



Certificate No:
TAS00003A8

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Portable Offshore Units

with type designation(s)

Upper Guide Frame Lifting Assy 90deg, Upper Guide Frame Lifting Assy 30deg

Issued to

**Himile Mechanical Manufacturing (Shandong) Co., Ltd.
Weifang,, Shandong Province,, China**

is found to comply with

DNV GL standard DNVGL-ST-E273 – 2.7-3 Portable offshore units, April 2016 (Amended January 2020)

Application :

DNV 2.7-3 Type E R00-RXX

Not for offshore lifting.

For subsea and shipboard lifting only.

The responsible installation contractor shall do a final assessment of the operational limitations for subsea lifting based on the characteristics of the actual installation vessel and installation procedure.

Only certified lifting equipment shall be used

Type	Max. static load (kg)	Max. dynamic (kg)	Max. sling leg angle
Upper Guide Frame Lifting Assy 90deg	15 000	25 000	0 with vertical
Upper Guide Frame Lifting Assy 30deg	40 000	60 000	60 with vertical

Issued at **Høvik** on **2021-12-15**

This Certificate is valid until **2026-12-14**.

for **DNV**

DNV local station: **Shanghai Verification**

Approval Engineer: **Steinar Hernes**

Stig Johannes Johannesen
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 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.



Form code: TA 251

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Holder of certificate

TechnipFMC plc., Wincomblee Road, NE63PL, Newcastle upon Tyne, United Kingdom

Manufactured by

Himile Mechanical Manufacturing (Shandong) Co., Ltd.
Himile Industry Park, No.5655 Kangcheng Street, Economic Development Zone, Gaomi, 261500 Weifang, China

Responsability

The Holder of the Certificate takes responsibility that both design and production are in compliance with the Rules, Standards and/or Regulations listed on page 1 of this Type Approval Certificate.

Product description

POU consist of Lifting body, Lifting pin & Top plate including fasteners

POU TYPE / CLASS : DNV 2.7-3 Type E R00-SXX
TARE WEIGHT : NA kg
POU external dimensions (LxWxH) : NA [mm]

Application/Limitation

Upper Guide Frame Lifting Assy (90°) for Gen 2 UCON-H-10:

Maximum Static Load : 15 000 kg
Maximum Dynamic Load : 25 000 kg
Max H_s during offshore lift : 0.0 m (Not for offshore lifting)
Max H_s during subsea lift : X.X m (final assessment of the operational limitations required)
Min. temperature : -20°C
Max. sling angle from vertical : 0°
Shackle size (WLL) : 22.0 mT (L-562A ROV Eye Shank Hook)

Upper Guide Frame Lifting Assy (30°) for Gen 2 UCON-H-10:

Maximum Static Load : 40 000 kg
Maximum Dynamic Load : 60 000 kg
Max H_s during offshore lift : 0.0 m (Not for offshore lifting)
Max H_s during subsea lift : X.X m (final assessment of the operational limitations required)
Min. temperature : -20°C
Max. sling angle from vertical : 60°
Shackle size (WLL) : NA (

Lifting:

Lifting of these units shall be carried out as planned operations. Specific lifting procedures shall be available. The procedure shall include all relevant information required to ensure safe handling of the unit, - at least the following:

Information relative to POU;

- max. static and dynamic load, tare weight, operational class, subsea operational class, type of POU among others,
- operational class to be R00 – i.e., not for lifting between vessels offshore,
- subsea class to be SXX, i.e., no pre-defined wave height limitation,
- all operational limitations considered during design phase; e.g.
 - max. allowable DAF
 - lifting angles
 - lifting/landing speed
 - design/operational temperature
 - water depth
 - wave height

Reference to the procedure shall be clearly stated in the information plate* on the unit.

The following remarks shall be stated on the **POU certificate**:

- 1) The responsible installation contractor shall do a final assessment of the operational limitations for subsea lifting based on the characteristics of the actual installation vessel and installation procedure
- 2) It is the responsibility of the transport/installation contractor to ensure that all handling is carried out safely with due consideration to applicable HSE requirements.

Fabrication follow-up

DNV surveyor to witness important production and test events and issue Form no. MOP 201 "Certificate for Portable Offshore Unit" for each unit.

Production strength tests to be carried out according to DNVGL-ST-E273 (January 2020) and after agreement with the DNV Surveyor.

Type Approval documentation

Tests carried out

Prototype testing according to DNVGL-ST-E273, Sec. 5.

All point lift (pull) test according sec. 5.2.3, total load (table 5-2):

- min. 35 000 kg @ 90 degrees (vertical).
- min. 63 000 kg @ 30 degrees for P7000081199-04 only (as for SN: 079191-06-01)

Marking of product

Each unit to be marked with:

- Safety marking according to DNVGL-ST-E273 (January 2020), sec. 6 including
 - Operational Class Identification
 - "OPERATIONAL RESTRICTIONS"
- Data plates according to DNVGL-ST-E273 (January 2020), sec. 6
- Reference to operational procedure shall be clearly stated on information plate
- The general DNV hard stamp "VL" shall be hard stamped on frame
- Manufacturer's serial number to be welded on frame
- DNV emblem for Portable Offshore Units

Due to limited space for marking on the unit, relaxations in marking requirements or alternative ways of marking might be discussed with and approved by attending surveyor.

Periodical assessment

In order to maintain the validity of the type approval certificate, periodical assessments should be carried out according to DNVGL-CP-0338 at 2- and 3.5-year intervals. Periodical assessments will, when possible, be harmonized with other surveys and audits carried out.

END OF CERTIFICATE