DNV·GL

Certificate No:
TAD000016S

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Hoisting, Rotation and Pipehandling Equipment

with type designation(s)
BB011 16.0 mT Eagle Light Winch

Issued to
MHWirth AS
KRISTIANSAND S, Norway

is found to comply with
Det Norske Veritas' Offshore Standard DNV-OS-E101, "Drilling Plant", October 2009
DNVGL-SI-0166 – Verification for compliance with Norwegian shelf regulations, Edition July 2018

Application :

See next page.

Issued at **Høvik** on **2019-11-05**
This Certificate is valid until **2024-11-04**.
DNV GL local station: **Oslo Drilling Systems**

Approval Engineer: **Axel Janson**

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.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Reference Standards

DNV Standard for Certification No. 2.22 "Lifting Appliances", October 2011

Product Description

Hydraulically powered utility winch with fail-safe break, with SWL 16.0 mT.

Application/Limitation

Design Parameter	Value	Equivalent
Safe working load:	16.0 mT	220 sT
Hydraulic Working Pressure:	207 bar	3 000 psi
Minimum Design Temperature:	-20 °C	-4 °F
Wire Diameter:	30 mm	1.18 in
Minimum Wire Rope Breaking Load:	756 kN	170 kips
Maximum Hoisting Speed:	30 m/min	100 ft/min
Maximum Fleet Angle:	4°	
Maximum Wire Layers:	1	
Dynamic Factor Applied:	1.3	

Type Approval Documentation

Fabrication and Testing Procedures

Test Procedures:

1. Load testing of each winch assembly shall be performed according to DNV-OS-E101 Ch.2 Sec.7 D300.
2. Functional testing shall be performed in accordance with DNV-OS-E101 Ch.2 Sec.7 D400.
3. Charpy Impact testing to be carried out in accordance with DNV-OS-E101 Ch.2 Sec.2.

NDE Procedures:

4. NDE/NDT shall be performed in accordance with DNV-OS-E101 Ch.2 Sec.7 C100.

Welding Procedures:

5. Qualification of welding procedures and qualification of welders shall be in accordance with DNV-OS-E101 Ch.2 Sec.7 B "Manufacture".

Marking of Product

For traceability, each winch shall be marked in accordance with Standard for Certification No.2.22 Lifting Appliances Ch.2 Sec.12, and shall include:

- Manufacturer's Name or Mark
- Reference Standard
- Load Rating
- Part Number
- Serial Number

Other Conditions and Comments

- Materials for the main load-bearing components shall be delivered with 3.1 certificates according to EN10204 or similar.
- The motor/gearbox and brakes shall be delivered with DNV Product Certificate.
- The winch is not approved for lifting of personnel.
- 3 turns of wire shall remain on the drum at all times.
- Loose gear such as wire, shackles, swivels/hooks are to be delivered with pertinent ILO-form certificate.
- The control system is not within the scope of this Type Approval Certificate.
- Each product are to be surveyed during fabrication in accordance with the requirements for equipment of Category I as defined in DNV GL Offshore Standard DNV-OS-E101 Drilling Plant, followed by issuance of a DNV GL Product Certificate.
- This Type Approval Certificate replaces the previously issued certificate D-4924.

Certificate Retention Survey

For retention of this Type Approval Certificate, DNV GL AS's representative shall carry out surveys every second year in accordance with DNV GL Type Approval Scheme DNVGL-CP-0338.

END OF CERTIFICATE