

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Waterjet

with type designation(s)
Ultrajet 305

Issued to

Marine Jet Power AB
Uppsala Uppsala Län, Sweden

is found to comply with
Det Norske Veritas' Rules for Classification of High Speed and Light Craft

Application :

The approval is valid for propulsion duty with ratings as given on page 2.

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

This Certificate is valid until **2018-06-30**.

Issued at **Høvik** on **2016-02-11**

DNV GL local station: **Stockholm**

Approval Engineer: **Frida Douglass Hylin**

for **DNV GL**

Tormod Eidal
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.

Job Id: **262.1-018889-2**
Certificate No: **TAM000003R**

Product description

Waterjet unit with built in steering and reversing system.

Application/Limitation

The approval is valid for propulsion duty with the following rating :

Input power	372.8 kW
Impeller speed	3000 rpm
Maximum torque	1020 Nm
Application factor, contd.	1.2

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

Service interval shall correspond with calculated lifetime of roller bearings.

Type Approval documentation

Marking of product

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

Periodical assessment

For retention of the Type Approval, a DNV GL 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.

Other conditions

The following is not covered by this certificate and shall be submitted for approval for each delivery:

- Connection to hull (shipbuilders responsibility)
- Connection to driving unit
- Remote control system
- Controls and alarms, including set points and delays
- Hydraulic cylinders for steering and reversing (Cylinders shall be type approved or approved on a case by case basis)
- The hydraulic system for steering and reversing shall be submitted for approval in each separate case.
- Flexible hoses shall be type approved.

END OF CERTIFICATE