DNV·GL

Certificate No:
TAD0000127

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Accumulators

with type designation(s)
Piston Type Accumulator, Model No. 5.2A50-22-SS-A (2.75 Gallon Capacity)

Issued to
Tobul Accumulator Incorporated
Houston, TX, USA

is found to comply with
DNVGL-OS-E101 – Drilling facilities, Edition January 2018
DNVGL-SI-0166 – Verification for compliance with Norwegian shelf regulations, Edition July 2018

Application :

See Page 2

This Type Approval Certificate is 3 pages long and replaces D-5698.

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

Issued at **Høvik** on **2019-01-30**
This Certificate is valid until **2024-01-29**.
DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **M. Kevin Mandeville Jr.**

for **DNV GL**

.....

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.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Job Id: **262.1-030620-1**
Certificate No: **TAD0000127**

The following design codes and standards were used as reference:

ASME Boiler and Pressure Vessel Code, Section VIII, Division1, 2017 Edition
ASME B1.1, 1989 Edition, *"Unified Inch Screw Threads (UN and UNR Thread Form)"*
ASME B1.9, 1985 Edition, *"Buttress Inch Screw Threads 7°/45° Form with 0.6 Pitch Basic Height of Thread Engagement"*

Product description

Accumulator, 2.75 Gallon capacity, Piston style body

Application/Limitation

Design Parameter	Value	Equivalent
Max Internal Working Pressure	5,000 psi	344.7 bar
Max Internal Test Pressure	7,500 psi	517.1 bar
Max External Working Pressure (gauge)†	3,578 psi	247 bar
Min Design Temperature	-20 °F	-29°C
Max Design Temperature	200 °F	93°C
Corrosion Allowance	0in	0mm
ASME Code Stamp 'U'	Yes	

†Note: Accumulators are not rated for external pressure. This does not, however, prevent subsea use.

Type Approval documentation

Tests carried out

Marking of product

For traceability, the following marking is to be carried out on each product:

1. Serial No.
2. Manufacturer's Name or Trademark
3. Additional marking at the manufacturer's discretion

Certificate Retention Survey

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

Other conditions/comments

- Cylinder Castings are to be processed per ASME BPVC Section VIII, Division 1, appendix 7 and 8, for a quality factor of 90%.
- DNV GL Ref. Project No. A0632483.

END OF CERTIFICATE