

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Pipe Fitting**

with type designation(s)

Kill & Choke Hose Swivel 3-1/8" 5K w/ API Spec 6A Type 6B Flanges

Issued to

Sivilingeniør E.J.Wiig AS
OSLO, Norway

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 next page for details.

This Certificate is valid until **2022-06-28**.

Issued at **Høvik** on **2017-06-29**

DNV GL local station: **Oslo Drilling Systems**

for **DNV GL**

Approval Engineer: **Jan H. Hansen**

Per Esvall
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.

Job Id:
Certificate No: **TAD00000RM**

Reference Standards

- ASME B31.3, 304.7.2 & K304.7.2
- ASME VIII Boiler and Pressure Vessel Code, Division 2, Part 5
- ASME VIII Boiler and Pressure Vessel Code, Division 3, KD-2
- ASME VIII Boiler and Pressure Vessel Code, Part D
- API Spec 6A
- API Spec 16C

Product description

Kill & Choke Hose Swivel, Size 3-1/8" with 5000 PSI working pressure and API Spec 6A Type 6B flanges. This swivel type is typical fitted in between the end of a flexible hose and the fixed nozzle flange on the riser slip-joint located in the moon-pool area of a floating Drilling Unit.

Application/Limitation

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

Product & Size	Kill & Choke Hose Swivel 3-1/8" with API Spec 6A Type 6B fanges and R/RX-35 seal rings
Maximum Working Pressure, WP	5.000 PSI (345 Bar)
Maximum Test Pressure	7.500 PSI (517 Bar)
API Temperature Rating	B+X (-20°C to +177° C).
Corrosion & erosion allowance	3 mm
Material for flanges and body	AISI 410 13Cr Martensitic Precipitation Hardening Stainless Steel per ASTM A182
Minimum Yield	552 MPa @ +20 °C / 413 MPa @ +177 °C
Minimum Tensile	690 MPa @ +20 °C / 600 MPa @ +177 °C
Maximum allowable tension (in addition to WP)	100 kN
Maximum allowable bending moment	10 kNm
Rotation limitations	Unlimited, normally within +/- 5 deg
Rotation speed	20 RPM
Environment	Marine atmosphere, air and submerged to 30m water depth
Service	Mud, Crude, Well returns, Sour Service

Type Approval documentation

Tests to be carried out on each final product

- Non-destructive examination methods, extent and acceptance criteria, shall be carried out in accordance with DNVGL-OS-E101, July 2015 or later editions, Ch.2, Sec. 6, 3.
- Each complete swivel assembly shall before certification be pressure tested according to DNVGL-OS-E101, July 2015 or later editions, Ch.2, Sec. 6, 4.2, in presence of a DNVGL surveyor.
- Functional testing shall be performed according to the manufacturers written specifications and witnessed by a DNVGL Surveyor. Ref. also Doc. No. 14354 Factory Acceptance Test Procedure.

Marking of product

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

- Manufacturers name and trademark
- "VL TAD00000RM"
- Serial number
- Swivel size
- Pressure rating



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- Temperature rating

Periodical assessment

For retention of this Type Approval , a DNV GL Surveyor shall perform a survey, every second year, and before the expiry date of this certificate. This in order to verify that the conditions for the type approval are complied with. Ref. DNVGL-CP-0338, DNV GL Type Approval Scheme.

END OF CERTIFICATE