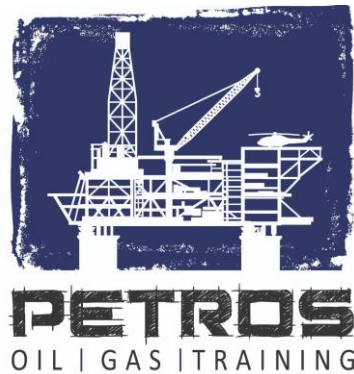


Certificate No : 2022-PTR-STD-029-01

Date : December 4<sup>th</sup> , 2022



# **CERTIFICATE OF ACCOMPLISHMENT**

This is to certify that  
**MUHAMMAD FARHAN, S.T**  
ID NUMBER : PTR-STD-029-01

has completed  
**STEEL STRUCTURE DESIGN  
FOR OIL GAS/INDUSTRIAL PLANT  
TRAINING**

Held by **PETROS OIL GAS TRAINING**, Jakarta  
December 3<sup>rd</sup> & 4<sup>th</sup> , 2022 , covering the subjects as listed on the back page



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

**Heru Prasadja, ST**  
Director

# STEEL STRUCTURE DESIGN FOR OIL GAS/INDUSTRIAL PLANT TRAINING

## 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
  - K factor
  - Material Properties
- Loadings
  - Pipe Load
  - Equipment Load
  - Live Load
  - Friction Load
  - Anchor Load
  - Wind Load
  - Seismic Load
- 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