

A LDI TRAINING COURSE

SAFETY INSTRUMENTED SYSTEM (SIS) and CONTROL

by
Ir. In Jumanda Kasdadi, MT

COURSE OVERVIEW

Pelatihan ini dimaksudkan untuk memberikan pengetahuan dan pemahaman mengenai SIS dan control, serta hal-hal lain yang terkait seperti SIF (safety instrumented function), SIL (safety integrity level), LOPA, dan sebagainya. Beberapa metode hazard & risk analysis yang terkait SIS & Control seperti HAZOPS, FTA & ETA akan direview pada pelatihan ini. Selain itu akan direview juga code & standard yang terkait SIS seperti IEC 61511 dan ISA 84.00.01. Selain itu, dalam pelatihan ini juga akan diberikan contoh-contoh perhitungan untuk menentukan SIL baik pada fasilitas, maupun system instrumentasi yang digunakan. Pelatihan akan dilaksanakan dengan metode pemaparan, maupun diskusi dan studi kasus, agar sesuai dengan kebutuhan peserta di lapangan. Secara umum setelah mengikuti pelatihan ini, peserta diharapkan mendapatkan pengetahuan dan pemahaman mengenai SIS (safety instrumented system) dan control secara menyeluruh.

COURSE CONTENTS

- **Introduction to Course**
- **Safety Terms & Definition** (hazard, danger, incident, accident, risk, near miss, hierarchy of hazard control, etc)
- **Layers of Protection Analysis / LOPA** (BPCS, Alarm System, SIS/SIF, Relief System, etc)
- **Concept of SIS, Code & Standard** (SIF, SIL, PFD, Sensor, Logic Solver, Final Element, BS IEC 61511, ISA 84.00.01, ISA TR84, etc)
- **Concept of Control System** (Elements in Control System, Process Variables, Manipulated Variables, Final Control Element, etc)

- **Overview for HAZOPS** (HAZOPS Methodology, Guide Word, Node, Intention, Cause, Consequence, safeguard, recommendation, etc)
- **Overview for FTA & ETA** (Fault Tree Analysis, Even Tree Analysis, Top Event, Intermediate Event, Basic Event, etc)
- **Risk Reduction & Analysis** (general concept, risk matrix, risk level, generic failure frequency, probability of failure, etc)
- **SIL Determination for Facilities** (safety layer matrix, risk parameter, risk graph, semi-quantitative method, example calculation, etc)
- **SIL Determination for Instrumentation** (failure analysis, HFT (Hardware Fault Tolerance), SFF (Safe Failure Fraction), failure rate, etc)
- **Discussion, Case Study, and Film**

WHO SHOULD ATTEND

New engineers, asset management team members, design and construction engineers, team leaders/coordinators, operations engineers, construction coordinators, maintenance team leaders/engineers, operations team leaders and other personnel who are or will be responsible for the designing, selecting, sizing, specifying, installing, testing, operating and maintaining process instrumentation, process controls and safety systems

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 materials course soft & hard copy for training.
- Participants will receive a certificate after completing the training.

INSTRUCTOR:

Ir. In Jumanda K, MT 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, Freeport, and many others.



Ir. In Jumanda K, MT was involved in several projects of Front-End Engineering Design (FEED), Risk-Based Inspection (RBI), HAZID, HAZOPS, QRA, FTA, etc; for national and international companies.

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).

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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