

TYPE APPROVAL CERTIFICATE

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

with type designation(s)

2-2002 MxF 20K 1.0 CH2M Manual Choke, Part No. 20416740-3

Issued to

**National Oilwell Varco, LP - Process & Flow Technologies
(Ledger 869)
Houma, LA, USA**

is found to comply with

DNVGL-OS-E101 – Drilling facilities, Edition January 2018**DNVGL-SI-0166 – Verification for compliance with Norwegian shelf regulations, Edition July 2018****Application :****See Page1****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Houston** on **2020-07-30**This Certificate is valid until **2025-07-29**.for **DNV GL**DNV GL local station: **Certification & Inspection
Services**Approval Engineer: **Srujanbabu Sridharala****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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Job Id: **262.1-034324-1**
Certificate No: **TAD00001BH**

Design codes/standards used as references

-API Specification 6A, 'Specification for Wellhead and Tree Equipment', 21st Edition

Product Description

Adjustable choke, CH2M, 1" Body, 2" 2002 20k male inlet x female outlet, SSTC 1" trim, Manual.

Application/Limitation

Design Parameter	Value
Maximum Working Pressure	20,000 psi
Minimum Test Pressure	30,000 psi
Temperature Class	PU (-20° F to 250° F)
Service	General service
API 6A PSL	3
API 6A PR	1
Material Class	BB

Type Approval Documentation

Drawings and Material Specifications:

<u>Description</u>	<u>Drawing No.</u>	<u>Rev.</u>	<u>Material Spec.</u>	<u>Rev.</u>
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Calculations:

<u>Document No.</u>	<u>Rev.</u>	<u>Description</u>
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Note: Other part numbers or updated revisions may be acceptable under this TA Certificate provided critical aspects of the design remain the same. Changes shall be documented and approved (via ECN or similar) by NOV Engineering Dept and/or Quality Dept as appropriate. DNV GL Surveyor shall verify these changes before issuance of Product Certificate.

Test Reports

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 option

Periodical assessment

For retention of the Type Approval, DNV GL's surveyor shall perform periodical assessment after 2 years and after 3.5 years in accordance with DNV GL's Class Program 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 GL's local surveyor.
2. DNV GL ref.: A0904619



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END OF CERTIFICATE