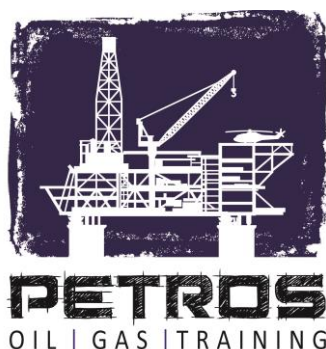


Certificate No : 2022-PTR-ESD-WIKA-014

Date : March 16th , 2022



CERTIFICATE OF ACCOMPLISHMENT

This is to certify that

THOMAS ANTONIUS PURBA

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 15th & 16th , 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