



شركة ميرك العربية السعودية
MEIRC Saudi Arabia

Process of Dehydration and Hydrate Inhibition

Duration: 5 Days

Objectives:

To understand the dehydration and hydrate inhibition Concept and Process of dehydration ,troubleshooting,

Who Should Attend?

Engineers and operators works in operation, design and maintenance fields.

Methodology:

This interactive Training will be highly interactive, with opportunities to advance your opinions and ideas and will include;

- Lectures
- Workshop & Work Presentation
- Case Studies and Practical Exercise
- Videos and General Discussions

Contents:

- **Introduction to Natural Gas :**
 - Natural Gas Classification
 - Poly Propylene and Gases used in the plant MSDS
- **TEG Dehydration Process using flow diagrams**
 - Process Design Considerations
 - Still (Stripper)
 - Reboiler
- **Introduction To Hydrate Inhibition And Dehydration:**
 - What is a Hydrate , Types of Hydrates, Dehydration & hydrate inhibition meaning and examples
 - Absorption versus Adsorption comparison chart
- **Appropriate methods of dehydration or hydrate inhibition and its properties**
- Chemicals
- Solids
- Cooling
- Others
- Problems related to water in process streams associated with natural gas processing and compressed air facilities.
- Predicting hydrate formation



- Water solubility (dew point) in a hydrocarbon gas
- Methods and equipment used to measure the water content of natural gas streams.
- **Calculating the saturated water content of hydrocarbon gases and liquids.**
- Calculating glycol injection rate required to inhibit hydrate formation in a natural gas stream.
- **Troubleshooting Glycol Dehydration Systems:**
- Determining appropriate glycol types and lean glycol concentrations for the dehydration of natural gas streams.
 - Recommending actions to correct faulty glycol dehydration systems
- Determining an appropriate solid desiccant type for a dehydration system.
- Estimating the optimum drying cycle time for a solid desiccant dehydrator.
- **Calculating regeneration heat loads and the required regeneration gas flow rates of a solid desiccant dehydrator.**
- **Determining actions that optimize the regeneration heating cycle of a solid desiccant dehydrator.**
- **Troubleshooting Glycol Dehydration Systems**

There are few comments;

1. **More emphasis on cracked gas dehydration units (like olefin plants)**
2. **Design and troubleshooting of mol sieves dehydration beds.**
3. **Best practices in mol sieve dehydration in terms process, instrumentation, regeneration effectiveness etc.**