

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Class A Door**with type designation(s)
SM-A60-EV

Issued to

Sung Mi Co., Ltd.
Gimhae-si Gyeongsangnam-do, Republic of Koreais found to comply with
DNV GL offshore standards
DNV GL rules for classification – Ships
DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations**Application :****Approved for use as an integrated part of fire resisting divisions of class A-60.****Max. size of clear opening is 900 x 2100 mm (W x H).****This certificate is recognized by Transport Canada.****Product approved by this certificate is accepted for installation on all vessels classed by DNV GL.**This Certificate is valid until **2021-10-16**.Issued at **Høvik** on **2016-10-17**DNV GL local station: **Gimhae MC & FIS**for **DNV GL**Approval Engineer: **Tomasz Werchowicz**-----
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.

Product description

"SM-A60-EV"

is a single leafed hinged door, fitted with three hinges, with door leaf constructed of an insulation core made of mineral wool with nominal density of 200 kg/m³ (manufactured by KCC CORPORATION). The insulation core is faced on both sides by 0.8 mm steel sheets, stiffened along the perimeter.

Total door leaf thickness is 60 mm.

The four sided door frame is made from 4 mm thick steel sheets. The frame is bolted to the bulkhead by means of M8x25 screws with spacing of 250-300 mm. The door frame may be also welded to the bulkhead. The offset between the exposed door side and bulkhead steel plate is approximately 400 mm, towards the exposed side.

The door may be fitted with:

- window in the upper part of the door, type "Contraflam 60-N2" manufactured by Saint-Gobain, thickness: 27 mm,
- integrated door closer specified in the drawing listed under Type Approval documentation.

For further details, see drawings mentioned 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.

Any surface materials used have to be approved for smoke and toxicity and low flame spread characteristics (IMO 2010 FTP Code parts 2 and 5 or IMO FTPC Parts 2 and 5 when in compliance with the 2010 FTP Code Ch. 5.2 and 8) when required according to relevant rules and regulations.

Max. size of door leaf: 985 x 2145 mm (W x H).
Max. clear window opening: 400 x 400 mm (W x H)

External windows to comply with ISO 3903 (Ref. DNV GL rules for classification: Ships, Pt.3, Ch.12, Sec.6 [1.1.4]).

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

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2015.

Fire Test Report No. KOMERI-0402-16T2326 dated 29th August 2016 from Korea Mairne Equipment Research Institute

Drawings booklet No. SMD-160706-001 dated 6th July 2016 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 and address of manufacturer, type designation and fire technical rating.

Transport Canada Approval



Job Id: **262.1-023932-1**
Certificate No: **TAF00000ES**

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)", DNV GL confirms that the product listed in this certificate is 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 Class Programme DNVGL-CP-0338, Section 4.