



Certificate no.:
TAD00001R5

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Kill and Choke Equipment**

with type designation(s)

MAGNUM CHOKE ASSEMBLY, MODEL WMC-30, 3-1/16" X 15K INLET F.E & 3-1/16" X 15K OUTLET F.E.

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 **2024-12-03**

This Certificate is valid until **2029-12-02**.

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

- MAGNUM CHOKE ASSEMBLY, MODEL WMC-30, 3-1/16" X 15K INLET F.E & 3-1/16" X 15K OUTLET F.E. W/ HYDRAULIC MOTOR DRIVEN WORM GEAR (2" MAX. ORIFICE)
- MAGNUM CHOKE ASSEMBLY, MODEL WMC-30, 3-1/16" X 15K INLET F.E & 3-1/16" X 15K OUTLET F.E. WORM GEAR (2" MAX. ORIFICE)

Reference standards

- API 6A, *Specification for Wellhead and Tree Equipment*, 21st Edition
- API 16C, *Choke and Kill Equipment*, 3rd Edition
- NACE MR0175/ISO 15156, *Petroleum and Natural Gas Industries – Materials for Use in H₂S – Containing Environments in Oil and Gas Production*, 4th Edition

Application/Limitation

- Max. Working Pressure: 15,000 psi
- Test Pressure: 22,500 psi
- Design Temperature: -20 °F to 350 °F
- Service: H₂S
- Material Class: DD, EE (see notes for details)
- Product Specification Level: 3
- Performance Requirement: PR2F

Type Approval documentation

Tests carried out

1. MAGNUM CHOKE ASSEMBLY MODEL WMC-30, 3-1/16" X 15K STUDDED INLET & 3-1/16" X 15K FLANGED OUTLET W/HYDRAULIC MOTOR DRIVEN WORM GEAR (3" MAX. ORIFICE)
2. 2. API 16C Performance Requirements & Annex A Design Validation Test Report

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. DNV ref.: A1620608.

Manufactured by:

1. Worldwide Oilfield Machine, Inc., Houston, TX, USA
2. Worldwide Oilfield Machine Pvt. Ltd., Pune, India