

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Window and Glass Partition**with type designation(s)
A-60 CLASS WINDOW (JG-A60-310)

Issued to

Jung Gong Ind. Co., Ltd.
Busan, 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-retarding bulkhead of class A-60.****This certificate is recognized by Transport Canada.****Product approved by this certificate is accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2018-12-10**This Certificate is valid until **2023-12-09**.for **DNV GL**DNV GL local station: **Busan**Approval Engineer: **Grzegorz Wolski**.....
Mårten Schei-Nilsson
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

"A-60 Class Window (JG-A60-310)"

constructed of 8mm toughened pressure glass and 27 mm fire proof glass, type "Contraflam N2" spaced 12 mm apart by an air gap containing dehydrated air. The window assembly is mounted in a steel frame that is welded to the bulkhead. Total window thickness is 47 mm.

Main frame is made from 12 mm mild steel. Pressure glass frame is made from 3 mm mild steel. Fire glass frame is made from 3 mm mild steel or stainless steel (SUS 304) and bolted (M6) to main frame. Window box constructed from 1,6 mm steel is fitted to retaining frame.

For further details see drawing mentioned under Type Examination documents below.

Application/Limitation

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.

Maximum size of fire technical glazing unit: 1500 mm x 1300 mm (W x H).

Restricted application: Fire against toughened glass (from outside/weather side).

Hose stream test was carried out with satisfactory results according to IMO Res. A.754(18) appendix A.I.5.

External windows to comply with ISO 3903 (Ref. DNV GL Rules 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, September 2018.

Test report No. 2009-1105 dated 03 November 2009 from FILK, Busan, Korea.

Drawing No: JG-A60-310, Dated 25 September 2009 from Jung Gong Ind. Co., Ltd.

Tests carried out

Tested according to IMO FTPC Part 3, IMO Res. A.754(18) and IMO 2010 FTP Code Ch. 8.

Marking of product

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



Job Id: **262.1-008994-18**
Certificate No: **TAF0000136**

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 Class Programme DNVGL-CP-0338, Section 4.