

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Waterjet

with type designation(s)
HamiltonJet HT810

Issued to

C.W.F. Hamilton & Co. Ltd
CHRISTCHURCH, New Zealand

is found to comply with

Det Norske Veritas' Rules for Classification of High Speed and Light Craft

Application :

Product approved by this certificate is accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **2019-10-29**.

Issued at **Høvik** on **2015-10-30**

DNV GL local station: **Auckland**

Approval Engineer: **Frida Douglass Hylin**

for **DNV GL**

Oddvar Deinboll
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

Waterjet propulsion unit with steering and reversing system.

Application/Limitation

The waterjet is approved for the following rating:

Impeller type	Max shaft power (kW)	Impeller shaft speed (rpm)	Max torque (kNm)	Max Application factor (Ka)
4900	4000	935	40,86	1,2
4200		985	38,78	
3400		1056	36,17	

The waterjet shall be run within safe operation range (no harmful cavitation) to achieve a satisfactory lifetime.

Type Approval documentation

[illegible]



Job Id: **262.1-008772-2**
Certificate No: **TAM0000038**

Marking of product

The product shall be marked with the manufacturer's name or trademark and type number identification.

Periodical assessment

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

The objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval Certificate was issued. The main scope of the Periodical Assessment will normally include:

- Verification of the Type Approval applicant's production and quality system w.r.t. ensuring continued consistent production of the Type Approved products at the Type Approval applicant's own premises and at other companies that are given the responsibility for manufacturing of the products.
- Review of the Type Approval documentation and that this is still used as basis for the production
- Review of possible changes to the design, the material and the performance of the product
- Verification of the product marking.

In cases where the Type Approved product is manufactured at other companies, the Periodical Assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore Periodical Assessment shall be carried out randomly at these companies.



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Other Conditions

- Flexible hoses shall be type approved by DNVGL

The following items shall be submitted for approval in each separate case:

- Control system
- Alarm list with set-point and delay time
- Connection to driving unit
- Connection to hull (shipbuilder's responsibility)
- Emergency steering procedure

END OF CERTIFICATE