

AN LDI TRAINING COURSE

SAFETY ENGINEERING IN DESIGN

by

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OVERVIEW

Pelatihan ini dirancang untuk memberikan peserta kursus pengetahuan dan pemahaman mengenai *safety engineering* dalam perancangan (*safety engineering in design*).

Pada bagian awal pelatihan ini akan dibahas istilah-istilah dalam *safety engineering* seperti *hazard*, *danger*, *risk*, dan sebagainya. *Process design*, *engineering drawing*, serta *protection layer* dalam *safety engineering* akan dibahas satu persatu dalam pelatihan ini.

Berbagai teknik untuk mengidentifikasi bahaya pada *safety engineering* dalam design - HAZID, HAZOPS, FTA, dan ETA - juga akan dibahas.

Dengan mengikuti pelatihan ini, para peserta akan mendapatkan pengetahuan dan pemahaman mengenai *safety engineering* dalam perancangan secara menyeluruh.

COURSE CONTENTS

- **Safety Engineering Terminologies**
Hazard, danger, risk, event, incident, accident
- **Design Process & Safety Engineering**
Basic engineering design data, an example of process calculation, front end engineering design / FEED, detail design
- **Layers of Protection for Safety & Reliability**
Independent protection layer / IPL, process control, alarm system, relief system
- **Engineering Drawing in Design**
Process flow diagram / PFD, piping & instrument diagram / P&ID
- **Basic Process Control System / BPCS**
Process control loops, measuring element, controller, final control element
- **Safety Instrumentation System / SIS**
Sensor, logic solver, the final element, safety integrity level / SIL
- **HAZID / Hazard Identification**
Project safety activity, checklist, what if, process hazard analysis
- **Hazard and Operability Study / HAZOPS**
Nodes, deviation, causes, consequences, recommendations
- **FTA - Fault Tree Analysis**
- **ETA - Event Tree Analysis**
- **Hazardous Area Classification / HAC**
Class, division, zone, temperature class, material class
- **Discussion, Case Study & Film**

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 inhouse 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.

IJK has also taken courses for 9 topics in The Oil & Gas fields at PETEX (Petroleum Extension), University of Texas at Austin, in Houston, Texas, USA (2018).

COURSE DELIVERY

- This offline (face to face) course is conducted in Bahasa Indonesia.
- Training hours are from 08:00 to 16:00 WIB
- Participants will receive course material prior to training.
- Participants will receive a certificate after completing the training.

TRAINING CONFIRMATION

LDI Training will provide a Confirmation Letter after we receive registration according to the required quota.

For more information please contact

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