

TYPE APPROVAL CERTIFICATE

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

with type designation(s)

4 1/16"-10K Magnum Hyd. F.S. F.E.

Issued to

Worldwide Oilfield Machine, Inc. (WOM)**Houston TX, United States****Pune, India**

is found to comply with

DNV-OS-E101 Drilling Plant October 2013**DNV-OSS-201 - Verification for Compliance with Norwegian Shelf Regulations - Ch.2 Sec.7****DRILL (N), October 2014****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****THIS CERTIFICATE REPLACES D-6085 ISSUED MARCH 9TH 2015**Issued at **Houston** on **2017-06-12**This Certificate is valid until **2019-06-30**.for **DNV GL**DNV GL local station: **Houston, Approval CMC**Approval Engineer: **Xiangwen (Maggie) Wang****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: **262.1-019252-2**
Certificate No: **TAD00000R1**

Product description

- Valve , 4 1/16"-10K Magnum Hydraulic F.S. F.E.

Reference standards/codes

- API 6A, Specification for *Wellhead and Christmas Tree Equipment*, 20th Edition
- ISO 15156-3, *Petroleum and Natural Gas Industries Materials for use in H₂S containing environments in Oil and Gas Production*, 2nd Edition

Application/Limitation

- Max. Working Pressure: 10,000 psi
- Test Pressure: 15,000 psi
- Max. Hydraulic Working Pressure: 3,000 psi
- Min. Design Temperature: -20 °F
- Max. Design Temperature: 350 °F
- Service: H₂S
- API 6A Material Class: DD / EE
- API 6A PSL: 3
- API 6A PR: 2

Note: DNV GL surveyor to check materials used in each project for Material Class trim.

Type Approval documentation

Tests carried out

- PR-2 Report: DOC#ENG.TEST.MAG.003 Rev.0

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. Marking shall be in accordance with DNV-OS-E101 Ch. 2 Sec.7 A300 and requirements of API 6A.

Certificate Retention Survey

For retention of the Type Approval, DNV GL's surveyor shall perform a survey every second year in accordance with DNV's Standard of Certification No. 1.2.

Other conditions/comments

1. Procedures related to testing, welding, NDT, and other quality control requirements are to be reviewed/approved by DNV GL's local surveyor.
2. DNV GL ref.: Project No. PP124258-036/PP175528-23.

END OF CERTIFICATE