DNV·GL

Certificate No:
TAF000001F

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class A Door

with type designation(s)
A60 Class Fire door - SM-A60-WS

Issued to
Sung Mi Co., Ltd.
KIMHAE-SI KYUNGNAM, Republic of Korea

is found to comply with
Det Norske Veritas' Offshore Standards
Det Norske Veritas' Rules for Classification of Ships
Det Norske Veritas' Interpretation of SOLAS 1974 Convention as Amended

Application :

Approved for use as an integrated part of fire retarding divisions of class A-60

Max. clear opening: 1765 x 2521 mm (w x h)

This certificate is recognized by Transport Canada.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **2019-08-23**.

Issued at **Høvik** on **2015-08-24**

for **DNV GL**

DNV GL local station: **Gimhae MC & FIS**

Approval Engineer: **Synnøve Bolstad Eri**

Petter Langnes
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Product description

"A60 Class Fire door - SM-A60-WS"
single leaf sliding door consists of an insulated doorleaf, one doorstiffener, rail and rail cover, guide wheel, cylinder lock, seals and door frame.

The door leaf consists of 1.5 mm thick steel sheets around an insulation core of 50 mm thick mineral wool (density 140 kg/m^3, from Kumgang Korea Chemical Co., Ltd). The insulation core has a 15 mm airgap in the middle. Hanger rollers and rail are fitted on the top side of the door leaf, connected to steel L-profile rail brackets (max. spacing between 1000 mm) which are welded to the bulkhead. Guide rollers are fitted at the lower part of the door leaf at one side, the other side is fitted with a ceramic door packing Ø20 mm.

Total thickness of door leaf is 80 mm.

The door frame is made from 4 mm thick steel and may be bolted by M10 bolts (spacing between 250 and 300 mm) or welded to the bulkhead.

The door may be fitted with:
- Hose port in the lower part of the door leaf
- Window of nominal thickness 27 mm, type Contraflan 60-N2, manufactured by Saint-Gobain, Germany.

For further details regarding the door arrangement, see drawing listed under Type Approval documentation below.

Application/Limitation

The door is approved for installation in steel bulkheads of class A-60. Installation of the door in bulkheads made of other materials (aluminium, FRP, etc.) are subject to case-by-case approval.

Max. size of door leaf:	1786 x 2585 mm (w x h)
Max. clear opening of window:	900 x 1580 mm (w x h)
Max. clear size of hose port:	150 x 150 mm (w x h)

Any surface materials used on door leaf and door frame have to be approved for smoke and toxicity and low flame-spread characteristics (IMO FTP Code Annex 1 Parts 2 and 5) when required according to relevant rules.

External windows to comply with ISO 3903 (Ref. DNV Rules Pt. 3, Ch.3, Sec. 6 L104).

Note that this is a fire safety certificate which only covers fire technical properties (i.e. not to cover any evaluations related to watertightness, gastightness, etc.).

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

Type Approval documentation

Certification in accordance with Standard for Certification No. 1.2, Type Approval, January 2013.
Test report No. KOMERI-0402-14T2232 dated 23 October 2014 from Korea Marine Equipment Research Institute, Korea.

Drawing Nos. D-140808-1 to D-140808-5 (5 pages) dated 08 August 2014 from manufacturer.

Tests carried out
Tested according to IMO 2010 FTP Code Part 3.

Marking of product
The product is to be marked with name of manufacturer, type designation and fire-technical rating.

Transport Canada Approval
Based on the procedures laid down in the Transport Canada Publication entitled "*Approval Procedures for, Life Saving Equipment and Structural Fire Protection Products (TP 14612)",* Det Norske Veritas confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements

Periodical assessment
DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Standard for certification No. 1.2 Type Approval Item 4.