DNV·GL

Certificate No:
TAD00000EM

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Valves

with type designation(s)
6K, 10K, 15K and 20K ULT Plug Valves
Part Numbers: See Page 2

Issued to
FMC Technologies
Stephenville, Texas, USA

is found to comply with
DNVGL-OS-E101 – Drilling plant, Edition July 2015
DNVGL-SI-0166 – Verification for compliance with Norwegian shelf regulations, Edition July 2015

Application :

Max Working Pressure, ULT060: 6000 psi
Max Wokring Pressure, ULT100: 10000 psi
Max Working Pressure, ULT150: 15000 psi
Max Working Pressure, ULT200: 20000 psi
Max Test Pressure, ULT060: 9000 psi
Max Test Pressure, ULT100: 15000 psi
Max Test Pressure, ULT150: 22500 psi
Max Test Pressure, ULT200: 30000 psi
Temperature Class: -20 to 250 °F
Service: See Part Description
Performance Requirement: 1

This Certificate is valid until **2021-09-20**.

Issued at **Houston, Texas** on **2016-09-21**

for **DNV GL**

DNV GL local station: **Approval CMC**

Approval Engineer: **Kevin Bui**

Christian Nilsen
Team Lead

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.

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References

- API Spec 6A, Specification for wellhead and christmas tree equipment, 20th Ed
- NACE MR0175, Materials for use in H_2S-containing environments in oil and gas production, 2015
- Project No. PP161030-2, Attn. Andrew Huf

Part Numbers and Descriptions

Part No./Rev.	Description	Drawing No./Rev.
3269318/D	3 ULT060 Plug Valve w/ 602 FxM, Standard	DU500015731/A
3267140/F	3 ULT100 Plug Valve w/ 1002 FxM, Standard	DU500007211/A
P501010/G	3 ULT100 Plug Valve w/ 1502 FxM, Sour	DU500029517/A
3265122/I	3 ULT150 Plug Valve w/ 1502 FxM, Standard	DU500007240/C
3265903/G	3 ULT150 Plug Valve w/ 1502 FxM, Standard	DU500007227/B
3265904/I	3 ULT150 Plug Valve w/ 1502 FxM, Standard	DU500007238/C
P528242/A	3 ULT150 Plug Valve w/ 3-1/16 Flg & Stud, Standard	6640DU5016994/A
P519240/D	3 ULT150 Plug Valve w/ 4-1/2 IF, Standard	DU500007250/A
P553923/C	3 ULT200 Plug Valve w/ 2002 FxM, Standard	DU500028972/A
P518355/E	4 ULT100 Plug Valve w/ 1002 FxFR10 M, Standard	DU500008000/A
P518356/G	4 ULT100 Plug Valve w/ 1002 FxM, Standard	DU500026660/A
P518749/H	4 ULT150 Plug Valve w/ 1502 FxM, Standard	DU500008260/B
P535679/A	4 ULT150 Plug Valve w/ 6-3/8 ACME, Standard	DU500007114/A
P518935/D	4 ULT150 Plug Valve w/ 6-5/8 REG, Standard	DU500006110/A

Type Approval Documentation

- Notes: Other part numbers or updated revisions may be acceptable under this TAC provided critical aspects of the design remain the same. Changes shall be documented and approved via ECN or similar by FMC Engineering and/or QA. DNV GL Surveyor shall verify the changes before issuance of Product Certificate.

- Drawings and Material Specifications:

Description	Drawing No./Rev.	Specification No./Rev.

Job Id: **262.1-013385-2**
Certificate No: **TAD00000EM**

Description	Drawing No./Rev.	Specification No./Rev.

Job Id: **262.1-013385-2**
Certificate No: **TAD00000EM**

Description	Drawing No./Rev.	Specification No./Rev.

Calculation Reports

Description	Document No./Rev.

Test Reports

Description	Part No.	Serial No.

Fabrication Procedures

- Procedures related to NDE, welding, testing, marking etc shall be reviewed by DNV GL Surveyor.

Marking of Products

- For traceability, the product shall be marked at least with part number and serial number.

Periodical Assessments

- For retention of TAC, periodical assessments shall be carried out bi-yearly.

Comments

- This TAC replaces TAC No. D-4554.