



Certificate No:
TAD00001FW

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Kill and Choke Equipment

with type designation(s)
Adjustable Choke 3 1/16"-15K

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 **2022-02-28**

This Certificate is valid until **2027-02-27**.

for **DNV**

DNV local station: **Houston Offshore Services**

Approval Engineer: **Xiangwen Maggie Wang**

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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.



Product description

- 3 1/16" 15,000 psi, Adjustable Drilling Choke F.E.

Reference standards

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

Application/Limitation

- Max. Working Pressure: 15,000 psi
- Min. Design Temperature: -20 °F to 350 °F
- Service: H₂S
- Material Class: DD, EE
- Product Specification Level: 3
- Performance Rating: PR2F

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

Type Approval documentation

Tests carried out

PR2 test report 4.9.53.5 for M4448, 3 1/16"-15K adjustable choke S/N: A29273.

Additional manufacturing locations

Worldwide Oilfield Machine Pvt. Ltd.
Gat No. 778, at Post Velu
Pune Satara Road
Tal. Bhore, Dist. Pune 412 205, India

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 DNVGL-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. Non-metallic materials shall be suitable for the intended service and shall be capable of sustaining the design pressures and temperatures. Non-metallic materials in wetted components shall be tested in order to ensure compatibility with all fluids that they will be exposed to during service, as specified.
3. DNV ref.: A1172181.

END OF CERTIFICATE