



Certificate No:
TAD00001FJ

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Valve

with type designation(s)
6,250 psi Ball Valve Model 2BB-G0490-BHHDDPFD (P/N P568450)

Issued to
FMC Technologies Inc. - Fluid Control
Stephenville, 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 **2022-02-10**

This Certificate is valid until **2027-02-09**.

for **DNV**

DNV local station: **Houston, Approval CMC**

Approval Engineer: **Parna Deljo**

.....
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.



Form code: TA 251

Revision: 2021-03

www.dnv.com

Page 1 of 2

Product description

6,250 psi Ball Valve Model 2BB-G0490-BHHHDDPFD (P/N P568450)

Reference Standards

- API Spec 6A, *Specification for Wellhead and Tree Equipment*, 21st Edition.
- NACE MR0175/ISO 15156, *Petroleum and Natural Gas Industries Material for Use in H₂S-Containing Environments in Oil and Gas Production*, 2nd Edition.

Application/Limitation

<u>Parameter</u>	<u>Value</u>	<u>Equivalent</u>
Maximum Working Pressure ¹	: 6,250 psi	(43.1 MPa)
Maximum Internal Shell Pressure	: 10,000 psi	(68.9 MPa)
Minimum Design Temperature	: -50°F	(-46°C)
Maximum Design Temperature	: 320°F	(160°C)
Nominal Pipe Size	: 6 in	(152.4 mm)
Corrosion Allowance	: 0.063 in	
API 6A Material Class	: FF	
API 6A PSL	: 1	
API 6A PR	: 1	
Service	: Sour (H ₂ S)	

Note 1: The parameter "Maximum Working Pressure" is indicated in lieu of "Rated Working Pressure" because the value is not a designated pressure rating service condition of reference standard API 6A.

Type Approval documentation

Tests carried out

Doc No.	Date	Title
--	2018-01-09	Pressure Chart

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 the manufacturer's discretion

Periodical assessment

Periodical assessments for type approvals will be required after two years (+/- 90 days) and after three-and-a-half years (+/- 90 days) in accordance with 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. When DNV product Certification is required, each product is to be surveyed during fabrication in accordance with the requirements for Category I equipment as defined in DNV's Offshore Standard DNV-OS-E101.
3. DNV ref: A1130398

END OF CERTIFICATE