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# H2S Management & Abatement

## Overview

H2S is an extremely toxic gas present in many oil installations, either because it is associated with natural gas and/or oil or as a result of crude refining and/or upgrading operations. Increasingly, environmental and government regulations are generated to minimize the risk of contamination with H2S for the transport, handling and storage of crude oil and products. This program presents different strategies for managing products with H2S in order to comply with existing regulations and protect workers

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## Program Outline

### 1. Introduction

- a) concepts
- b) H2S formation
- c) H2S properties
- d) H2S safety Data Sheet

### 2. H2S in Oil Refineries

- a) Crude Oil
- b) Natural Gas & LPG
- c) Light Products
- d) Heavy Products

### 3. H2S impact on operations

- a) Wet H2S Corrosion
- b) Health and Safety concerns
- c) Off-spec products

### 4. Sampling and Lab Testing

- a) Sampling of hydrocarbons w/ H2S
- b) Liquid sampling
- c) Gas sampling
- d) Heavy oil sampling and testing

### 5. H2S Treatment

- a) Objective
- b) Physical removal
- c) Chemical removal
- d) Scavenging
- e) Reversible reactions
- f) LUMITH® Method
- g) H2S Safety

### 6. H2S Abatement Plan

- a) Objectives
- b) Removal Selection Method

- c) Economics
- d) Safety Considerations

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### Who should attend?

This program is designed for professionals in the oil business, for those who work in the oil industry in any of its functions, as well as those regulatory entities that, due to the nature of their work, must supervise oil activities. The H<sub>2</sub>S management course in oil installations is specially designed for business professionals involved in the management of hydrocarbons that contain H<sub>2</sub>S, especially in the plant and storage areas. Experienced and new professionals and plant operators will benefit from this program.

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### Learning Outcome:

After the course, the participants will be able to:

- ✓ Understand the origin and risk of H<sub>2</sub>S in the different refinery environment.
- ✓ Understand the different methodologies for testing samples containing H<sub>2</sub>S.
- ✓ Understand the different methodologies for removing H<sub>2</sub>S from products.
- ✓ Develop a strategy for H<sub>2</sub>S removal/abatement for the different refinery products.

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### Instructor:

#### **Germán Luna-Mejías, BSc ChE, P. Eng., FS Eng. (PH&RA).**

Member of AIChE, CSE and Professional Engineer in Alberta, Canada. He holds a Chemical Engineer Degree from Universidad Simon Bolivar (Venezuela); with more than 35 years of experience in the Oil & Gas Industry in Venezuela and Canada. Broad experience in Process Engineering, Operation's Engineering, Process Safety and Volunteer Firefighter for Refinery Operations. He has studied the H<sub>2</sub>S management problem in refineries and crude management systems for more than 15 and has presented several papers in the subject. He developed his own correlations to predict and model H<sub>2</sub>S scavenging and holds a patent in the subject. He is the founder of LUPATECH CANADA.

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### Additional program details

- This program is 8 hours long. (2 days x 4 hrs each is also available).
- International standards (CCPS, API) are used in this training.
- Completion certificate available
- Training available virtual & on-site for larger groups.

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### Information & Registration :

- Email us: [german@lupatechltd.ca](mailto:german@lupatechltd.ca)