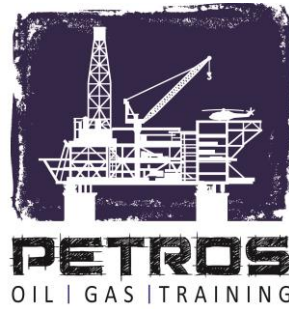


Certificate No : 2022-PTR-ECMS-WIKA-007

Date : April 12th , 2022



CERTIFICATE OF ACCOMPLISHMENT

This is to certify that

ENDRO IRAWAN

has completed training

COMMISSIONING MANAGEMENT

TRAINER :

I Putu Sukmayasa – Commissioning Manager EPC

Held by **Petros Oil Gas Training** on April 5th, 6th & 12th , 2022
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

COMMISSIONING MANAGEMENT

SUBJECTS :

- Introduction of Pre Commissioning & Commissioning
- Organization & Discipline in Commissioning
- Commissioning Planning
- Tools, Test Equipment and Consumables
- System & Subsystem Identification
- System Markup Drawing
 - P&ID
 - Instrument Control
 - Single Line Diagram
 - General Procedure & Operation Test
- Mechanical Completion
- MC Walkdown & Punch List Categorize
- Static Commissioning
- Dynamic Commissioning
- CMS Software Overview, System Subsystem & Commissioning Deliverable List
- Commissioning Check Sheet & Procedure
- Commissioning Execution
- Completion Certificate & Commissioning Hand Over
- Minimum Document to be Prepared
- Piping Test Package
- Work Package Leak Test
- Work Package Instrument/Electrical/Telecom
- Work Package Mechanical
- Structure Building/Civil (road/pavement)
- Pipe Line Work Pack

FINAL PROJECT