

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00008D9

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-0 Fire Rated 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

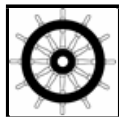
Further details of the equipment and conditions for certification are given overleaf.

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

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

DNV local unit:
Hamburg – CMC North/East

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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-0 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 6 mm thick toughened glass and a 8 mm thick fire resistant glass pane type PYRAN S 8, with a 1.5 mm PVB interlayer between them, manufactured by Schott Technical Glass Solutions GmbH.

Total window glass unit thickness: 15.5 mm.

The window glass unit is installed in a 12 mm thick flanged main window steel frame, bolted to a 5 mm thick glass retaining stainless steel frame by stainless steel screws (M6 x 30) spaced 100 mm apart.

The window glass unit is 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, and by a strip made of Kerafix Flexpress 100 (manufactured by Kuhn Fire Protection Materials) in the inner side of the main frame.

Fire sealant Flex 310 M Fireseal (manufactured by Weicon) is applied all around the edge of the glass retaining frame in way of the 6 mm thick toughened glass.

Total window thickness (including glass retaining frame): 85 mm

The main window frame is welded to the bulkhead structural core.

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-0. Other applications are subject to case-by-case approval.

Restricted application: fire against 6 mm toughened glass.

Maximum size of window: 1202 x 2002 mm (W x H).

Maximum size of clear opening: 1124 x 1924 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).