Certificate No : 2026-PTR-EC-DNVGL-0118
Date : April 08th , 2026

PETROS
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CERTIFICATE OF ACCOMPLISHMENT

This certificate is granted to

MICHAEL ELVIRA DA FITRA

ID NUMBER : PTR-EC-DNVGL-0118

For successfully completing 16 hours of lesson & finished Final Project of our E-Course

LIFTING PLAN CALCULATION AS PER DNVGL-ST-N001

Held by **Petros Oil Gas Training** – Jakarta
covering the subjects as listed on the back page

Certificate Validation

Heru Prasadja, ST
Director

www.oilgas-training.com

LIFTING PLAN CALCULATION AS PER DNVGL-ST-N001

Load factors

- Weight contingency and center of gravity factors (Section 16.2.2)
- Dynamic amplification factors (DAF) (Section 16.2.5)
- Centre of gravity Factor (COG) (Section 5.6.2.3)
- Skew load factor (SKL) (Section 16.2.6)
- Consequence factor (Section 16.8.3)
- Yaw Factor (Section 16.4.2.5)
- Tilt Factor (Section 16.2.3.2)

Derivation of hook, lift point and rigging loads

- Hook loads (Section 16.3.2)
    - Static Hook Load (SHL)
    - Dynamic Hook Load (DHL)
- Lift point loads (Section 16.3.3)
- Dynamic Sling loads (Section 16.3.4)

Sling and grommet Safety Factor

- Sling or grommet nominal safety factors for design Yf (Section 16.4.3)
- Consequence factor,Yc (Section 16.4.5)
- Sling or grommet reduction factor, Yr (Section 16.4.6)
- Termination factor, Yt (Section 16.4.7)
- Bending factor, Yb (Section 16.4.8)
- Wear and application Factor, Yw

Sling Tension Calculation

- Case 1 : 1 Hook + 4 Sling
- Case 2 : 1 Hook + 1 Level Spreader Bar
- Case 3 : 1 Hook + 2 Level Spreader Bar
- Case 4 : Tandem Crane Lifting
- Trunion

Sling & Shackle Selection

Padeye Design

Crane Selection, Utilization & Safety Factor

Ground Bearing Pressure

FINAL PROJECT :

- Lifting Plan Calculation for 50 Ton Modular Bridge Structure as per DNVGL-ST-N001

- Lifting Plan Drawing