



Certificate no.:
TAS00004A1 Rev. 0

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Portable Offshore Units**

with type designation(s)
48 ft Transport Frame

issued to

National Oilwell Varco, LP - Well Site Services
Willis, TX, USA

is found to comply with

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

Application:

Maximum Gross Weight (MGW)	:57,500 kg	126,766 lbs
Payload (maximum)	: 47,500 kg	104,719 lbs
Maximum sling angle from vertical	: 40	°

Issued at **Houston** on **2024-06-20**

This Certificate is valid until **2029-06-19**.

for **DNV**

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

Approval Engineer: **Liqun Yang**
Principal Engineer

Aravind Nair
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

Revision: 2023-09

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Product description

POU Type	:	DNV 2.7-3 Type A R30	
Maximum Gross Weight (MGW)	:	57,500 kg	126,766 lbs
Payload (maximum)	:	47,500 kg	104,719 lbs
Tare (maximum)	:	10,000 kg	22,047 lbs
POU External Dimension (LxWXH)	:		

Application/Limitation

Minimum design temperature	:	-20 °C	-4 °F
Number of sling legs	:	4	
Maximum sling angle from vertical	:	40 °	
Minimum shackle pin diameter:	:	2.04 in	51.8 mm

Type Approval documentation

<u>Doc. No.</u>	<u>Rev.</u>	<u>Title</u>
18-544-1200	06	WELDMNT, TRANSPORT FRAME, 48 FT, PRIMARY STRUCTURE
18-544-1121	02	SLING SET, 4-LEG, SLING MBL 242,500 LBS, MASTER LINK WLL 160,000 LBS
18965121-DAD	02	WLDMNT, TRANSPORT FRAME, 48 FT, W/EXT SADDLES
18966895-ASM	01	ASSY, TRANSPORT FRAME, 48 FT W/EXT SADDLES AND LIFTING ACCESSORIES
18786583-DAD	02	WELDMNT, PADEYE, 2-1/2 THK, 12 X 16-3/4 LG
18787046-DAD	02	PLATE, PADEYE, 1-3/4 THK, 12 X 16-3/4 LG, API 2H GR 50
18788996-DAD	01	PLATE, CHEEK, 3/8 THK, 5 DIA, A572 GR 50
18965716-DAD	01	PLATE, SADDLE RIB, 1.00 THK X 4.50 X 10.25 LG
18968501-DAD	01	WLDMNT, SADDLE, EXT, 58 OD ANNULAR
25-353-0006	02	PLATE, NAME, .03 THK X 3.00 X 5.50 LG, INSPECTION
25-353-0014	02	PLATE, NAME, .03 THK X 4.00 X 5.50 LG, 48FT TRANSPORT FRAME
18-544-TR-07416	01	48FT Transport Frame for MPD System
18-544-TS-07471	00	TECHNICAL DATASHEET - 48FT TRANSPORT FRAME
18997118-GAD	01	LIFTING ARRANGEMENT, TRANSPORT FRAME, 48 FT, W/ EXT SADDLES, MPD JOINT

Materials

<u>Components</u>	<u>Material Specification</u>	<u>Minimum Yield Strength</u>	<u>Charpy</u>
Hollow Sections	ASTM A500 Gr B (or equivalent)	315 MPa	32 J @ -10°C for $6 < t \leq 12$ mm 32 J @ -20°C for $12 < t \leq 25$ mm 32 J @ -40°C for $25 < t \leq 50$ mm
Padeye	API 2H Gr 50 (or equivalent)	345 MPa	35J @ -10°C for $6 < t \leq 12$ mm 35J @ -20°C for $12 < t \leq 25$ mm 35J @ -40°C for $25 < t \leq 50$ mm
Plate	ASTM A572 Gr 50 (or equivalent)	345 MPa	35J @ -10°C for $6 < t \leq 12$ mm 35J @ -20°C for $12 < t \leq 25$ mm 35J @ -40°C for $25 < t \leq 50$ mm

Tests carried out

Prototype for the transportation frame with S/N: 6111181-1-1 tested according to Standard for Certification DNV-ST-E273, April 2016, amended May 2022.

DNV attending surveyor has performed on-site survey and TAC audit for this TAC renewal and issued Type Approval Assessment Report on June 19, 2024. Prototype Load Test Report reviewed and accepted by DNV Houston onsite in June 2024.

Production testing to be carried out per DNV-ST-E273 Section 5.2.3.

Marking of product

All units shall be fitted with an information plate in accordance with DNV-ST-E273 Section 6.4.

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, April 2016, Amended, May 2022.