

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 Norway.

This is to certify:

That the Windows and side scuttles

with type designation(s)
SG-FS2B1-A60

Issued to

Samgong Co., Ltd.
Busan, Republic of Korea

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773**,
item No. MED/3.25. SOLAS 74 as amended, Regulation II-2/9, IMO MSC/Circ.1120 and IMO 2010 FTP Code

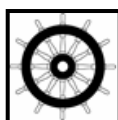
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-07-21**.

Issued at **Høvik** on **2019-07-22**

DNV GL local station:
Gimhae Station

Approval Engineer:
Marcin Tobiasz



Notified Body
No.: **0575**

for **DNV GL AS**

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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



Product description

SG-FS2B1-A60

Is a rectangular multilayer A-60 fire window constructed of window frame, multilayer window pane, press plate, insulation material and seal material:

- Multilayer A-60 fire window with total thickness of 51 mm.
- The fire window is composed, seen from unexposed side, of 29 mm fireproof glass (three layers of 5 mm toughened glass with 7 mm hydrogel intumescent two layers between them) manufactured by SAMGONG CO. LTD., 12 mm dehydrated airgap, 10 mm pressure glass manufactured by JEONG-AM SAFETY GLASS CO. LTD.
- Insulation between glass frame/setting block and fire window: 3 mm Kerafix 2000 with nominal density of 150 kg/m³ manufactured by ROLF KUHN GMBH.
- Insulation between glass keeper and fire window: 12.5 mm Cerakwool 1300 blanket with nominal density of 130 kg/m³ manufactured by KCC Corporation.
- Glass packing between fire window and window frame: synthetic rubber type APCR-65 manufactured by HANCHANG.
- L-shaped 6 mm steel main frame,
- 5.5 mm aluminium glass frame,
- Press plate: 5 mm stainless steel plate fixed to the glass frame by M6 screws (max spacing 150 mm).
- Sealing: MASA manufactured by KIILTO, between pressure glass, glass packing and window frame.
- Setting block LUMIBOARD L14Z manufactured by KWANGJIN.

The window frame is fixed to the bulkhead by M8 bolt assembly (max spacing 120 mm).

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 10 mm thick pressure glass (fire from outside).

Maximum size of main frame: 1450 x 1150 mm (W x H)
Maximum clear light size : 1300 x 1000 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.

Hose Stream test was carried out with satisfactory results according to IMO 2010 FTP Code Part 3 Appendix A.I.5.

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

Type Examination documentation

Test Report No. KOMERI-0402-19T1311 dated 12 June 2019 from KOMERI, Busan, Korea.
Drawing Nos. SGFS2TW-B1A60-01 Rev. 2 and SGFS2TW-B1A60-03A Rev. 2 dated 1 April 2019 from maker.

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).