



Certificate No:
TAS000033G

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Windows

with type designation(s)
CCJ AL COW

Issued to

C.C. Jensen Window A/S
Svendborg, Syddanmark, Denmark

is found to comply with
International Load Line Convention, 1966
DNV GL rules for classification – Ships
DNV GL rules for classification – Offshore units

Application :

Clamp-on Windows.

Issued at **Høvik** on **2021-08-09**

for **DNV**

This Certificate is valid until **2026-08-08**.

DNV local station: **Fredericia FiS**

Approval Engineer: **Gisle Hersvik**

Gustav Heiberg
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.

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 300,000 USD.



Product description

CCJ AL COW

The CCJ Clamp-on window may be mounted without welding or bolting, instead it is mounted with a number of clamps on the back side that is tightened by screws. Hereby the pre-mounted gasket system will be compressed and thus securing water tightness to the superstructure.

Max frame size: 1800 x 1500 mm

Other sizes are acceptable, as long as the area does not exceed 2.7 m².

The frames and clamps are manufactured of extruded aluminium AlMgSi alloy.

The surfaces are to be protected and have a surface treatment equivalent to a minimum of the requirements of corrosion class C4 in ISO 12944-2:2017 (*Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 2: Classification of environments*).

The window frame can be delivered as a standard with corners of R90 and R200 mm.

For windows with an area not greater than 0.28 m² the minimum radius of the frame corner is 50 mm, while the minimum corner radius of the larger windows is 90 mm.

The max. distance between the clamps is 350 mm. All windows are fitted with minimum 2 clamps along each side. The frames with R200 mm or bigger will have an additional clamp mounted in each corner.

Type of frame	Glass pane thickness (mm)	Max bulkhead thickness (mm)
Standard	8 to 19	20
Extended edition	25	25

The glass pane is glued into the frame with a special adhesive developed for maritime use.

Mechanical securing of the glass pane is fitted outside the glass.

Application/Limitation

The window may be fitted in external bulkheads above the freeboard deck, provided that side scuttles are not required by the International Convention on Load Lines, DNV Rules or Offshore Standards.

The window is to be mounted in accordance with manufacturer's mounting instructions.

The type approval does only cover the structural requirements for the window design.

The support of the bulkhead around the cut out where the window is fitted is subject to approval by DNV on a case-by-case basis.

Dead lights are to be fitted if the window is located in positions where such are required either by the International Convention on Load Lines, DNV Rules or Offshore Standards.

The thickness of the toughened safety glass pane is to comply with ISO 21005:2018 (*Ships and marine technology — Thermally toughened safety glass panes for windows and side scuttles*), where the design pressure is taken from DNV Rules and ISO 5779:1987 (*Shipbuilding — Ordinary rectangular windows — Positioning*).

The thickness of the glass pane is subject to approval by DNV on a case-by-case basis.

Type Approval documentation

1. "Fixed ALU Window clamp on 562 x 762", Item No. VA910900101 dated 2009-04-01
2. "Mounting instructions for CCJ Clamp On window in steel or aluminium bulkhead", Drawing no. VH0100219 (11.04.08)
3. "Clamps for frame corner", Drawing no. VD09133001 (20.06.06)
4. "Clamps for frame", Drawing no. VD09133002 (20.06.06)
5. "Clamp On 500 x 1500 CCJ AL COW A60 02", Drawing no. VA910800702 (14.10.08)
6. "Clamp On 500 x 1500 CCJ AL COW 01", Drawing no. VA910800703 (27.02.09)
7. AlMgSi alloy 606035 Technical Datasheet for EN AW-6060 SP3.
8. DNV Hydrostatic Pressure Test Report, Cert. No. 22140718 of 2005-07-01.

Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**.

- The glass panes to be tested in accordance with ISO 614:2012 (*Ships and marine technology — Toughened safety glass panes for rectangular windows and side scuttles — Punch method of non-destructive strength testing*).
- Hydrostatic pressure test carried out 2005-01-19 and Wave Impact Impulse test carried out 2005-05-27 to 2005-07-01, both described in DNV Hydrostatic Pressure Test Report, Cert. No. 22140718 of 2005-07-01.
- “Windows - Soft and heavy body impact test” according to DS/EN 13049:2003 (*Windows - Soft and heavy body impact - Test method, safety requirements and classification*), carried out by Danish Technological Institute.

Marking of product

The glass pane is to be marked in accordance with ISO 614.

The product shall also be marked with *manufactures name or trademark, nominal size and DNV Type Approval Certificate number: **TAS000033G***.

The marking is to be carried out in such a way that it is visible, legible and indelible. The marking of product is to enable traceability to the DNV Type Approval Certificate.

Periodical assessment

The scope of the Periodical Assessment is to verify that the conditions stipulated for the Type Approval is complied with and that no alterations are made to the product design or choice of materials.

Periodical assessments (for Certificate Retention and Certificate Renewal) shall be performed according to DNVGL-CP-0338.

This certificate is only valid if required Periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnvgl.com>

END OF CERTIFICATE