Certificate No:
TAD00000ZD

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Hoisting, Rotation and Pipehandling Equipment

with type designation(s)
Load Pin, P/N LPE-1M-EB476-01D

Issued to
National Oilwell Varco - Cedar Park
Cedar Park TX, United States

is found to comply with
DNVGL-OS-E101 – Drilling plant, Edition July 2015
and DNV GL AS' understanding of the implementation and interpretation of:
PSA's "Regulations relating to design and outfitting of the facilities etc. in the petroleum activities" (THE FACILITIES REGULATIONS), Last amended 16 December 2014, Ch.VIII

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **2020-12-03**.

Issued at **Houston** on **2015-12-04**

for **DNV GL**

DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Arturo Rodriguez**

Nick Prokopuk
Team Lead

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.

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Job Id: **262.1-020956-1**
Certificate No: **TAD000007D**

Product description

Load pin assembly, LPE-1M-EB476-01D, 4-20 ma, Rdnt. bridge , Rcal; for use in NOV Travelling Block HTB-1000.

Application/Limitation

Design Parameter	Value	(Equivalent)
Maximum Rated Load (y)	: 4,448.2 kN	(1,000,000 lbf)
Minimum Operating Temperature	: -20 °C	(-4 °F)
Maximum Operating Temperature	: 60 °C	(140 °F)
Temperature Class	: T4	
Specification Level	: PSL 1	

For use in Zone 0, Gas Group IIB (Class 1 Division 1, Gas Group C & D), Protection method Ex ia.

Type Approval documentation

Tests carried out

- NOV MD Totco Generic Factory Acceptance Test Rev. B, Cage Code 38589 – P/N LPE-1M-EB476-01, S/Ns 1429789 and 1434122.
- DNV Survey Report No.: 2015-05-05-A, by MNAS dated 2015-05-05.

Marking of product

For traceability, the following marking is to be carried out on each product:

- Serial number
- Manufacturer's name or trademark
- Additional marking at the manufacturer's discretion
- Be in accordance with API Specification 8C

Periodical assessment

For retention of the Type Approval, DNV·GL's surveyor shall perform a survey every second year in accordance with Standard for Certification No. 1.2.

Other Conditions / Comments

1) The instructions listed in the "Conditions of Certification", IECEx certificate UL 10.0024X and in "Specific Conditions of Use", EC-TE Certificate DEMKO 03 ATEX 0305995X Rev 2, shall be taken into consideration when installing and operating the device.

2) This design verification does not cover the approval of the controls and automation for the equipment. These shall be approved separately as part of the drilling equipment control system and tested onboard by the site surveyor to verify compliance with DNV-OS-E101 Ch.2 Sec.1 [2].
3) Procedures related to testing, welding, NDE and other quality control requirements are to be reviewed/approved by DNV·GL's local surveyor in accordance with API specification 8C.

End of certificate