Certificate no.:
TAD00001RM

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Pipe Fitting

with type designation(s)
Pup Joint, Data Header, Crossover Union & Tee

issued to
Red Deer Ironworks Inc.
Red Deer, AB, Canada

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 **2025-04-30**
This Certificate is valid until **2030-04-29**.
DNV local unit: **Long Beach**

for **DNV**

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

- 2" & 3" Fig. 1502 Pup Joint, NPST Pup Joint, Pup Joint Date Header 15K Standard Service
- 2" Fig. 1502 Frac Tee, 15K Standard Service
- 3" Fig. 1502 Flange Adapter, Cushion Tee, Crossover Union & Tee 15K Standard Service
- 2" Fig. 1502 F x Fig. 206 M-NS Crossover Union 2K Sour Service

Reference standards

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

Design Parameter	
Max. Working Pressure	15,000 psi; 2,000 psi (2K crossover union only)
Shell Test Pressure	22,500 psi; 3,000 psi (2K crossover union only)
Design Temperature	-20 °F to 250 °F
Material Class	AA; DD (2K crossover union only)
Product Specification Level	1
Performance Requirement	1
Service	Standard; Sour (2K crossover union only)

Type Approval documentation

Tests carried out

1. Pup joint 3" fig 1502 x 5ft MXF det integral 15000 psi standard service dated Mar. 27th 2025
2. Crossover – 3" fig 206 M-NS x 2" fig 1502 F integral 2000 psi sour service dated Mar. 27th 2025
3. Tee – 3in fig 1502 MXFXF det integral 15000 psi standard service dated Mar. 27th 2025
4. Crossover union – 3" fig 1502 FX 2in fig 1502 M det integral 15000 psi standard service dated Mar. 27th 2025
5. NPST pup joint – 3in fig 1502 MXF NPST det 15000 psi standard service dated Mar. 27th 2025
6. Pup joint data header 3" fig 1502 x 2 ft MXF det c/w 3ea .5625in autoclave tap 15000 psi std service dated Mar. 27th 2025

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.: A1659263.

Manufactured by:

1. **Red Deer Ironworks Inc.,** 6430 Golden West Avenue, Red Deer, AB T4P 1A6 Canada