

TYPE APPROVAL CERTIFICATE

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

with type designation(s)

Accumulator, NOV DCB, Cherted Double Bottle Style**P/N 198051-01-01****P/N 198051-01-02****P/N 198051-01-03****P/N 198051-01-04**

Issued to

**Reel Power Oil & Gas , Inc. DBA Radoil and/or Tulsa Power
Houston TX, USA**

is found to comply with

DNVGL-OS-E101 – Drilling facilities, Edition January 2018**Application :****See page 2****This Type Approval Certificate is three pages long and replaces D-5028, issued on 2013-07-18.**Issued at **Houston** on **2018-03-09**This Certificate is valid until **2023-03-08**.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: **262.1-015280-2**
Certificate No: **TAD00000V1**

The following standards/codes were used as a reference:

ASME Boiler and Pressure Vessel Code, Section VIII, Division 1, 2015 Edition

Product description

Accumulator is a double bottle style consists of a Nitrogen bottle and a hydraulic one standing in parallel joint by a top and bottom mount.

Application/Limitation

Design Parameter	Value	Equivalent
Maximum Allowable Working Pressure	5,000 psi	345 bar
Hydrostatic Test Pressure	7,500 psi	517 bar
Maximum Depth Rating	12,000 ft	3,657m
Design Temperature	120°F	49°C
Minimum Design Metal Temperature	32°F	0°C
Corrosion Allowance	0 in	0 mm
Service	Hydraulic Oil/N ₂	

Type Approval documentation

Note: Other part numbers or updated revisions may be acceptable under this Certificate, provided that the critical aspects of the design remain the same. Changes shall be documented and approved (via an Engineering Change Notice or similar documentation) by the Manufacturer's Engineering and/or Quality department as appropriate. DNV GL's local surveyor shall verify the change before issuance of Product Certificate.

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Materials

Tests carried out

Factory Acceptance Test on PN 198051-01-03, Rev. A21, Serial No. RB11499-000-01, carried out on 2016-11-28.

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

Periodical assessment

For retention of this Type Approval Certificate, DNV GL's Surveyor shall perform a survey after two and three and a half years, in accordance with DNV GL's Type Approval Class Programme, DNVGL-CP-0338.

Other Conditions/Comments

1. DNV GL Ref. Project No. A0447834

END OF CERTIFICATE