

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00008D7

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

with type designation(s)
A-60 Fire Rated Fixed Window

Issued to

Fehrmann GmbH
Hamburg, Germany

is found to comply with the requirements in the following Regulations/Standards:

Regulation (EU) 2022/1157,
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

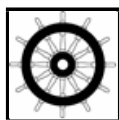
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2028-07-06**.

Issued at **Hamburg** on **2023-07-07**

DNV local unit:
Essen

Approval Engineer:
Karolina Kusmider



Notified Body
No.: **0098**

for **DNV GL SE**

Christine Mydlak-Roeder
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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

“A-60 Fire Rated Window”

Rectangular window composed of a main window steel frame, a glass unit and a glass retaining frame.

Window glass unit consists of a 8 mm thick toughened glass pane and a 23 mm thick fire resistant glass pane type PYRANOVA 60, with a 1.5mm PVB interlayer between them, manufactured by Schott Technical Glass Solutions GmbH.

Total window glass unit thickness: 32.5 mm.

The window glass unit is installed in a 8 mm thick T-shaped main window steel frame, bolted to a 6 mm thick glass retaining steel frame by stainless steel screws (M6 x 70) spaced 74 mm apart.

The T-shaped main window steel frame and the glass retaining steel frame are spaced 50 mm apart and the gap is sealed with preformed Promatect H strips (manufactured by Promat, density 870 kg/m³). Six steel distance plates 50 x 40 mm, 5 mm thick, are welded to the main window frame around the perimeter to further hold the window glass unit in place and the 10 mm gap between the distance plate and the glass retaining frame is sealed with Promatect H strips.

The window glass unit is also retained in position by a sealing strip made of Kerafix 2000 (manufactured by Kuhn Fire Protection Materials) around the edge of the frame on both sides.

Fire sealant Flex 310 M Fireseal (manufactured by Weicon) is applied around the inner edge of the glass retaining frame in way of the 23 mm fire resistant glass pane.

Total window thickness (including glass retaining frame): 154 mm

The main window frame is fixed to the bulkhead structural core by means of welding.

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

Application/Limitation

The window is approved for installation in steel bulkheads of class A-60. Other applications are subject to case-by-case approval.

Restricted application: fire against 8 mm toughened glass.

Maximum size of window: 1695 x 1695 mm (W x H).

Maximum size of clear opening: 1595 x 1595 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.

Each product is to be supplied with its manual for installation and use.

Type Examination documentation

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).