DNV·GL

Certificate No:
TAD000017W

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Accumulators

with type designation(s)
DPAC 585/160 x 6632 - XX-XC-XNC-LAN (GA drawing no. D017690)

Issued to
Servi AS
RISSA, Norway

is found to comply with
DNVGL-OS-E101 – Drilling facilities, Edition January 2018

Application :

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

Issued at **Høvik** on **2019-12-17**
This Certificate is valid until **2024-12-16**.
DNV GL local station: **Norway CMC, Mid-North**

Approval Engineer: **Zrinka Cizmek**

for **DNV GL**

Zeinab Sharifi
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.

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Product description

Hydraulic accumulator designed according to EN14359:2017.

Model: DPAC 585/160 x 6632 – XX-XC-XNC-LAN
Outer diameter: 730 mm
Inner diameter: 585 mm
Design code: EN 14359

Part	Material
Barrel passive side	S355J2+N (PMA EN 10025-2)
Cylinder barrel active side	S355J2H (PMA EN 10210-1)
Piston rod	S355J2+N (PMA EN 10025-2)
Stuffing box (part 5 and 16)	S355J2G3 (PMA EN 10250-2)
Rear piston rod	S355J2+N (PMA EN 10025-2)
End cap, N2 side	S355J2+N (PMA EN 10025-2)
Gland, N2 side	S355J2+N (PMA EN 10025-2)
Stuffing box (part 13)	1.4418 (PMA EN 10088-3)

Application/Limitation

Volume and pressures:
N2 side:
- Volume, Litre: 1783
- Design pressure (DP), bar: 312
- Test pressure (TP), bar: 468
- Working pressure (WP), bar: 312

Passive side 10'' Oil port:
- Volume, Litre: 1650
- Design pressure (DP), bar: 330
- Test pressure (TP), bar: 495
- Working pressure (WP), bar: 330

Active side 3'' Oil port:
- Volume, Litre: 167
- Design pressure (DP), bar: 310
- Test pressure (TP), bar: 465
- Working pressure (WP), bar: 310

Design Temperature (min/max): -20°C / 50°C
Corrosion allowance: 1 mm
Number of load cycles: Infinity
The unit will be working in compensation mode as described:
99.1% of the cycles Δp = 8bar
0.99% of the cycles ΔP = 58 bar

Each accumulator shall be protected on both gas and hydraulic fluid side by a safety device such as relief valve, fuse plug or rupture disc to prevent excess pressure if overheated. When the accumulator is an integral part of a system with such a safety device, the accumulator itself need not be supplied with a safety device.

For accumulators certified according to DNVGL-OS-E101 non-metallic materials in wetted components shall be tested in order to ensure compatibility with all fluids that they will be exposed to during service, as specified. (DNVGL-OS-E101 Ch. 2 Sec. 2 [2.7])

Type Approval documentation

Production testing

Each accumulator shell shall be hydraulically pressure tested at 1.43 times design pressure in the presence of a DNV GL Surveyor.

Final inspection of assembled product shall be witnessed by a DNV GL Surveyor.

Certification

Each accumulator shall be certified by a DNV GL Surveyor.

For accumulators certified according to DNVGL-OS-E101, 3.1 material certificate is sufficient for pressurized parts. All structural materials shall be fine grain treated, and shall comply with DNVGL-RU-SHIP Pt.2 Ch.2 Sec. 2, Table 8 and Table 10.

All manufacturing, workmanship and testing shall be done in accordance with EN 14359.

Marking of product

Each pressure equipment shall be permanently and legibly marked on the pressure part or on a nameplate permanently attached to a principal pressure part to show its identity and origin.
The marking of pressure vessels shall show at least the following particulars:

- manufacturer's name and address
- type designation and serial number
- year of manufacture
- maximum allowable working pressure
- design temperature range
- hydrostatic test pressure.

Periodical assessment

For retention of the Type Approval, a DNV GL 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 DNVGL-CP-0338.