



Certificate no.:
TAS00004JA

TYPE APPROVAL CERTIFICATE

This is to certify:

that the A-Frame

with type designation(s)
eA150 ROV A-Frame with docking head

issued to

MacArtney A/S
Esbjerg V, Syddanmark, Denmark

is found to comply with

DNV standard DNV-ST-0378 – Offshore and platform lifting appliances

Application:

Electrical eA150 ROV A-Frame with docking head

Issued at **Høvik** on **2025-09-10**

This Certificate is valid until **2030-09-09**.

for **DNV**

DNV local unit: **Esbjerg Verification**

Approval Engineer: **Lap Van Duong**

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 USD 300 000.

Product description

Electrical eA150 ROV A-frame with docking head

Safe working load, SWL: 150 kN

Design dynamic factor:

- Launch and recovery:
 - o Outboard: 3.2, side lead / off lead: 10% SWL, heel / trim: 10.5°
 - o Outboard and operation: 3.2, roll / pitch: +/- 15°, damping: 147 kN
- Latched: 2, roll / pitch: +/- 15°, damping: 14.7 kN
- Luffing: 1.44
 - o Inboard and latched: side lead / side lead: 10 % SWL
 - o Inboard and umbilical over sheave: side lead / off lead: 10 % SWL, heel / trim: 10.5°
 - o Outboard and latched: off lead / side lead: 10% SWL, heel / trim: 0°

Minimum design temperature: -20 °C

Design life:

- 20 years, including 10 years in transit
- Maximum load cycles at SWL: 2920

Maximum significant wave height: 2 m

Maximum wind pressure: 0.36 kN/m²

Application/Limitation

1. Materials specified in the drawings shall be delivered with material certificates, at a minimum complying with EN 10204/3.1.
2. All welding shall be carried out by qualified welders and according to approved welding procedures acceptable to the surveyor.
3. Extent of non-destructive testing of welds shall comply with DNV-ST-0378 Sec.3 and shall be carried out to the attending surveyor's complete satisfaction.
4. The various components transferring load such as hook, wire rope, socket, shackle etc. shall be manufactured according to recognized standards or codes and shall be delivered with relevant ILO form certificates

Type Approval documentation

Tests carried out

Each unit requiring DNV certification shall be tested in according with DNV-ST-0378 Section 14.

Marking of product

Marking of each product shall be in according with DNV-ST-0378 Section 14.

Periodical assessment

For retention of the Type Approval, a DNV surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.

Manufactured by:

Macartney Offshore solutions A/S
Idomvej 4, 7570 Vemb, Danmark

Macartney A/S
GI Guldagervej 48, 6710 Esbjerg V, Danmark