

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Hoisting, Rotation and Pipehandling Equipment**

with type designation(s)

Elevator links 1500 sh tons 6. 1/2"

Issued to

**Hamburg Oil Tools GmbH
Hamburg, Germany**

is found to comply with

DNVGL-OS-E101 – Drilling facilities, Edition January 2018**Application :****See next page.**Issued at **Høvik** on **2020-06-30**This Certificate is valid until **2025-06-29**.DNV GL local station: **Hamburg Verification**for **DNV GL**Approval Engineer: **Ole Osuldsen**

**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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Job Id: **262.1-032160-1**
Certificate No: **TAD00001B5**

Product description

Elevator link 1500-216"

Applicable codes

- (1) API 8C Spec 8C/ISO 13535, Specification for Drilling and Production Hoisting Equipment 5 th ed 2012.
- (2) FEM: Rules for design of hoisting appliances , 3rd edition 01.10.1998

Application/Limitation

Design parameter	Value
Load rating	1500 Sh ton/set.
Temp (min/max)	-40 / + 40 Deg C
Safety factor API 8C	2.25
Total number of cycles	1.301.955
Fatigue life	20 years
8C product specification level	1 -2 (As per order)
Impact toughness	42 J at -40 Deg C.
Material	34 CrNiMo6V (1.6582)
Environmental loads	None

Type Approval documentation

Tests carried out

1. Proof load test shall be performed in accordance with API 8C 8.6
2. Functional testing , after installation shall be performed in accordance with DNVGL-OS-E101 Ch 2 Sec 2.
3. Charpy testing shall be performed in accordance with DNVGL-OS-E101 Ch 2, Sec 2.
4. NDE shall be performed in accordance with DNVGL-OS-E101 Ch 2 Sec 6.

Marking of product

Marking of the product shall be performed in accordance with API 8C 10 Marking

Periodical assessment

The type approval shall be renewed every 5 years.

For retention of type approval, a DNVGL Surveyor shall perform a periodical assessment after two years (+/-90) days after 3,5 years (+/- 90) days to verify that conditions for approval are complied with.

Reference is made to DNVGL-CP-0338.