



Certificate no.:
TAS00003NM

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Portable Offshore Units

with type designation(s)
FPS-K1 Skid

issued to

Halliburton Manufacturing & Leasing Company, LLC
Duncan, OK, USA

is found to comply with

DNV standard DNV-ST-E273 – 2.7-3 Portable offshore units, April 2016 (Amended May 2022)

Application:

FPS-K1 Skid (Part No./ Material No. : 102123926)

- Max. gross weight : 13,608 kg 30,000 lbs
- Max. payload : 907 kg 2,000 lbs
- Max. sling leg angle : 45 °

Issued at **Houston** on **2024-02-26**

This Certificate is valid until **2029-02-25**.

for **DNV**

DNV local unit: **Houston-Technical Advisory and Verification**

Approval Engineer: **Simon Ouyang**
Principal Engineer

Mohsen Shavandi
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.





Job ID: **262.1-008709-3**
Certificate no.: **TAS00003NM**

Manufactured By

Halliburton Manufacturing & Leasing Company, LLC
Duncan, OK
United States

Product description

POU Type : DNV 2.7-3 Type A R60
Max. Tare : 12,701 kg 28,000 lbs

Application/Limitation

Min. Design Temperature : -20 °C -4 °F
Max. Sling Angle w/ Vertical : 45 °
Shackle Size (WLL) : 13.5 t 29,762 lbs
Min. Shackle Pin Diameter : 38.86 mm 1.53 inch

The FPS-K1 Skid has been approved as Type A unit with an operational class R60 for transportation and lifting in air for single event.

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

Production strength tests to be carried out according to DNV 2.7-3 and after agreement with the DNV surveyor.

Type Approval documentation

Doc. No.	Rev.	Part No.	Title
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Materials Specifications

Component	Material	Min Yield Strength	Avg. Charpy Value
Hollow Sections	ASTM A500 Gr. B	46 Ksi [315 MPa]	32 J @ -10 °C for 6 < t ≤ 12 mm 32 J @ -20 °C for 12 < t ≤ 25 mm 32 J @ -40 °C for 25 < t ≤ 50 mm
Plate/Channel	ASTM A710	80 Ksi [551 MPa]	42 J @ -10 °C for 6 < t ≤ 12 mm 42 J @ -20 °C for 12 < t ≤ 25 mm 42 J @ -40 °C for 25 < t ≤ 50 mm
Plate	ASTM A36	36 Ksi [250 MPa]	27J @ -10 °C for 6 < t ≤ 12 mm 27 J @ -20 °C for 12 < t ≤ 25 mm 27 J @ -40 °C for 25 < t ≤ 50 mm
Padeyes	API 2H Gr. 50	50 Ksi [345 MPa]	35 J @ -10 °C for 6 < t ≤ 12 mm 35 J @ -20 °C for 12 < t ≤ 25 mm 35 J @ -40 °C for 25 < t ≤ 50 mm

Tests carried out

Prototype for the FPS-K1 Skid with part number: MN M102123926-U, serial number: B4949417-1 has been tested and witnessed on November 09, 2023 according to Standard for Certification DNV-ST-E273, April 2016.

Prototype Load Test Reports reviewed and accepted by DNV on November 29, 2023. Production testing to be carried out per DNV-ST-E273 Section 5.2.3.

Comments

Fuel tanks must be empty and properly ventilated before transportation and shall be marked on unit as per DNV-ST-E273 Section 6.2 "Operational Limitations."

Marking of product

Marking is to be carried out in accordance with DNV-ST-E273 Section 6.

Periodical assessment

Periodical assessment to be carried out at intervals not exceeding 12 months and after substantial repair or alteration according to Standard for Certification DNV-ST-E273, 2016 edition.

END OF CERTIFICATE



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