Certificate no.:
TAD00001RX

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Accumulators

with type designation(s)
Piston Style Accumulator, Stainless Steel Body, 1 Liter Capacity, 6,000 psi, Model No. 3.A760-2-SS-A

issued to
Tobul Accumulator Incorporated
Houston, TX, USA

is found to comply with
DNV-OS-E101 – Drilling facilities, Edition July 2024
DNV statutory interpretations DNV-SI-0166 – Verification for compliance with Norwegian shelf regulations, Edition July 2021

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Houston** on **2025-07-01**
This Certificate is valid until **2030-06-30**. for **DNV**
DNV local unit: **Certification & Inspection Services**

Approval Engineer: **Xiangwen Maggie Wang**

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.

The following design codes/standards were used as references:

ASME *Boiler and Pressure Vessel Code*, Section VIII, Division 1, 2023 Edition
ASME B1.1, *Unified Inch Screw Threads (UN and UNR Thread Form)*, 2003 Edition
ASME B1.9, *Buttress Inch Screw Threads 7°/45° Form with 0.6 Pitch Basic Height of Thread Engagement*, 1985 Edition

Product description

Piston Type Accumulator, Model No. 3.A760-2-SS-A (1 Liter Capacity)

Application/Limitation

Design Parameter	Value	Equivalent
Max Allowable Working Pressure	6,000 psi	413.7 bar
Hydrostatic Test Pressure	9,000 psi	620.5 bar
Design Temperature	200ºF	93°C
Minimum Design Temperature	-20ºF	-29°C
Corrosion Allowance	0 in	0 mm
ASME Code Stamp ‘U’	Yes	

Type Approval documentation

Marking of product

For traceability to this Type Approval Certificate the products are as a minimum to be marked as follows:

1. Serial Number
2. Manufacturer's name and trademark
3. Additional marking at manufacturer’s option
4. As required in Paragraph UG-116 of ASME Section VIII Division 1, 2023 Edition

Certificate retention survey

For retention of the Type Approval Certificate, a DNV surveyor shall perform a retention survey after two and three-and-a-half years in accordance with the DNV Class Program for Type Approval, DNV-CP-0338.

Other Comments and Conditions

1. Cylinder castings are to be processed per ASME BPVC Section VIII, Division 1, Appendix 7 and 8 for a quality factor of 90%.
2. DNV Ref.: A1719465.

END OF CERTIFICATE