Certificate no.:
TAM00001CB

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Waterjet

with type designation(s)
HTX47

issued to
C W F Hamilton & Co. Ltd.
Christchurch, CAN, **New Zealand**

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

Application:

Products approved by this certificate are accepted for installation on all vessels classed by DNV.
The waterjet is approved for propulsion duty with rating(s) as given on page 2.

Issued at **Høvik** on **2023-12-08**
This Certificate is valid until **2028-12-07**.
DNV local unit: **Auckland**

for **DNV**

Approval Engineer: **Terje Sollie**

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
Waterjet propulsion unit with 6-bladed impeller and steering and reversing system.

Application/Limitation
The waterjet is approved for the following rating:

Max- engine power [kW]	1630
Max. impeller shaft speed [rpm]	1654-1743
Max. torque [Nm]	9409

The application factor K_A, shall be less or equal to 1.1.
The waterjet shall be run within safe operation range (no harmful cavitation) to achieve a satisfactory lifetime.

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 an assessment after 2 years and after 3.5 years, to verify that the conditions of the type approval are complied with. A renewal assessment will be performed at renewal of the certificate.

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 are not covered by this certificate and shall be submitted for approval for each delivery:
- Connection to hull (yard responsibility)
- Connection to driving unit
- Remote control system
- Controls and alarms, including set points and delays
- Hydraulic system for steering and reversing
- Flexible hoses shall be type approved

END OF CERTIFICATE