

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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 GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Windows and side scuttles

with type designation(s)

P-2300×1500×90-NOW-202-A60-H-A

Issued to

QINHUANGDAO XINGYANG MARINE FITTING CO., LTD.
Qinhuangdao, China

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

Regulation **(EU) 2015/559,**

Annex A.1, item No. A.1/3.25 and Annex B, Module B in the Directive SOLAS 74 as amended,
Regulation II-2/9, IMO MSC/Circ.847, IMO MSC/Circ.1120 and IMO 2010 FTP Code

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

This Certificate is valid until **2022-02-21**.

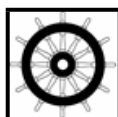
Issued at **Høvik** on **2017-02-22**

DNV GL local station:

Tianjin

Approval Engineer:

Tomasz Werchowicz



Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
Head of Notified Body



Job Id:
Certificate No: **MEDB00001C4**

Product description

"P-2300×1500×90-NOW-202-A60-H-A"

is a fireproof rectangular window composed of a glass unit with framing and sealing arrangement. The glass unit is composed of layers with thickness as follows (from the unexposed side respectively): 15 mm of toughened glass, 22 mm of refractory gel, 12 mm of toughened glass, 9 mm of air gap, 6 mm of toughened glass, 2mm of film + electrical heating unit and 19 mm of toughened glass.

The framing and sealing arrangement consist of steel (Q235A) main frame, with flange of dimensions 90 x 8 mm (H x T), steel (Q235A) window frame with dimensions of 57 x 25 mm (H x T), steel* (Q235A) 6 mm thick, glass holding (press) plate, calcium silicate board and ceramic cotton with nominal density of 160 kg/m³ (manufactured by Shandong Luyang Co. Ltd.). All is connected together with M6 x 16 mm countersunk screws (106 pcs) and M6 x 65 mm bolts (106 pcs) around the frame.

* inside most element, not exposed to the fire. Material of press plate may be changed from Q235A to stainless steel or manganese brass.

The window main frame is welded to the bulkhead.

Total thickness of glazing unit: 85 mm

For further details, see the test reports listed under Type Examination documentation below.

Application/Limitation

The window is approved for use as an integrated part of fire retarding steel bulkheads of class A-60. Other applications are subject to case-by-case approval.

Max. size of fire glazing unit: 2340 x 1540 mm (W x H)
Max. size of exposed fire technical glazing unit: 2300 x 1500 mm (W x H)

Fire against uninsulated steel bulkhead side and 19 mm toughened glass.

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, use and maintenance.

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, MED Mark of Conformity (see first page).