DNV·GL

Certificate No:
TAF0000060

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class A Door

with type designation(s)
KL-A60QS

Issued to
KwangLim Marine Tech. Co., Ltd.
Busan, Republic of Korea

is found to comply with
DNV GL rules for classification – Ships
DNV GL offshore standards

Application :

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

Max. clear opening: 950 x 1700 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 **2021-02-01**.

Issued at **Høvik** on **2016-02-02**

for **DNV GL**

DNV GL local station: **Pusan**

Approval Engineer: **Tessa Biever**

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

'KL-A60QS A60 fire door' is a single leafed hinged door.

The door leaf is composed of two layers of 25 mm mineral –wool insulation core with nominal density of 110 kg/m3 from KCC Corporation, with a 8 mm steel plate on the outside followed by a three layers of 3 mm graphite plate and a 3 mm steel plate on the inner side.

The door leaf is attached to the door frame with 3 hinges.

The door frame is fitted with a fireproof seal and made of a 9 mm thick steel plate which is welded to the bulkhead.

The door can be opened by hand wheel, which serves a linked locking mechanism consisting of seven locking points.

For further details see the 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.

Maximum size door leaf: 1014 mm x 1764 mm (w x h).
Maximum clear opening: 950 mm x 1700 mm (w x h).

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

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) when required according to relevant rules and regulations.

Any adhesive used, other than the one used during testing, has to be tested for low flame spread characteristics according to IMO 2010 FTP Code part 5.

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

Type Approval documentation

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

- Test report no. AK2015-0639, dated 2015-11-04, Fire Insurers Laboratories of Korea (FILK), Busan, Korea
- Drawing KL-WT-A60-003 (5 sheets), dated 2015-10-12 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, fire technical rating.

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.

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)",* DNV GL confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements.