approved adhesive is used to affix the fire board to the door leaf structure. The door leaf is fixed to the door frame with four stainless steel flag shaped hinges mounted on the side of the door which was not exposed to the fire hazard. The door thus opens towards the side not exposed to the fire hazard.

Both door leaves extend outwards 15 mm and 27 mm to form lips in the width direction such that the steel sheet covers both the gap between door leaf and door frame and the gap between two door leaves. A fireproof sealing strip is arranged along the inner side of each of these overlapping lips.

The door was tested with the door frame fixed to the bulkhead with M6 x 30 mm steel bolts and may alternatively be tack- and fully welded to the bulkhead.

The leading door leaf is fitted with a door handle, fireproof lock with vertical rod which latches into the door frame at top and bottom. The other door leaf is fitted with a fixed door handle and shoot bolts top and bottom. The locking mechanisms are installed on the side exposed to the fire hazard.

Insulation and sealing materials:
The fire board used inside the door leaf: Type HL-CPJK, with a nominal density of 260 kg/m³ manufactured by Jiangsu Hailu Decorative Co., Ltd.
Door frame insulation: Ceramic wool Type AZ120 of 120 kg/m³ nominal density produced by Jiangyin Anzhou Construction Material Co., Ltd.
Fireproof sealing strip 20 mm x 4 mm provided by Jiangyin Lide Fittings Co., Ltd.
Seal strip of type LD-1 and specification 20 mm x 15 mm, and of type JK-2 and specification 10 mm x 8 mm, both provided by Jiangyin Lide Fittings Co., Ltd.

Total thickness of each door leaf: 57 mm.

For further details, see test report with included 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 each door leaf (as tested):	1220 mm x 2793 mm (width x height)
Maximum clear opening door size (as tested):	2400 mm x 2750 mm (width x height)

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.

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. FT12241 dated 1st of October 2012, issued by Far East Fire Testing Centre (FEFTC), Shanghai, China.

Tests carried out

Tested according to IMO Resolution MSC.307(88) – 2010 FTP Code Annex 1, Part 3.

The door has been successfully tested with extended test period for at least 68 minutes for insulation and 68 minutes for fire integrity in compliance with IMO MSC.1/Circ.1319.

This certificate is based on the previous MED Module B Certificate No. 60 543 - 13 HH.

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).