

GAS HAZARDS and MEASUREMENT

by Ir. In Jumanda Kasdadi, MT.

In oil and gas facilities in which workers may have potential exposure to gas hazards such as carbon monoxide, hydrogen sulfide or methane, it is vital that these hazards are understood.

This Gas Hazards and Measurement course is designed to increase participants' awareness and knowledge of gas hazards. Participants will learn the general characteristics of the common hazardous gases encountered in the oil and gas drilling, production and processing.

This course provides participants with a sound understanding of the techniques to assess the gas hazardous substances in the workplace and the measurement of the hazardous substances.

This training is vital to all company employees working projects where hazardous gases may be present.

By attending this course, participants will:

Be aware of gas hazards

Understand the seriousness of gas hazards

Know the characteristics of hazardous gas – H₂S, CO, CO₂, CH₄, SO₂ and other hydrocarbons

Learn how to detect and measure gas hazards

Know the different types of fire and explosion

Able to protect himself or herself and other workers from gas hazards

Learn the equipment and methods of fire and explosion protection

COURSE CONTENTS

Introduction of Gas Hazards

Gas pressure hazard, flammable gas, toxic gas

H₂S Gas Hazard

Physical Properties, Chemistry of H₂S, Toxicity of H₂S, flammability of H₂S

SO₂ Gas Hazard

Physical Properties, Chemistry of SO₂, Toxicity of SO₂, flammability of SO₂

CO & CO₂ Gas Hazard

Their Physical Properties and Chemistry, Toxicity, Flammability

CH₄ and other Hydrocarbons

Their Physical Properties and Chemistry, Toxicity, Flammability

Gas Leakage, Fire, and Explosion

Triangle & tetrahedron of fire, Type of fire and explosion

The Boiling Liquid Expanding Vapor Explosion (BLEVE)

The Unconfined Vapor Cloud Explosion (UVCE)

Measurement of Gas Hazards

Gas Detection, Gas Sensor, Personal Gas Monitor

Respiratory Protection and SCBA

Self Containment, Breathing Apparatus

Fire Protection and Extinguishers

Discussion, Case Study and Film

WHO SHOULD ATTEND

Workers who may have potential exposure to gas hazards

Drilling Operators, supervisors, and engineers

Production operators, supervisors, and engineers

Gas plant supervisors and managers

Safety supervisors, engineers, and managers

Anyone in the Health, Safety and Environment (HS&E) department.

ABOUT THE 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.

For course registration and more information about the course, please contact LDI Training.

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