

## A Live Online Course

# OIL & GAS PROCESSING PLANTS

by: Ir. In Jumanda Kasdadi, MT.

### Introduction

By attending this course, the participants will understand the basic technology and equipment on how oil and gas produced from a well are processed.

This course is designed for people involved in oil and gas production who need to understand the processing techniques and the equipment used.

In the course you will:

- Learn the techniques and equipment to process crude oil into stock tank oil.
- Know the technology and equipment to process wellhead gas into pipeline gas.
- Understand the refinery processes to refine crude oil into refined products.
- Know how to read a Process Flow Diagram (PFD)
- Learn how to read a Piping and Instrument Diagram (P&ID)

### Course Content

- 1. Physical Properties & Chemistry of Oil & Gas** - Molecular weight, Vapor pressure, Critical properties, Heat of combustion, etc.
- 2. Overview of Production Processes** - Well fluid, Gas-Oil Separator, Units of Oil Processing Plant, Units of Gas Processing & Conditioning, etc.
- 3. Production Separator & FWKO** – Two-phase and three-phase separators, vertical & horizontal separators, Factors affecting separation, internal & external separator components, Separator Control, Routine Checking of Separator, etc.

- 4. Flash, Scrubber, and Distillation Process** - Vapor-Liquid Equilibrium (VLE) Principles, Phase Behavior, Antoine Equation, Fractionation Process, Tray & bed columns, etc.
- 5. Gas Sweetening** - Sour & sweet gas, Amine (MDEA) processes, Acid Gas Pick-up, Operating Problem (corrosion, solution degradation, foaming), Amine Reconcentration, etc.
- 6. Gas Dehydration Plant** - Wet and dry gas, TEG Dehydration System, MEG Injection, Amine Reconcentration, etc.
- 7. Oil Processing Plant** - Oil-Water Emulsion, Heater Treater, Emulsion Treater, Desalting, Coalescers, Mercury Removal, etc.
- 8. Plant Piping and Pipelines** - Oil pipeline, gas pipeline, multiphase pipeline & flowline, metal & non-metal pipe, etc.
- 9. Process Control and Safety Systems** - Elements of a process control system, Control loops, Control modes, PID, Layer of Protection, IPL / Independent Protection Layer, SIS / Safety Instrumented System, etc.

## Who Should Attend

This course is designed for the following professionals whose works are related to oil and gas production:

- Production engineers
- Production supervisors
- Production operations personnel
- Gas plant supervisors and engineers
- Gas plant operators
- Maintenance supervisors and engineers
- Pipeline supervisors and engineers
- And anyone who wants to know how oil and gas are processed.

## Course Delivery

- This live online course will be delivered via Zoom.

- Each participant needs to prepare a PC with a wifi connection to join this training.
- Participants will receive course material in the form of a hard copy and a soft file which will be delivered to the participant's address via a courier.
- Participants will receive a certificate after the training.

## Daily Hours

Training time is from 09:00 to 15:00 with several breaks in between.

Session 1 → 09:00 – 10:30

Session 2 → 11:00 – 12:00

Session 3 → 13:30 – 15:00

## About Instructor

Ir. In Jumanda Kasdadi is an experienced instructor and he has been conducting training for oil and gas companies since 1997.

He has BS and MS in chemical engineering degrees from the Institute Technology Bandung.

Companies that have received Mr. Kasdadi's in-house training include Chevron, Pertamina Hulu Energi–ONWJ, ConocoPhillips, Total, Medco, Petrochina, Pertamina, Star Energy, and many others.

Ir. In Jumanda Kasdadi was involved in several front-end engineering design (FEED) and Risk-Based Inspection projects.

## Registration Information

### Two ways to enroll

1. Enroll online at [www.lditraining.com](http://www.lditraining.com)
2. Email your enrollment message to LDI Training at [lditrain@indo.net.id](mailto:lditrain@indo.net.id)

LDI Training will send the access code for this online training after we have received the participant's registration, email address, and WA number.

**For more information please contact**

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**Website : [www.Lditraining.com](http://www.Lditraining.com)**