

A 3 day **LDI Training** Course on Topic

# **GAS HAZARD and MEASUREMENT**

by

**Ir. In Jumanda Kasdadi, MT.**

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## **COURSE OVERVIEW**

Providing students with a sound understanding of the techniques to assess the gas hazardous substances in the workplace, and also provides an understanding of how the measurement of the hazardous substances

## **COURSE CONTENTS**

- **Introduction of Gas Hazard** (gas pressure hazard, flammable gas, toxic gas, etc)
- **H<sub>2</sub>S Gas Hazard** (Physical Properties & Chemistry of H<sub>2</sub>S, Toxicity of H<sub>2</sub>S, flammability of H<sub>2</sub>S, etc).
- **SO<sub>2</sub> Gas Hazard** (Physical Properties & Chemistry of SO<sub>2</sub>, Toxicity of SO<sub>2</sub>, flammability of SO<sub>2</sub>, etc).
- **CO & CO<sub>2</sub> Gas Hazard** (Physical Properties & Chemistry of CO and CO<sub>2</sub>, Toxicity of CO & CO<sub>2</sub>, flammability of CO, etc).
- **CH<sub>4</sub> and other Hydrocarbon Gas Hazard** (Physical Properties & Chemistry of CH<sub>4</sub> and other Hydrocarbon Gas, flammability, etc).
- **Gas Leakage, Fire, and Explosion** (triangle & tetrahedron of fire; types & physical properties & chemistry of fire & explosion, etc)
- **The Boiling Liquid Expanding Vapor Explosion (BLEVE)**
- **The Unconfined Vapor Cloud Explosion (UVCE)**
- **Measurement of Gas Hazard** (Gas Detection, Gas Sensor, Personal Gas Monitor, etc)
- **Respiratory Protection and SCBA** (Self Containment Breathing Apparatus)
- **Fire Protection and Extinguishers**
- **Discussion, Case Study and Film**

## **WHO SHOUL ATTEND**

Personnel whose job responsibilities include:

- Supervising, Advising, Monitoring or Auditing
- Monitoring and Auditing,
- Implementing,
- Designing, Constructing, Implementing, Modifying or Operating company process HS&E efforts in the office or in the field
- Other Operations Personnel;
- Other professionals with little to moderate background in risk analysis or HS&E, or who want a better understanding of the subject matter; and
- Government Employees.

## **COURSE LEADER**

### ***IN JUMANDA KASDADI***

In Jumanda Kasdadi (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 in-house training in the major oil companies in Riau Rumbai, Duri, Jambi, and Balikpapan. As for the public training, IJK & team have experienced more than 225 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)**.

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)**.