

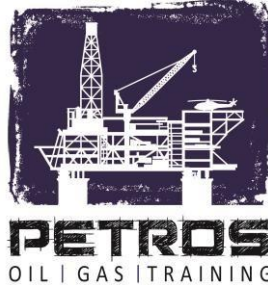


**Kampus
Merdeka**
INDONESIA JAYA

MSIB
magang dan studi independen bersertifikat

Certificate No : 2023-PTR-SPRD-MSIB4-G2-12

Date : June 30th, 2023



CERTIFICATE OF ACCOMPLISHMENT

This certificate granted to
MELSA EL PRINA BR ARITONANG
MSIB ID : 5657492

For successfully completing the training (210 hours)

STEEL STRUCTURE DESIGN FOR OIL GAS/INDUSTRIAL PLANT

Held by **PETROS Oil Gas Training &
Ministry of Education and Culture Research and Technology
of Republic of Indonesia**
at **Kampus Merdeka Studi Independen Bersertifikat Program**

And meet all requirements with score:

83.00

of 100 points



Certificate Validation
Valid Through
30/06/2025

Petros Oil Gas Training
(PT. INDONESIA LEBIH ANDAL PROFESIONAL)

Heru Prasadia, 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
 - Lateral Torsional Buckling
 - 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