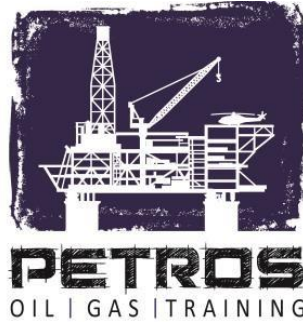


Certificate No : 2024-PTR-EC-FDN-007

Date : September 9<sup>th</sup> , 2024



# CERTIFICATE OF ACCOMPLISHMENT

This certificate granted to  
**SYHRIZAL LUBIS**  
ID NUMBER : EC-FDN-007

has completed 32 total hours & finished the Final Project of our E-course

## EQUIPMENT FOUNDATION DESIGN FOR OIL GAS/INDUSTRIAL PLANT

Held by **PETROS Oil Gas Training** covering the subjects as listed on the back page



Certificate Validation

**Petros Oil Gas Training**

A handwritten signature in black ink, appearing to read "Heru Prasadia, ST".

**Heru Prasadia, ST**  
Director

# EQUIPMENT FOUNDATION DESIGN FOR OIL GAS/INDUSTRIAL PLANT

## SUBJECTS :

### FOUNDATION THEORY

- Stability Check
  - Overturning
  - Sliding
  - Upending
  - Soil bearing
- Strength Check
  - One Way Shear
  - Two Way Shear
- Pier Reinforcement Bar
- Slab Reinforcement Bar

### EQUIPMENT FOUNDATION COMPUTER MODELLING (AFES) :

- Define Project
- Input Parameter
  - Allowable Stress And Unit Weight Of Material
  - Concrete Cover
  - Safety Factor
  - Soil Bearing Capacity
  - Single Pile Capacity
- Input Node & Dimension
- Input Reinforcement Bar
- Define Loading
  - Dead Load
  - Equipment Load
  - Wind Load
  - Seismic Load
- Define Unfactored Load Combination
- Define Factored Load Combination
- Setting Anchor
- Pile Arrangement

### ANALYSIS RESULT

- Foundation & Pile Arrangement Illustration
- Pile Arrangement
- Safety Factor Of Pile
- Check Of Pile Capacity
- Shear Strength Check
- Reinforcement Design

### FINAL PROJECT :

- Foundation Design for HP Amonia Scruber 124-D (Vertical Vessel)
- Foundation Design for Production Separator 31-MDB-101 (Horizontal Vessel)
- Foundation Design for Methanol Distillation Column 6160C1