DNV·GL

Certificate No:
TAD000018M

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Hoisting, Rotation and Pipehandling Equipment

with type designation(s)
HydraRacker Hydraulic Lifting Tool

Issued to
National Oilwell Varco Norway AS
KRISTIANSAND S, Norway

is found to comply with
DNVGL-SI-0166 – Verification for compliance with Norwegian shelf regulations, Edition July 2018
DNVGL-OS-E101 – Drilling facilities, Edition January 2018

Application :

The lifting tool is connected to the Gripper Head on the HydraRacker for handling of components up to 5.5 T.
Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Issued at **Høvik** on **2020-01-31**
This Certificate is valid until **2025-01-30**.
DNV GL local station: **Oslo Drilling Systems**

Approval Engineer: **Ole Osuldsen**

for **DNV GL**

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.

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Product description

Normative reference Standards

F.E.M 1.001 "Rules for the design of hoisting Appliances"
Norsok R-002 Lifting equipment 2017.
Eurocode 3 "Design of steel structures".

Product description

The lifting tool is connected to the Gripper Head on the HydraRacker through an identical interface as for the Pick up Elevator . The Lifting Tool is for lifting and handling of components up to 5.5 T.

Application/Limitation

Design temp (min/max)	-20 / +45 Deg C.
SWL	5.5 T
Dynamic load factor	1,3
Environmental loads, operation	Horizontal: 0,1 g, Vertical 0,1 g, 36 m/s wind speed .
Environmental loads, survival	Horizontal : 0,75g without load. Vertical 0,4 g without load. 51,4 m/s wind speed.

Type Approval documentation

Testing

Pressure and functional testing of individual and complete assemblies shall be performed in accordance with DNVGL-OS-E101 "Drilling facilities" 2018, Ch 2, Sec 8, 3.

Other Conditions and comments

-Each product is to be surveyed during fabrication an accordance with the requirements for equipment Category I, as defined in DNVGL-OS-E101, Ch 3 , Sec 3, followed by a product certificate. Fabrication records are to be maintained in accordance with DNVGL-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 at or below design temperature according to DNVGL-OS-E101, Ch 2, Sec 2 (2).
-Steel wire rope, shackles, etc is not scope for approval.

Marking of product

For traceabilty the following minimum amount of marking is to be carried out on each product;
-Manufacturers name
-Serial number
-Load rating

Documentation to be accompanied with each product/delivery.

-DNVGL`s product certificate if delivery to a vessel with DNVGL Drill or Drill(N) notation.
-Maintenance/user manual.

Certificate retention survey

For retention of this type approval, DNVGL`s representative shall carry out product audits biennially.