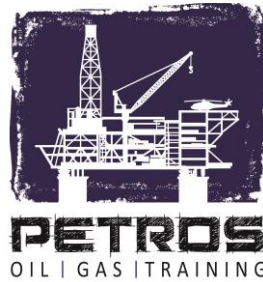


Certificate No : 2023-PTR-EC-LE-89
Date : September 6th , 2023



CERTIFICATE OF ACCOMPLISHMENT

This certificate granted to

SURYA CHRIST MAKRONI MANALU

ID NUMBER : PTR-EC-LE-089

For successfully completing the training

LIFTING/RIGGING ENGINEER

And meet all requirements with score:

92.20

of 100 points

Trainer :

IR. TAUFIQURRAHMAN, IPM

Certified Advanced Rigging Engineer - CA 90722 Wood Group

Held by **Petros Oil Gas Training** – Jakarta
September 2nd & 3rd , 2023, covering the subjects as listed on the back page



Valid Through :
September 6th , 2025



Heru Prasadja, ST

Director

LIFTING/RIGGING ENGINEER TRAINING

BASIC RIGGING

- Lifting/Rigging Principles
- Type of Slings
- Weight Calculation, SWL, Angle Factor & Sling Factor
- Lifting Gear/Accessories' (Shackle, Eyebolt, Clamp, Chain Block)
- Ascertain of general lifting procedure and related government regulation for lifting

SAFETY LIFTING

- Lifting Hazard
- Personal Safety Equipment
- Commons Systemic Lapses Involving Lifting Activities
- Hand Signal

LIFTING PROCEDURE

- Lifting Categories (light, heavy, critical)
- Lifting Team
- Risk Assessment & How to Control the Hazard
- Pre Lift Safety Check
- Statutory Inspection of Lifting Equipment
- Communication
- Rigging Plan Preparation Check List

ADVANCE RIGGING

- Pre-use Inspection of Lifting Equipment
- Recommended Rigging, Slings Methods & Calculation
- Sling Factor, Angle Factor, Estimation Weight, Determine Weight & COG
- Roles & Responsibility of Lifting Teams
- Lifting Plan
- Multi Crane Lift
- Purchases System (pulley)
- Span Rope & Flying Fox

STUDY CASE : Lifting Operational Procedure for 61 Ton Modular Structure

- Set Up Crane Configuration
- Define Lifted Weight & COG
- Select A Right Crane & Lifting Gear Selection
- Ground Bearing Pressure Verification

FINAL EXAMINATION : Develop Lifting Operational Procedure for 62.7 T Modular Structure