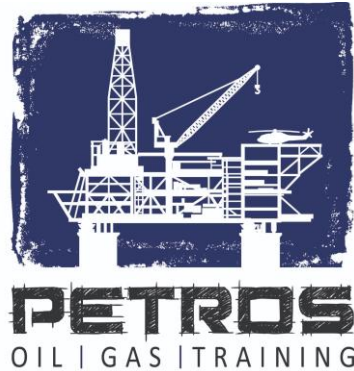


Certificate No : 2025-PTR-EC-SPRD-028

Date : April 03rd , 2025



CERTIFICATE OF ACCOMPLISHMENT

This is to certify that

ZUL AWFAN

ID NUMBER : PTR-EC-SPRD-028

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

STEEL STRUCTURE DESIGN FOR OIL GAS/INDUSTRIAL PLANT

Held by **PETROS OIL GAS TRAINING**, Jakarta
covering the subjects as listed on the back page



Certificate
Validation

A handwritten signature in black ink, appearing to read "Heru Prasadja", located above the printed name of the director.

Heru Prasadja, ST
Director

STEEL STRUCTURE DESIGN FOR OIL GAS/INDUSTRIAL PLANT

SUBJECTS :

A. INTRODUCTION TO OIL GAS/INDUSTRIAL PLANT PROJECT

- General Layout Plan
- Scope of Work of Civil Engineer in Project
- Technical Specification
- Standard Codes , AISC, UBC, ASCE & SNI

B. STEEL STRUCTURE DESIGN FOR OIL GAS/INDUSTRIAL PLANT (STAAD PRO)

- Structural Modelling for Steel Pipe Rack, 36 m (L) x 5 m (W) x 9 m (H), 2 level Making Generate Model
 - Release & Truss Member
 - Offset Member
 - Support
 - Effective Length
 - Unbraced Length
 - K factor
 - Lateral Torsional Buckling
 - Fy
- Material Properties
- Loadings
 - Dead Load
 - Pipe Load
 - Equipment Load
 - Live Load
 - Friction Load
 - Anchor Load
 - Wind Load
 - Seismic Load as SNI 1726-2019/ASME 7-16
- Load Combinations
 - Operation Condition
 - Test Condition
- Running Model
- Analysis Result
 - Member Design
 - Deflection
 - Material Take Off
- Design Report

C. FINAL PROJECT

Steel Pipe Rack, dimension 71 m (L) x 8 m (W) x 9 m (H), 2 level