



Certificate no.:
TAD00001T5

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Pipe Fitting

with type designation(s)
Swivel 6" 7 1/16" 3 K

issued to

DF Wiig AS
Paradis, Norway

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:

See next page

Issued at **Høvik** on **2026-01-23**

This Certificate is valid until **2031-01-22**.

for **DNV**

DNV local unit: **Stavanger**

Approval Engineer: **Ole Osuldsen**

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

Subsea swivel size 6" 7 1/16" 3K WP 5 K API 16 A BX 156 .

Reference standards

API 16C Choke and Kill Equipment 2021
API 6A 21 Edition, Wellhead & Christmas tree equipment
API 6X 2 Edition 2019 Design calculations for pressure equipment
API 16 A Specification for Drill Through Equipment, Fourth Edition
DNV RP-C203, 2021
DNV-OS-E101, July 2024

Application/Limitation

The approval is valid for the fields of application and operational limitations as follows:

Product & Size	Subsea swivel size 6" 7 1/16" 3K WP 5 K API 16 A BX 156 .
Pressure class	3000 psi /207 bar
Test Pressure	4.500 psi /310 bar
Design Temperature	-20 °C to +150 °C
Max axial tension	52,2 kN Wave and inertia loads
Max bending moment	52 kNm, total.
Lateral load	20 kN, max.
Rotation speed	+/- 1,5 degrees per second. Rotation; Unlimited.
Service	Mud, water and hydrocarbon based fluid. Non sour service.
Fatigue	Subsea max 500 m water depth. Design life; 15 years. DNV-RP-C203 Curve B1 Table 2-2. Fatigue is based on loads supplied by Designer. Fatigue shall be evaluated case by case for unit.
Body	ASTM A182F22 Charpy at design temp, impact toughness av 60 J, min single values 45 j.
Balls	Stoff nr; 1.4034 AISI 420 Hardness 55/58 Hrc. MDS doc no; 11718.



Job ID: 262.1-045241-1
Certificate no.: TAD00001T5

Type Approval documentation for the 6 “ 7 1/16” Subsea Swivel 3 k

DRAWINGS for the 6” 7 1/16” Subsea swivel ;

CALCULATIONS for the 6” 7 1/16” Subsea Hose Swivel , stamped FI

Doc. No	Rev.	Title:

Tests carried out on the final prototypes with serial numbers 1326.

The following test reports describe tests carried out on the prototype swivels. All test reports have been witnessed and signed by a DNV Surveyor:

Doc. No	Rev	Title
---------	-----	-------

Other Conditions and comments

- Each product is to be surveyed during fabrication in accordance with the requirements for equipment of Category I as defined in DNV's Offshore Standard DNV-OS-E101 Drilling facilities, Ch.3, Sec.3, followed by issuance of a Product Certificate. Fabrication records are to be maintained in accordance with DNV-OS-E101, Ch.3, sec. 3.2..
- Scaling has been evaluated and performed in accordance with API 16 C sect A.5.2.2.2.2
- Charpy impact testing to be performed at minimum design temperature according to DNV-OS-E101, Ch. 2, Sec. 2 [2].
- Pressure testing shall be performed in accordance with DNV-OS-E101 Ch 2 Sec 8, 3.3 Pressure testing.
- Function testing at rig as installed equipment at rig shall be performed in accordance with DNV-OS-E101 Ch 2 Sec 8 3.5.

Marking of product

For traceability the following minimum amount of marking is to be carried out on each product:

- Manufacturer's name and trademark
- Serial Number
- Swivel size
- Pressure rating
- Temperature rating

Documentation to be accompanied with each product/delivery

- DNV Product Certificate if delivered to a vessel with DNV DRILL or DRILL(N) notation
- Maintenance/ User Manual

Certificate Retention Survey

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>

END OF CERTIFICATE