LDI Training

An LDI Training Course

Acid Gas Removal and Acid Gas Compressor

by
Rachmat Sudjana, ST

Introduction

This course is designed to broaden the understanding of sour gas treatment, compression, and injections projects. The session includes a review of the evolution of sour gas sweetening solvents, and the problems associated with the operation of sour gas treating, such as corrosion and foaming.

This will also provide a comprehensive overview of the design and operational aspects of acid gas compression project, to includes a detailed discussion of the phase behavior of acid gas and outlines the methods for estimating the properties of acid gas for the design of the compression and injection facilities.

The methods for controlling corrosion and prevention of the formation of hydrates are also discussed.

The Aims

Participants will learn to:

- Describe the typical process equipment in a sweetening train
- Understand the function of each piece of equipment in a sweetening train
- Select the appropriate sweetening solvent for a sour gas mixture
- Select the appropriate operating range for solvent concentration
- Describe the basic process equipment design considerations
- Reduce the potential causes of foaming
- Select scavenger sweetening chemical
- Discuss acid gas extraction from sour gas.
- Present options for disposal of acid gas.

- Determine properties of acid gas.
- Predict conditions for the formation of hydrates and methods of prevention.
- Select method for dehydration of acid gas.
- Predict the dewpoint pressure of acid gas.
- Prevent corrosion in acid gas process equipment

Course Contents

1. Gas Sweetening process:
    - Review of types of Sulphur-containing compounds in sour natural gas
    - Sulfur Recovery Process
    - Typical process equipment in a sweetening train
    - Regenerative chemical sweetening solvents
    - Proprietary solvents
    - Physical solvents
    - Mixed solvents
    - Comparison of the process
    - Difference between physical and chemical solvents
    - Selective removal of H2S
    - Design considerations for components of sweetening train
    - Types of operating problems and solutions
    - Causes of corrosion
    - Scavenger chemical sweetening process
    - Acid Gas Removal Process
    - Waste water treatment

2. Acid Gas Compression:
    - Brief review of sour gas sweetening
    - Brief review of sulfur recovery options
    - Properties of acid gas, vapor/liquid behavior
    - Control of corrosion and avoiding hydrate formation
    - Determining number of compression stages
    - Packaging of Compressor
    - Materials selection
    - Cooler design considerations
    - Injection line design considerations
    - Hazard of Acid Gas
    - Mechanical Overview of Acid Gas Compressor
    - Compressor Selection
    - Acid Gas –Distance Piece
    - Compressor Valve Assemblies
    - Acid Gas Applications
    - Material Selection Philosophy
    - JT Effect & Hydrates
    - Shaking Forces
    - Driver Selection
    - Trouble Shooting – Valves

Who Should Attend

Project Engineers, Maintenance Engineers, Operation Engineers, Mechanical Engineers, Process Engineer, Electrical and Instrument Engineers, QA/QC Engineers, Construction Engineers, and other related Engineers, Technologists, Plant Supervisors, and Plant Operators wanting to broaden their understanding of sour gas treatment, compression, and injections

Your Course Leader

Rachmat Sudjana, ST

Education: University of Indonusa, Industrial Engineering AKAMIGAS, Mechanical Engineering
Qualification: Instructor for Oil and Gas Industries and Pulp & Paper Mills

Other Qualifications: Lecturer and Mentor for Graduate Engineering Trainee – Engineering Manager - Senior Staff Pipeline/Facility Engineer – Pipeline Material Selection Specialist

He was a retired Oil & Gas Industry practitioner, who is willing to share his knowledge and experience to the next engineer's generation who need them.

He has a lot of experiences in the Oil & Gas Industries domestic and abroad in the World Class Oil Companies, such as working in the oil field in the north edge of Sahara Desert, Africa next the south shore line of the Mediterranean Sea. As soon as he retired, he had a particular assignment as a Company Engineer in Foster Wheeler, Reading, next to London, UK.

He completed the assignment and get a lot more experience after the completion of the project. A long with his engineering tasks, he was also mentored the engineer's new hired in the company to facilitate them for their future to hold more responsibility. He is willing to improve the knowledge by sharing them to others. He also presented some of technical papers in the national and international forums.

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 course materials
- Participants will receive a certificate after completing the training

For course registration and more information please email to

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LDI Training

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