

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB00008H9

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 'A' and 'B' class fire proof windows and side scuttles

with type designation(s)
CMWS-A60 Fire Window

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/3.25. SOLAS 74 as amended, Regulation II-2/9, IMO MSC/Circ.1120 and IMO 2010 FTP Code, IGC Code 3

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

This Certificate is valid until **2029-01-09**.

Issued at **Høvik** on **2024-01-10**

DNV local unit:
Kaohsiung

Approval Engineer:
Timo Linn



Notified Body
No.: **0575**

for **DNV AS**

Mydlak-Röder, Christine
Head of Notified Body



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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-A60 Fire Window" is a rectangular window composed of a main window steel frame, a glass pane, and a glass retaining frame.

- Fireproof glass composed of 5 mm toughened glass, 5 mm fireproof gelling interlayer, 5 mm toughened glass, 5 mm fireproof gelling interlayer, and 5 mm toughened glass, total 25±2 mm thickness, manufactured by Gelling Technical Corporation, type GLA60.
- Fireproof materials manufactured by International Carbide Technology Co., Ltd. consists of ceramic fibre 128 kg/m³, 13 mm thickness with 1.0 x 30 mm intumescent strip and INSS2460 fireproof silicon between fireproof glass and steel frame/keeper.
- Window frame made of 12 mm steel.
- The main steel window frame consists of a flat bar 140 x 12 mm to which a 70 x 12 mm bar is welded as a flange.
- The glass retaining frame consists of a steel rim 8 mm thick, which is fixed to the main steel frame by means of screws M5 spaced about 120 mm apart. The main frame is fixed to the bulkhead by means of M8 bolting spaced about 150 mm apart or by welding.

Total thickness: 140mm

For further details, see drawings listed under Type Examination documentation below.

Application/Limitation

The window is approved for installation in steel bulkheads of A60-Class. Other applications are subject to case-by-case approval.

Maximum size of window: 2088 x 1288 mm (W x H) exclude 70 x 12 mm flange
Maximum size of glazing unit (clear view): 2000 x 1200 mm (W x H)

The window has only been evaluated with respect to fire technical properties (e.g. strength requirements have not been considered). Arrangement and location of any window is subject to approval from relevant authorities in each case.

Type Examination documentation

Test Report No. FPSRC-GW0584-IMO-F-02-A dated 22nd December 2023 from National Cheng Kung University Fire Protection and Safety Research Centre, Tainan City, Taiwan.

Drawing No.: CMWS-A60-2012 dated 01st December 2023 from manufacturer.

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, Mark of Conformity and USCG approval if applicable (see first page).