



Certificate No:
TAD00001HB

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Valve

with type designation(s)
Ball Valves, 300# CLASS, 8", 14" & 16"

Issued to
Worldwide Oilfield Machine, Inc.
Houston, TX, USA

is found to comply with
DNV-OS-E101 – Drilling facilities, Edition July 2021
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 **2023-04-12**

This Certificate is valid until **2028-04-11**.

DNV local unit: **Houston, Approval CMC**

for **DNV**

Approval Engineer: **Xiangwen Maggie Wang**

Mark Miser
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.

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 300,000 USD.



Form code: TA 251

Revision: 2022-09

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Product description

- Ball valves, 300# CLASS, 8", 14", 16" with 17-4PH internals, Inconel/duplex stem, Inconel 625 inlay in RTJ, seat pockets & stem seal area, w/WOM version rotary double acting hydraulic actuator.

Reference standards

- API 64, *Diverter Equipment Systems*, 3rd Edition
- API 6D, *Specification for Valves*, 25th Edition
- API 6DX, *Standard for Actuators and Mounting Kits for Valves*, 2nd Edition
- API 6FA, *Specification for Fire Test for Valves*, 4th Edition
- ASME B16.34, *Valves - Flanged, Threaded, and Welding End*, 2020 Edition
- NACE MR0175/ISO 15156, *Petroleum and Natural Gas Industries – Materials for Use in H₂S – Containing Environments in Oil and Gas Production*, All Parts 3rd Edition

Application/Limitation

- Max. Working Pressure: 750 psi @100F; 740 psi @300F
- Test Pressure: 1,125 psi
- Design Temperature: -20 °F to 300 °F
- Max. Working Pressure (Actuator): 3,000 psi
- Test Pressure (Actuator): 4,500 psi
- Design Temperature (Actuator): -20 °F to 176 °F
- Service: H₂S

Type Approval documentation

Tests carried out

1. Design Validation of Ball Valve Test As Per API 6D, 25th Edition, and WOM Specification: No 4.9.154.1, Rev 0, Dt- 30. Dec.2022. Ball Valve Model 30, 8"-600# CLASS, RFFE, W/0.001" ENP Carbon Steel Internals, w/17-4PH Stem, W/Gear Operated. Assy. Sr. No – IO00144224-1 Main Assembly Part No- W08F0601131S. Temperature Range: (-20°F To 300°F), Pressure Rating: 600#
2. DNV Inspection Report: Dual Seal Ball Valve 20"-600#CL. RF FE W-CS Internals Gear Operated, API 6D 25th Edition. WOM-4.9.154.1 Rev. 0 B-16.34.
3. Fire test report for 6-inch Class 150 ball valve, dated Nov. 10th 2015
4. Fire test report for 8-inch Class 150 ball valve, dated Nov. 13th 2015

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

- Procedures related to testing, welding, NDT, and other quality control requirements are to be reviewed/approved by DNV's local surveyor.
- DNV ref.: A1280007.

END OF CERTIFICATE