DNV·GL

Certificate No:
MEDB00005RD

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)
A-60 fire door type MA60CX

Issued to
Huanan Building Materials (Shenzhen) Co., Ltd.
Shenzhen, Guangdong, China

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2019/1397,**
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 **2025-03-30**.
Issued at **Hamburg** on **2020-03-31**

DNV GL local station:
China South NB

Approval Engineer:
Karolina Kusmider

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, and amended by Decision No 1/2018 dated February 18th, 2019.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Product description

"A-60 fire door type MA60CX"
is a class A-60 single-leaf fire door.

The door leaf is composed of the following layers:

- 0.5 mm thick stainless steel plate.
- 6 mm thick calcium silicate board LGB-0 type (density 1100 kg/m^3) manufactured by Suzhou Weiyu Marine Decoration Co, Ltd.
- 37 mm thick rock wool panel (density 120 kg/m^3) manufactured by Rockwool Firesafe Insulation Co., Ltd.
- 6 mm thick calcium silicate board LGB-0 type (density 1100 kg/m^3) manufactured by Suzhou Weiyu Marine Decoration Co, Ltd.
- 0.5 mm thick stainless steel plate.

Door closing stiffening board, made of 1.2 mm thick galvanized steel plate, was fixed internally at the top of door leaf.

Internal parts inside the door leaf is fixed by the adhesive.

The door is produced in two configurations:

a. The steel sheet end profile glued together forming the outer rim
b. 0.8 mm steel plate rimed at the perimeter of the door leaf. The steel plate is screwed on the steel sheets.

Total thickness of door leaf: 50 mm.

The door leaf is fitted to the door frame with 3 hinges and a fireproof lock system.

The three-sided door frame is formed by 1.2 mm thick stainless steel plates. The fireproof seal strip used in the inside groove of door frame is 13 mm x 10 mm and provided by Hebei Debang Special Seals Co., Ltd. The door frame may welded, bolted (M6x25) or connected with self-tapping screws to the bulkhead spaced maximum 300 mm apart.

The door leaf may be fitted with:

- Window, fireproof glass manufactured by Hua Nan Building Materials Co Ltd, thickness 32 mm (composed of: 5 mm tempered glass, 22 mm fireproof solution, 5 mm tempered glass).
- Hose port on lower corner of the door leaf (opposite side to the hinged side).
- A fireproof stainless steel door lock type C-1 provided by Nantong Hujiang Locks Co., Ltd. , 1000 mm in height from bottom of the door leaf.

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.

Max. size of door leaf:	1025 mm x 2201 mm (W x H)
Max. clear opening of door:	1000 mm x 2200 mm (W x H)
Max. clear opening of hose port:	150 mm x 150 mm (W x H)
Max. clear opening of window:	420 mm x 420 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 product is to be supplied with its manual for installation and maintenance.

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.).

Type Examination documentation

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

Marking of product
The product is to be marked with name and address of manufacturer, type designation, fire-technical rating, 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. For larger windows, USCG shall be contacted.