

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Accumulators**

with type designation(s)

Accumulator, Piston Style, Stainless Steel Body, 15 Gallon, Model No. 10.7A75-120SS-A

Issued to

**Tobul Accumulator
Bamberg SC, USA**

is found to comply with

DNVGL-OS-E101 – Drilling facilities, Edition January 2018**DNVGL-SI-0166 - Verification for Compliance with Norwegian shelf regulations - Ch.2 Sec.7
DRILL(N), July 2015****Application :****See Page 2****Product(s) approved by this certificate is/are accepted for installation on all vessels classed
by DNV GL.**Issued at **Houston** on **2018-04-10**This Certificate is valid until **2023-04-10**.for **DNV GL**DNV GL local station: **Certification & Inspection
Services**Approval Engineer: **M. Kevin Mandeville Jr.****Meindert van Mierlo
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: **262.1-028245-1**
Certificate No: **TAD00000X3**

The following design codes/standards were used as reference:

ASME *Boiler and Pressure Vessel Code*, Section VIII, Division 1, 2017 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 (Subsea Application)
Model 10.7A75-120SS-A, 15 Gallon Capacity

Application/Limitation

Design Parameter	Value	Equivalent
Max Allowable Working Pressure	7,500psi	517 bar
Hydrostatic Test Pressure	11,250psi	775.5 bar
Max Allowable External Working Pressure†	4,643 psi	320 bar
Design Temperature	200°F	93°C
Minimum Design Metal Temperature	-20°F	-29°C
Corrosion Allowance (Internal & External)	0 in	0 mm
ASME Code Stamp "U"	Yes	

†Note: The Accumulator is not rated for external gage pressure. This statement does not, however, prevent subsea applications.

Type Approval documentation

Tests carried out

Type Test successfully carried out on 2018-04-10 on Serial No. 359854, witnessed by E. Zalewski.

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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 BPVC, Section VIII, Division 1, 2017 Edition

Certificate retention survey

For retention of the Type Approval Certificate, a DNV GL surveyor shall perform a retention survey after 2 years and 3.5 years, in accordance with the DNV GL Class Programme For Type Approval, DNVGL-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 GL Ref. Project A0496029

END OF CERTIFICATE