

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Choke and Kill Equipment

with type designation(s)
3 1/16" Choke hose swivel.

Issued to

Sivilingeniør E.J.Wiig AS
Oslo, Norway

is found to comply with
DNV-OS-E101 – Drilling facilities, Edition July 2021

Application :

See next page.

Issued at **Høvik** on **2022-03-30**

This Certificate is valid until **2027-03-29**.

for **DNV**

DNV local station: **Norway Fleet in Service, West**

Approval Engineer: **Ole Osuldsen**

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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.



Product description

Choke & kill hose swivel 3 1/16" 20k psi with flanges for bolting.

Preference Standards

- API 16C Choke and Kill equipment 2016.
- API 6A Subsea wellhead and tree equipment 2010
- API 6X Design calculations for pressure containing equipment 2019.
- API 16A Specification for Drill-through equipment 2018.

Application/Limitation

Product/size;	3 1/16"
Pressure class;	20.000 psi
Service	Sour service.
Duty cycle	Continuous
Design temp.	-20 Deg C / +121 Deg
Environment	Marine atmosphere
Connections	API 6A BX flange both ends.
Max axial tension	100 kN
Max bending	60 kNm
Max rotation angle	-15 / + 15 degree reciprocating
Rotation speed	5 degree per second
Rotation resistance	1500Nm at RWP

Application/Limitation

Type Approval documentation

Tests carried out

- 18781 Rev 1 Seal qualification requirement
- 18993 Rev 0 Low temperature report
- 18925 Rev 0 Dynamic range test.
- 18928 Rev 0 FAT after design validation test
- 18991 Rev 0 Pressure endurance test
- 18990 Rev 0 Rapid decompression test.
- 18929 Rev 0 Seal rings test report.
- 18994 Rev 0 Ambient temperature report.
- 18926 Rev 0 Bending moment test report.
- 18927 Rev 0 FAT report.
- 19295 Rev 0 Seal rings inspection report.
- 18995 Rev 1 Seal rings design validation report.

Other Conditions and comments

- Each product is to be surveyed during fabrication in accordance with the requirements for equipment Category I, as defined in DNV-OS-E101, Ch 3, Sec 3, followed by a product certificate. Fabrication records are to be maintained in accordance with DNV-OS-E101, Ch 3, Sec 3.2. If the installation is DNV Classed, then this shall be a product certificate.
- Charpy impact testing to be performed at or below design temperature according to DNV-OS-E101, Ch 2, Sec 2 (2).

Marking of product

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

- Manufacturers name and address
- Part no.
- Serial number
- Swivel size
- Pressure rating
- Test pressure
- Temperature rating.

Documentation to be accompanied with each product/delivery.

- DNVGL's product certificate if delivered to a vessel with DNV Drill or Drill(N) notation
- Maintenance/use manual

Certificate retention survey

For retention of this Type Approval, DNV's representative may carry out product



Job Id: **262.1-036457-1**
Certificate No: **TAD00001FM**