

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Window and Glass Partition

with type designation(s)
H-120 Window

Issued to

C.C. Jensen A/S
SVENDBORG, Denmark

is found to comply with
Det Norske Veritas' Offshore Standards

Application :

Approved for use as an integrated part of fire retarding bulkheads of class H-120.

Fire against 8 mm toughened pressure glass (from outside/weather side).

Maximum size of exposed fire technical glazing unit: 1200 mm x 1500 mm (width x height).

This Certificate is valid until **2019-06-30**.

Issued at **Høvik** on **2015-04-23**

DNV GL local station: **Fredericia**

Approval Engineer: **Silje Helene Waagaard**

for **DNV GL**

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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.

Certificate No: **F-21070**
File No: **471.75**
Job Id: **262.1-019208-1**

Product description

"H-120 Window"

a window composition (starting from the exposed side) consisting of:

- 8 mm toughened glass manufactured by Glaseksperten A/S
- 8 mm spacer
- 43 mm fire resistant glass manufactured by Vetrotech Saint-Gobain
- 10 mm spacer
- 71 mm fire resistant glass manufactured by Vetrotech Saint-Gobain

Total glass thickness is 140 mm.

The frame is consisting of three steel profiles. On the exposed side a 100 mm wide and 8 mm thick steel profile, with $\varnothing 8$ studs cc 150 on the unexposed and exposed side. The profile also has 90° extensions (towards the unexposed side) three places along the bottom length. There are also 2 extensions for lifting on the top length. A 6 mm thick steel L-profile (80x60 mm) is fixed to the first profile on the exposed side with nuts on $\varnothing 8$ mm studs. A 8 mm thick steel L-profile (60x94 mm) is fixed on the unexposed side with nuts and washers on $\varnothing 8$ mm studs.

Between the glazing and the steel profiles as well as between the steel profiles on the exposed side it is insulated with 50 x 3 mm strips of Fiberfrax.

It was insulated according to class H-120 outside the glazing along all edges and on top of the frame on the unexposed side, fixed with pins, washers and wire.

The 6 mm steel L-profile of the window frame was fully welded to the steel bulkhead on the exposed side.

For more details see approved drawing listed under "Type Approval documentation".

Application/Limitation

The window is approved for installation in steel bulkheads of class H-120. Other applications are subject to case-by-case approval.

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.

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


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

Type Approval documentation

Certification in accordance with Standard for Certification No. 1.2, Type Approval, January 2013.

Test report No. PGA10528 (serial No. 14806) dated 03 December 2014, from Danish Institute of Fire and Security Technology (DBI), Hvidovre, Denmark.

Drawing No: VA911300102, Rev. 01 (p. 1-2); VA911300102a, Rev. 05-02-2014 (p.1-2); VA911300102g, Rev. 06-02-2014; VA911300102S, Rev. 01; VA911300102-1, Rev. 01; VA911300102-2, Rev. 01; VA911300102-3, Rev. 01, from C.C. Jensen A/S.



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Tests carried out

Tested according to IMO 2010 FTP Code Part 3 and the HC- temperature curve stipulated by the European Standard EN-1363-2.

Marking of product

The product is to be marked with name of manufacturer, type designation and 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 Standard for Certification No. 1.2 Type Approval Item 4.