

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Windlass

with type designation(s)
AAW-90, AAW-110, AAW-150

Issued to

Hercules Hydraulics Ltd
Paignton, United Kingdom

is found to comply with
DNV GL rules for classification – High speed and light craft

Application :

Aluminium anchor winches for rope

This Certificate is valid until **2020-06-23**.

Issued at **Høvik** on **2016-06-24**

DNV GL local station: **Southampton**

Approval Engineer: **Chi Wan Bang**

for **DNV GL**

Aldo Matteucci
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

Three types of aluminium anchor winches approved for the following:

- AAW-90 for rope with Minimum Breaking Strength up to 82 kN, corresponding to chain size of Ø12.5 mm K2 grade or Ø14 mm K1 grade.
- AAW-110 for rope with Minimum Breaking Strength up to 107 kN, corresponding to chain size of Ø14 mm K2 grade or Ø16 mm K1 grade.
- AAW-150 for rope with Minimum Breaking Strength up to 150 kN, corresponding to chain size of Ø16 mm K2 grade or Ø19 mm K1 grade.

Application/Limitation

1. Connection and support of the anchor winch to the ship's deck structure is not included in this type approval.
2. All materials to be delivered in grades as stated on approved drawings and with certificates according to the rules in question.
3. Welding to be carried out by approved welders and according to approved welding procedures specification. Extent of non-destructive testing of welds to comply with the Rules in question.
4. Load-carrying bolts are to be pre-stressed according to a procedure acceptable to the surveyor and secured to the attending surveyor's entire satisfaction.
5. Steel and aluminium components should be isolated from one another due to risk of corrosion.
6. Where Classification Rules require, the Manufacturer is required to have a DNVGL surveyor witness all important production and test as required.
7. Acceptance of bending specified by rope Manufacture should be verified against the drum / rope ratio.

Type Approval documentation



Job Id:
Certificate No: **TAS00000CZ**



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Tests carried out

Testing of windlass according to Rules for HSLC (Pt.3 Ch.5 Sec.3) carried out 2010-11-11, 2012-01-10 and 2012-03-30 witnessed by DNV Southampton. Survey report numbers. 54010109 and 54012001.

Marking of product

When a DNVGL product certificate is issued, windlass is to be marked with manufacturer's name or trademark, type number identification stamped with NV mark and reference to type approval certificate number.

Periodical assessment

For retention of the Type Approval, DNVGL surveyor shall perform a survey every second year and before expire date of this certificate to verify that the conditions of the type approval are complied with.

END OF CERTIFICATE