DNV·GL

Certificate No:
TAD00000T7

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Loose Components

with type designation(s)
3.75K and 6.25K Tailpieces
3.75K and 6.25K Weldneck Flanges
Part Numbers: See Page 2

Issued to
TechnipFMC
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 :

See Page 2

Issued at **Houston** on **2017-09-21**
This Certificate is valid until **2022-09-20**.
DNV GL local station: **Approval CMC**

Approval Engineer: **Kevin Bui**

for **DNV GL**

Brandon Caraway
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.

Design Codes/Standards Used as References

- API 6A, Specification for Wellhead and Christmas Tree Equipment, 20th Ed
- ASME B31.3, Process Piping, 2016
- NACE MR0175, Materials for Use in H_2S-containing Environments in Oil and Gas Production, 2015

Product Descriptions

Part No./Rev.	Description
P554765/B	Tailpiece, 3.75K, C-F0209 x 3 Sch 80 BW, 3.750 L
P555575/B	Tailpiece, 6.25K, C-G0150 x 2 Sch 80 BW, 3.562 L
P554767/C	Tailpiece, 6.25K, C-G0230 x 3 Sch 160 BW, 4.250 L
P554764/B	Weldneck Flange, 3.75K, 03A x 3 Sch 80 BW, 4.375 L
P554757/B	Weldneck Flange, 6.25K, 02A x 2 Sch 80 BW, 3.688 L

Application/Limitation

Design Parameter	P554765	P555575	P554767	P554764	P554757
Nom Bore (in)	2.30	1.50	2.30	2.09	1.50
Max Working Pressure (psi)	3,750	6,250	6,250	3,750	6,250
Shell Test Pressure (psi)	6,000	10,000	10,000	6,000	10,000
Temperature Class (°F)	-50 to 400	-50 to 400	-50 to 400	-50 to 400	-50 to 400
Service	Sour	Sour	Sour	Sour	Sour
Product Specification Level	3	3	3	3	3

Type Approval Documentation

- Drawings:

Drawing No./Rev.	Description
	Tailpiece, 3.75K, C-F0209 x 3 Sch 80 BW, 3.750 L
	Tailpiece, 6.25K, C-G0150 x 2 Sch 80 BW, 3.562 L
	Tailpiece, 6.25K, C-G0230 x 3 Sch 160 BW, 4.250 L
	Weldneck Flange, 3.75K, 03A x 3 Sch 80 BW, 4.375 L
	Weldneck Flange, 6.25K, 02A x 2 Sch 80 BW, 3.688 L

- Calculations:

Document No./Rev.	Description
	Tailpiece, 3.75K, C-F0209
	Tailpiece, 6.25K, C-G0150
	Tailpiece, 6.25K, C-G0230
	Weldneck Flange, 3.75K, 03A
	Weldneck Flange, 6.25K, 02A
	Wall Thickness for Tailpiece and Weldneck Flange

- Material Specifications:

See Material Specifications for additional material requirements.

Component	Spec No/Rev	Material	Min YS(psi)	Min Avg CVN(ft.lb)
Tailpiece, 3.75K, C-F0209				
Tailpiece, 6.25K, C-G0150				
Tailpiece, 6.25K, C-G0230				
Weldneck Flange, 3.75K, 03A				
Weldneck Flange, 6.25K, 02A				

- Notes:

  Other part numbers or revisions may be acceptable under this TAC provided critical aspects of the design remain the same. Changes shall be documented and approved by TechnipFMC Engineering and Quality. DNV GL Surveyor shall verify these changes before issuance of Product Certificates.

Tests Carried Out

- Design Validation Tests for these Loose Weldneck Flanges and Tailpieces are not required.

Marking of Products

- Product and data book shall be marked at least with company name, part number and serial number for traceability.

Periodical Assessments

- Periodical assessments shall be carried out bi-yearly for retention of TAC.

Fabrication Procedures

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

Comments

- Project No. A0434045, Attn. Jeffrey Chalifoux.