



Certificate no.:
TAF00001ZE

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Class A Door

with type designation(s)
A60 Class Double Door

issued to

E.STech Marine Co.
Busan, Republic of Korea

is found to comply with

Det Norske Veritas' Interpretation of SOLAS 1974 Convention as Amended
DNV offshore standards
DNV rules for classification – Ships

Application:

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

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

This certificate is recognized by Transport Canada.

Issued at **Høvik** on **2025-03-05**

This Certificate is valid until **2030-03-04**.

for **DNV**

DNV local unit: **Gimhae Station**

Approval Engineer: **Marta Kropiwnicka**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

Product description

"A60 Class Double Door"

consisting of a double-leaved hinged door with two equal-sized door leaves, composed of 3.2 mm thick galvanized steel sheet, insulated with 82 mm thick mineral wool (density 150 kg/m³, manufactured by Byucksan), and covered with 4 mm thick galvanized steel sheet.

The door leaves are attached to the steel frame with 4 hinges on each side.

The door leaf is connected to four-sided frame made by 6 mm thick steel plate and either welded or bolted (M12x35L) to the bulkhead spaced maximum 300 mm apart.

The active door leaf is fitted with an inside handle, push down type panic bar, door clamps and may also be incorporated with rectangular window type SLOUCE A60 in the upper part of the door, fireproof glass manufactured by Kukyong G&M, thickness 27 mm (composed of 5 mm tempered glass + 6 mm fireproof liquid + 5 mm tempered glass + 6 mm fireproof liquid + 5 mm tempered glass).

Total thickness of door leaf is 90 mm.

For further details, please see Type Examination documentation below.

Application/Limitation

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 each door leaf:	1100 mm x 2500 mm (W x H)
Max. clear door opening:	2200 mm x 2500 mm (W x H)
Max. clear opening of window:	400 mm x 600 mm (W x H)

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.

External windows to comply with DNV rules or a recognized national or international standard (Ref. DNV Rules for classification: Ships, Pt. 3, Ch. 12, Sec. 6 [1.1.3]).

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

Type Approval documentation

Certification in accordance with Class Program DNV-CP-0338, September 2021.

Test report No. KOMERI-0402-11T1201 dated 11 January 2012 from KOMERI, Busan, Korea.

Drawing No. ES-A600DL WT/GTD(OP) dated 26 May 2023 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 "Procedures for Approval of Life-Saving Appliances, Fire Safety Systems, Equipment and Products (TP14612)", DNV confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements.

Periodical assessment

DNV'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 Program DNV-CP-0338, Section 4.

Manufactured by:

Byucksan Corporation Gwanghui Building, 216 Gwanghui-dong 1-ga, Jung-gu, Seoul, Korea 1.
Kukyong G&M 7F, 36, Seocho-Jungang-ro, Seocho-gu, Seoul, Korea.