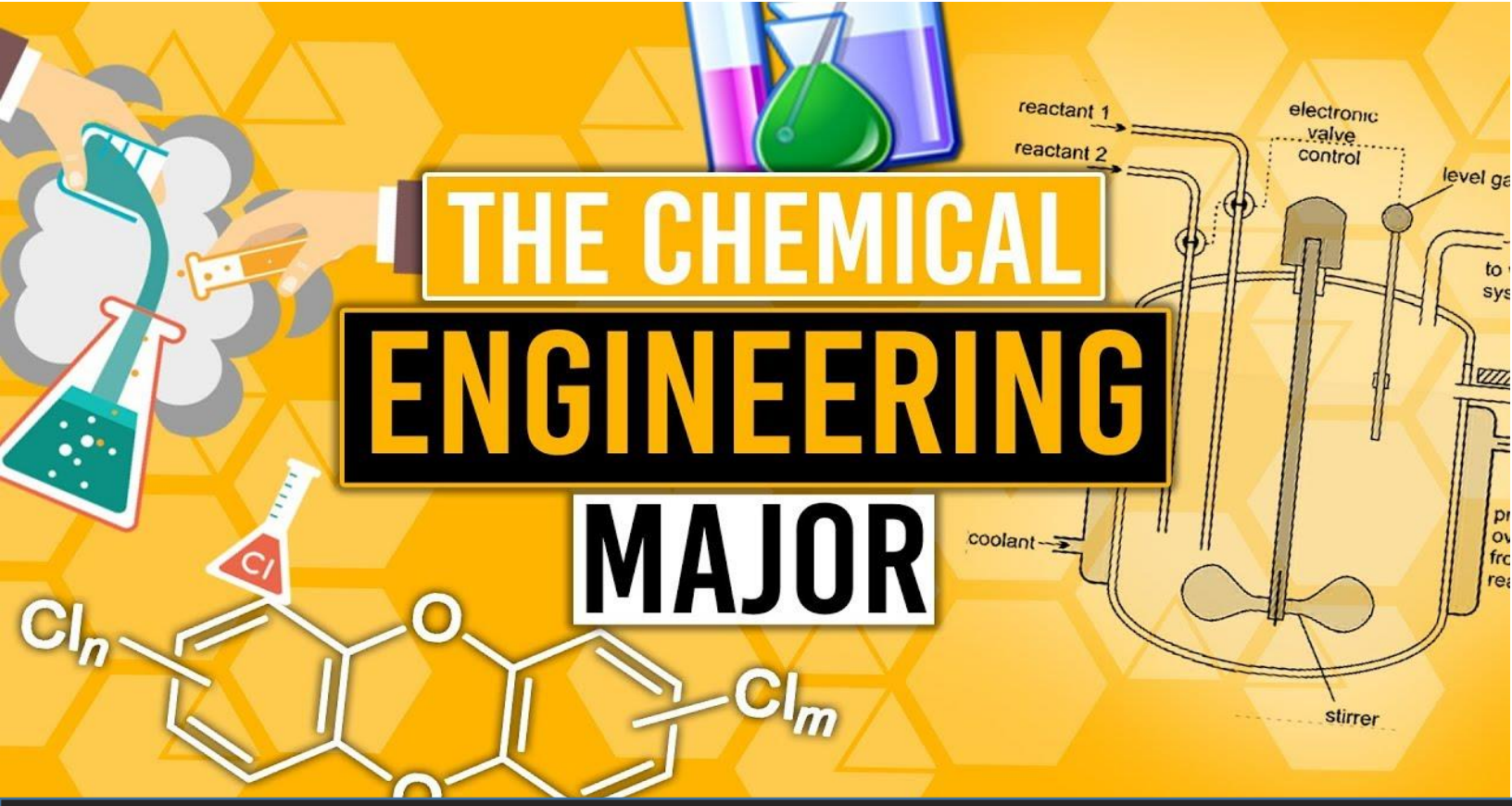

Process of Dehydration and Hydrate Inhibition

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BTS
Training & Consultancy

Process of Dehydration and Hydrate Inhibition

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

Certificate:

BTS attendance certificate will be issued to all attendees completing minimum of 80% of the total course duration.

Objectives:

- To understand the Process of dehydration and hydrate inhibition and its methods, troubleshooting, evaluating the performance of solid desiccant dehydrators and specialized dehydration processes.

Contents:

Introduction to Hydrate Inhibition and Dehydration:

- Appropriate methods of dehydration or hydrate inhibition.
- Problems related to water in process streams associated with natural gas processing and compressed air facilities.
- Methods and equipment used to measure the water content of natural gas streams.
- Calculating the saturated water content of hydrocarbon gases and liquids.
- Determining the hydrate-formation temperature of sweet and sour gas streams.

Hydrate Inhibition Methods:

- Temperature control methods and equipment used to inhibit hydrate formation in a natural gas stream.
- Calculating methanol injection rate required to inhibit hydrate formation in a natural gas stream.

- Calculating glycol injection rate required to inhibit hydrate formation in a natural gas stream.
- Procedures and Resources for Calculating Methanol Injection Rate Required to Inhibit Hydrate Formation in a Natural Gas Stream.
- Procedures and Resources for Calculating Glycol Injection Rate Required to Inhibit Hydrate Formation in a Natural Gas Stream.

Troubleshooting Glycol Dehydration Systems:

- Describing the glycol dehydration process.
- Determining appropriate glycol types and lean glycol concentrations for the dehydration of natural gas streams.
- Calculating the required diameters of inlet scrubbers.
- Determining glycol circulation and water removal rates.
- Determining the required size of contactor columns.
- Calculating the heat load on a reboiler.
- Determining the required size of a flash drum separator.
- Determining the required size of a stripping column.
- Recommending actions to correct faulty glycol dehydration systems.

Evaluating The Performance of Solid Desiccant Dehydrators:

- Determining an appropriate solid desiccant type for a dehydration system.
- Process flow and the function of the major components of solid desiccant dehydrators.
- Effects of key process variables on the operation of a solid desiccant dehydrator.

- Calculating the required size of adsorber towers.
- 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.
- Determining possible causes of and corrective actions for capacity and efficiency problems of solid desiccant dehydrators.
- Procedures resources for determining an appropriate solid desiccant type for a dehydration system.
- Procedures and resources for calculating the required size of an adsorber tower.
- Procedures and resources for estimating the optimal drying cycle time for a solid desiccant dehydrator.
- Procedures and resources for calculating the regeneration heat loads and the required regeneration gas flow rates of a solid desiccant dehydrator.
- Procedures and resources for determining actions that optimize the regeneration heating cycle of a solid desiccant dehydrator.
- Procedures and resources for determining possible causes of and corrective actions for capacity and efficiency problems of solid desiccant dehydrators.

Specialized Dehydration Processes:

- Operation of and equipment that is used for specialized dehydration processes.
- Advantages, disadvantages, and applications of special dehydration processes.
- Advantages, disadvantages, and applications of glycol and regenerative solid desiccant systems.