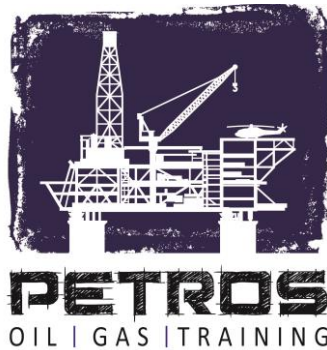


Certificate No : 2021-PTR-MDF-017

Date : August 20<sup>th</sup> , 2021



# CERTIFICATE OF ACCOMPLISHMENT

This is to certify that

**ARYA TAUFIQ RAHMAN**

ID NUMBER : PTR-MDF-017

has completed

## 2D & 3D CAD MECHANICAL DRAFTING TRAINING

Held by **PETROS Oil Gas Training** – Jakarta,  
July 17,18, 24 & 25 , 2021 , covering the subjects as listed on the back page



Certificate Validation

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

**Heru Prasadja, ST**  
Director

# 2D & 3D CAD MECHANICAL DRAFTING TRAINING

## SUBJECTS :

### BASIC ENGINEERING DRAWING

- Standard Drawing Sheet Size (ISO)
- Lettering Standard
- Lines Type
- Projection
  - Pictorial
  - Orthogonal
    - Europa Projection
    - American Projection
- Sections
- Details
- Dimension Rules
- Scale
- Tolerance
- Welding Symbol
- Mechanical Drawing Practice (manual)

### AUTOCAD 2D

- Basic Drawing Tools
- Basic Modify Tool
- Managing Object Properties
- Organizing Drawing Geometry
- Dimensions & Annotation
- Creating Drawing Sheets

### CASE STUDY : PRESSURE VESSEL DESIGN DRAWING

### AUTOCAD 3D

- Introduction to 3D Drawing
- Coordinate Systems
- Basic Construction Techniques; USC & Model Space Viewports
- Surface Modeling Techniques
- Dimensioning 3D Models; Viewing and Displaying 3D Models
- Solid Models
- External References and Assembly Drawings; Detail Drawings
- Drawing Packages

### CASE STUDY : MECHANICAL PART 3D MODELLING

### FINAL PROJECT DRAWING : TEST PRODUCTION SEPARATOR GA-1350