



Certificate no.:
TAD00001RS

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Mud and Cementing Equipment

with type designation(s)
Pressure Debooster (P/N: DB1006A)

issued to

National Oilwell Varco, L.P.
Cedar Park, 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 **2025-10-16**

This Certificate is valid until **2030-05-14**.

for **DNV**

DNV local unit: **Certification & Inspection Services**

Approval Engineer: **Parna Deljo**

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.



Job ID: 262.1-043529-1
Certificate no.: TAD00001RS

Product description

M/D Totco pressure deboster P/N: DB1006A

Reference Standards

- ASME BPVC Section VIII, Division I, 2023
- ASME B1.1-2024, Unified Screws Threads
- NACE MR0175/ISO 15156

Application/Limitation

<u>Design Parameter</u>	<u>Value</u>	<u>Equivalent</u>
Minimum Design Temperature	: -4°F	(-20°C)
Maximum Design Temperature	: 140°F	(60°C)
Maximum Allowable Working Pressure (Standard Service)	: 20,000 psi	(138 MPa)
Maximum Allowable Working Pressure (Sour Service)	: 15,000 psi	(103.4 MPa)
Hydrostatic Test Pressure (Standard Service)	: 30,000 psi	(207 MPa)
Hydrostatic Test Pressure (Sour Service)	: 22,500 psi	(155.1 MPa)
Corrosion Allowance	: 0 in	(0 mm)

Type Approval documentation

Tests carried out

<u>Document No.</u>	<u>Revision</u>	<u>Description</u>
78275395	2	Work Instruction: Mechanical Assembly - Third Party Witness Tests

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. Other markings at the manufacturer's discretion.

Periodical assessment

Periodical assessments for type approvals will be required after two years (+/- 90 days) and after three-and-a-half years (+/- 90 days) in accordance with DNV-CP-0338 September 2021, Section 4

Other conditions/Comments

1. Procedures related to testing, welding, NDT, and other quality control requirements are to be reviewed/approved by DNV's local surveyor.
2. When DNV Product Certification is required, each product is to be surveyed during fabrication in accordance with the requirements for Category I equipment as defined in DNV's Offshore Standard DNV-OS-E101.
3. Sub and Union are not within the scope of this Type Approval Certificate and shall be suitable for "Design Conditions" as stated in section "Application/Limitation" above and subject to satisfaction of the attending local surveyor.
4. DNV Ref.: A1667862

END OF CERTIFICATE