



Certificate no.:  
**TAD00001R0**

# TYPE APPROVAL CERTIFICATE

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## This is to certify:

that the **Well Testing Equipment**

with type designation(s)  
**7 3/8" - 10 ksi Flowhead**

issued to

**Worldwide Oilfield Machine, Inc.**  
**Houston, 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 **2024-11-06**

This Certificate is valid until **2029-11-05**.

for **DNV**

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

Approval Engineer: **Xiangwen Maggie Wang**

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.

### Product description

- 7 3/8" – 10 ksi W.P. Flowhead Assembly
- Customer: Schlumberger
- Schlumberger Codes: FHT-ND

### Reference standards

- API 6A, *Specification for Wellhead and Tree Equipment*, 21<sup>st</sup> Edition
- NACE MR0175/ISO 15156, *Petroleum and Natural Gas Industries – Material for Use in H<sub>2</sub>S – Containing Environments in Oil and Gas Production*, 4<sup>th</sup> Edition

### Application/Limitation

- Max. Working Pressure: 10,000 psi
- Min. Design Temperature: -20 °F
- Max. Design Temperature: 250 °F
- Max. Axial Load: 750,000 lbf@ 10,000 psi  
1,500,000 lbf@ 0 psi
- Service: H<sub>2</sub>S
- API 6A Material Class: EE
- API 6A PSL: 3G
- API 6A PR: PR2F
- Application: Surface well testing

### Type Approval documentation

#### Tests carried out

1. Test reports for swivel and the flowhead assembly are to be submitted

#### 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 manufacturer's discretion.

#### Periodical assessment

For retention of the Type Approval, DNV's surveyor shall perform periodical assessment after 2 years (+/- 90 days) and after 3.5 years (+/- 90 days) in accordance with DNV's Class Programme DNV-CP-0338, 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. Valves (P/Ns: M5072, M5024-A, M5024-B) shall be certified separately.
3. DNV ref.: A1597239.

END OF CERTIFICATE