EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00007SV

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)
Class A-60 Fire Fixed Rectangular Window (2 Vertical Girder) (261WDL007-00)

Issued to
Wuxi MNET Equipment Tech Co., Ltd.
Wuxi, Jiangsu, China

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2021/1158,**
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 **2027-04-19**.

Issued at **Høvik** on **2022-04-20**

DNV local station:
Jiangyin NB & CMC

Approval Engineer:
Thorvald Furuseth

Notified Body
No.: **0575**

for **DNV AS**

Sverre Olav Bergli
Head of Notified Body

NORWEGIAN ACCREDITATION PROD 019

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

"Class A-60 Fire Fixed Rectangular Window (2 Vertical Girder) (261WDL007-00)"
is a fire window constructed of window frame, 3 pieces of window panes, press plate and seal material:

- Window pane assembly with total thickness of 56.5 mm produced by Qinghuangdao Yaohua Glass Co., Ltd. The fire window is composed of 5 mm thick tempered glass + 5 mm thick fireproof layer + 5 mm thick tempered glass + 5 mm thick fireproof layer + 5 mm thick tempered glass + 12 mm thick air layer + 6 mm thick tempered glass + PVB film + 12 mm thick tempered glass.
- Fireproof strips manufactured by Jiangyin Dingyan Rubber and Plastic Group Co. Ltd.:
  - "XP-25Z" type, 16 x 25 mm, between window frame and press plate,
  - "JX1-56Z" type, between the window frame, glass and press plate.
- Sealing: "Sikaflex-291i" type, manufactured by Sika services AG.
- Press plate: 6 mm stainless steel plate fixed to the window frame by M6 x 45 mm stainless steel bolts max 75 mm c/c.
- Window frame is made of 12 mm steel and includes 2 vertical girders between 3 window panes.

Window frame is fixed to the bulkhead by welding.

For further details, see also 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 5 mm tempered glass and press plate (from the inside).

Maximum size of window frame: 2414 x 1964 mm (W x H).
Maximum size of clear view size: (750 + 750 + 750) x 1900 mm (W x H).
Maximum size of each glazing unit: (779 + 778 + 779) x 1930 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 authority in each case.

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

Type Examination documentation

Test report no. FT19058 dated 8 April 2019 from "FEFTC" Far East Fire Testing Centre, Shanghai, China.

Drawing Nos.
- 261WDL007-NHBZ, dated 22 December 2018,
- 261WDL007-NHBZ-TAD, dated 22 December 2018,
- 261WDL007-00, dated 22 December 2018,
- 261WDL007-01, dated 22 December 2018,
- 261WDL007-02, dated 22 December 2018,
- 261WDL007-03, dated 22 December 2018,

All from Wuxi Delin Marine and Ocean Technology (Group) Co., Ltd., Wuxi, China

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 (see first page).