

A LDI Training Course

HAZOPS (Hazard and Operability Study)

by
Ir. In Jumanda Kasdadi, MT

COURSE OVERVIEW

Training ini dimaksudkan untuk memberikan pengetahuan dan pemahaman mengenai metode studi tentang *hazard* dan *operability* (HAZOPS) pada fasilitas. Pembahasan akan dimulai terminologi-terminologi yang terkait dengan HAZOPS, *Hierarchy of Hazard Control* serta *Layer Of Protection Analysis / LOPA*. Pembahasan utama dalam pelatihan ini adalah *guide words*, *flowchart*, *format* dan proses HAZOPS, serta dokumen-dokumen yang diperlukan untuk HAZOPS. Selain itu juga akan ditinjau beberapa metode *Hazards Identification*, seperti *what if*, *check list*, *even tree analysis*, *fault tree analysis*, dsb; serta aturan-aturan dan pembagian tugas dalam Tim HAZOPS. Secara umum, setelah mengikuti pelatihan ini para peserta diharapkan akan mendapatkan pengetahuan dan pemahaman mengenai *Hazard and Operability Study* secara menyeluruh.

COURSE CONTENTS

- **Introduction to HAZOPS.**
- **Terminologies of Hazard, Safety, and Operability** (hazard, danger, risk, failure, incident, accident, near miss, etc).
- **Safety Thinking** (identify, consequences, probability, Prevention, safety code, cost, etc)

- **Hierarchy of Hazard Control** (elimination, substitution, engineering control, administration, PPE, etc).
- **Layer Of Protection Analysis / LOPA** (basic process control system, alarm, safety instrumented system, relief system, etc).
- **Overview for Methods of Hazards Identification** (what if, check list, even tree analysis, fault tree analysis, etc)
- **HAZOPS Terminologies** (node, intention, deviation, cause, consequence, safeguard, action, etc)
- **HAZOPS Guide Words** (more, less, reverse, no, other than, relief, ignition, maintenance, corrosion/erosion, human factors, etc)
- **Document Tool for HAZOPS** (PFD / Process Flow Diagram, P&ID / Piping and Instruments Diagram, legend & symbol, etc).
- **HAZOPS Flowchart & Format**
- **HAZOPS Process** (Terms of Reference, Scope of Work, Timing, Team Membership, Preliminary and main HAZOPS, etc)
- **The Role of HAZOP Team** (team leader, scribe, project manager, operations representative, risk engineering or safety representative, etc)
- **HAZOPS Practical Workshop** (practical workshop with HAZOPS real document in class)
- **Group Discussion and Case Studies**

INSTRUCTOR:

IN JUMANDA KASDADI

In JumandaKasdadi (IJK) has experienced an instructor at the industrial training since the year 1997, both the in-house training and public training. Experience in-house training in international **copper mining companies in Papua** (Year 1997-1998) and incorporated in the ITC (Industrial Training Center) company in Field Instrumentation & Process Control. IJK joint team is also experienced in-house training in the chemical industry company operating in Karawang (Year 2007) in Field Operations & Processing Unit, and The Oil&Gas Companies operating in the region of Palembang, Balikpapan, and the Natuna (Year 2006) Sector Oil & Gas Processing, Equipment and Control. The experience of other in-house training them in oil & gas companies that operate the Thousand Islands became one of the instructors in Field Safety Aspect Gas

Operation, in the year 2008. In recent years also do inhouse training in the major oil companies in Riau Rumbai, Duri, Jambi, and Balikpapan. As for the public training, IJK & team have experienced more than 200 execution of training in Jakarta, Bandung, Surabaya, Balikpapan, Jogjakarta, Denpasar, Lombok, and Batam. In addition to training, IJK is also experienced in some job-related training materials include **Field of Risk Assessment** in the oil & gas company for 9 gas plant in South Sumatra onshore & Natuna offshore, Field Processing on the design process and waste treatment equipment laboratory environment in Pare-Pare in South Sulawesi, Field piping and feasibility study on a pipeline from the offshore pipeline tie-in on the pipe in the Straits of Malacca to the onshore pipeline distribution on the Island of Batam. The international experience of IJK is the conduct of FEED (Front End Engineering Design) of Oil Pipeline Distribution at **Dili, Timor Leste (2015)** and an instructor at the training Corrosion Control Management & Coating with participants of Titas Gas Company, **Bangladesh (2016)**.

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Jakarta 10130 - Indonesia

Enrollment Information

LDI Training

Harmoni Plaza Blok B-16
Jalan Suryopranoto No. 2
Jakarta - Indonesia

PHONE : (62)(21) 632 6911 or 6313556

FAX : (62)(21) 630 5074 or 6330212

E-MAIL : Lditrain@indo.net.id

HOME PAGE : www.Lditraining.com

Course Fee: 12,950.000,-per person
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in the course fee)

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