

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB00008HA

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

This is to certify:

that the Fire Doors

with type designation(s)
CMWS-AWTD-A60 Fire Door (ALuminium Alloy)

issued to

China Marine Windows Shipyard Co., Ltd.
Kaohsiung, Taiwan.

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 **2029-03-17**.

Issued at **Høvik** on **2024-03-18**

DNV local unit:
Kaohsiung

Approval Engineer:
Timo Linn



for **DNV AS**

Notified Body
No.: **0575**

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 United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005, and amended by Decision No 1/2023 dated August 21st, 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 AS 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

“CMWS-AWTD-A60 Fire Door (ALuminium Alloy)”

A single leaf hinged fire door composed of door leaf and frame and various fittings consisting of an outer aluminum plate of 6 mm and inner 2.0 mm thickness steel sheet (exposed side of fire) respectively.

The core of the door is composed of following layers (from the outer aluminum plate):

- 50 mm thick rock wool board (density 120 kg/m³), from Byucksan Youngdong Plant,
- 25 mm thick ceramic fiber blanket (density 128 kg/m³), from INCA,
- 6 mm thick calcium silicate, board, from Jia Dah Chemical Industries Co. Ltd.,
- 38 ±5 mm thick air gap,
- 13 mm thick ceramic fiber blanket (density 128 kg/m³) placed along the inner steel sheet, from INCA.

The door leaf incorporates four horizontal stiffeners on the inside aluminum plate side, the steel cover is bolted. Along the edges of the outer steel cover a ceramic fiber packing (32 x 20 mm) is fitted with a 6 mm thick aluminum plate packing holder.

The door leaf is connected to the frame with three hinges and closed to the door frame by a locking system with eight fastening points consisting of opening handles (wheels) controlling linkage rods. The door frame with round corners is made from 8 mm thick aluminum plate and may be bolted (M8 bolt and nut with 2 mm fire resistant packing, spaced maximum 110 mm apart) or welded to the bulkhead.

The door may be fitted with:

A window fixed on upper part of the door. The window constructed of outer aluminum plate of 6 mm and inner 2.0 mm thickness steel sheet respectively. The core of the round window is composed of following layers (from the outer aluminum plate):

- with fireproof silicon, INSS2460, INCA
- 25 ±1 % mm thick fireproof glass (manufactured by Gelling Technical Corporation, type: GLA60).
- 13 mm thick ceramic fiber, from INCA
- 2 mm thick steel cover

Total thickness of door leaf: 140 mm.

For further details see documentation 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 (aluminum, FRP, etc.) are subject to case-by-case approval.

Restricted application: Tested with 6 mm thick aluminum plate of door leaf exposed to heating conditions.

Maximum size of door leaf (as tested): 980 mm x 1880 mm (width x height).

Maximum clear opening door size (as tested): 900 mm x 1800 mm (width x height).

Maximum clear opening of window: Ø250 mm

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 MED 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. FPSRC-D0584-IMO-F-06 dated 2 February 2024, issued by Fire Protection and Safety Research Center, Taiwan.

Drawing No. CMWS-AWTD-A60-0918 dated 14 April 2023 by China Marine Windows Shipyard Co., LTD.

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.



Job ID: **344.1-012817-1**
Certificate no.: **MEDB00008HA**

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).