Certificate no.:
TAD00001MZ

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Kill and Choke Equipment

with type designation(s)
3 1/16 in Choke and Kill Swivels (PN HPI-25540)

issued to
Dynamic Sealing Technologies, Inc.
Andover, MN, USA

is found to comply with
DNV-OS-E101 – Drilling facilities, Edition July 2021
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 **2024-05-01**

This Certificate is valid until **2029-04-30**. for **DNV**

DNV local unit: **Certification & Inspection Services**

Approval Engineer: **Parna Deljo**

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

3 1/16-inch choke and kill swivels allowing the flexible jumper to rotate at interface while maintaining fluids, gas and cuttings, effectively reducing the torsion in the flexible jumper.

Reference Standard

- API 6A, *Specification for Wellhead and Tree Equipment*, 21st Edition.
- API 16C, *Choke and Kill Equipment,* 3rd Edition.

Application/Limitation

Design Parameter	Value	(Equivalent)
Bore Size	: 3 1/16 in	(78 mm)
Maximum Working Pressure	: 15,000 psi	(103.5 MPa)
Hydrostatic Test Pressure	: 22,500 psi	(155.0 MPa)
Design Temperature Range (API Temperature Class PU)	: -20°F to 250°F	(-29°C to 121°C)
API 6A Material Class	: DD	
Maximum tension @ MWP	: 26,500 lbf	(117.9 kN)
Maximum Bending Moment	: 16,500 ft-lbf	(223,710 N-m)
Corrosion Allowance	: 0.118 in	(3 mm)
API 6A PSL	: PSL 3	
Systems/Equipment	: Choke and Kill Equipment	
Services	: Sour (H_2S)	

Note: End connections have been excluded from this design assessment. The claimed rating of end connections has not been evaluated by DNV for conformance to any applicable codes.

Type Approval documentation

Tests carried out

Doc. No.	Date	Description
HPI-25540 Design Report	November 12th, 2012	Test certificate of thermoplastic material T42 & TETRALAS™ 851A.

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 the manufacturer's discretion.

Periodical assessment

Periodical assessments for type approvals will be required after two years (+/- 90 days) and after three-and-a-half years (+/- 90 days) in accordance with 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. When DNV product Certification is required, each product is to be surveyed during fabrication in accordance with the requirements for Category I equipment as defined in DNV's Offshore Standard DNV-OS-E101.
3. DNV ref: A1514208

END OF CERTIFICATE