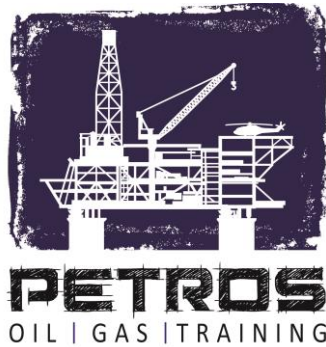


Certificate No : 2022-PTR-ESD-WIKA-007  
Date : March 16<sup>th</sup> , 2022



# CERTIFICATE OF ACCOMPLISHMENT

This is to certify that

**ENDRO IRAWAN**

has completed training

**EMERGENCY SHUTDOWN (ESD) SYSTEM,  
HIERARCHY ESD, PLANT SHUTDOWN & UNIT SHUT DOWN**

**TRAINER :**

**MUHAMMAD ZAHIRSYAH, IPM ASEAN ENG.  
PRINCIPAL PROCESS SAFETY ENGINEER**

Held by **Petros Oil Gas Training** on March 15<sup>th</sup> & 16<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

# EMERGENCY SHUTDOWN (ESD) SYSTEM, HIERARCHY ESD, PLANT SHUTDOWN & UNIT SHUT DOWN

## **SUBJECTS :**

- Introduction
- Hazard studies
- Safety requirements specifications
- Technology choices and the conceptual design stage
- Basic reliability analysis applied to safety systems
- Safety in field instruments and devices
- Case Study