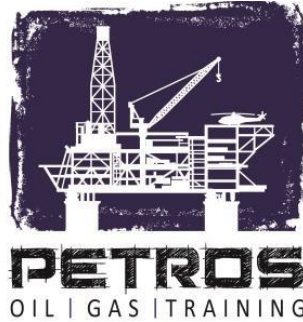


Certificate No : 2024-PTR-EC-FDN-009
Date : September 30th , 2024



CERTIFICATE OF ACCOMPLISHMENT

This certificate granted to
TOMI WIRYANDI SAPUTRA, S.T.
ID NUMBER : EC-FDN-009

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", written over a light blue horizontal line.

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