Introduction to Petrochemical Processes and Economics Training Course

Introduction

The success of every company depends of each employee's understanding of the key business components. Employee training and development will unlock the companies' profitability and reliability. When people, processes and technology work together as a team developing practical solutions, companies can maximize profitability and assets in a sustainable manner. Training and development are an investment in future success - give yourself and your employees the keys to success

It is strategically important that your operations team understands the fundamentals of process unit operations concepts. This is the difference between being in the best quartile of operational ability and being in the last quartile. There is vast difference in the operational ability of operating companies and most benchmarking studies have confirmed this gap in operational abilities.

Whether you have a team of new or seasoned employees, an introduction or review of these concepts is very beneficial in closing the gap if you are not in the best quartile or maintaining a leadership position. Most studies show that a continuous reinforcement of best practices in operational principles is the most effective way to obtain the desired results. Training and learning should be an ongoing continuous lifelong goal.

Course Objective

This course will guide the participates to develop key concepts and techniques for petrochemical processes and economics. These key concepts can be utilized to make operating decisions that can improve your unit's performance.

Many aspects of petrochemical operations and management can be improved including, product recoveries, purities and energy utilization, and safety. This cannot be achieved without first an understanding of basic fundamental principles of design and operation. These principles need to be understood in advance of operating and trouble shooting a process unit operation for the manager or problem solving to be effective.

This seminar focuses on the core building blocks of the petrochemical process systems, equipment and economics. This program will emphasize petrochemical process unit operation fundamentals, safe utilization of these fundamentals by operations, engineering, maintenance and support personnel.

Course Duration and Delivery

Typical course duration is 3 to 5 days based on the background of the participates. One of our Senior Technical Professional with over 25 years of experience would lead the class. Instruction can be in house or in an online webinar.

Outline

1. Introduction to Petrochemical Key Concepts

    A. Overview of the Petrochemical Industry
    B Chemistry of the Petrochemical Industry
    C. Safety in the Petrochemical Industry

2. Distillation in the Petrochemical Industry

    A. Fundamentals of Distillation
    B. Optimize Distillation Column Design for Improved Reliability in Operation and Maintenance

3. Introduction to Ethylene Plants

    A. Overview of Ethylene Plants
    B. Ethylene Process Variables
    C. Ethylene Furnace Technology
    D. Ethylene Furnace Trouble Shooting
    C. Ethylene Compressor Overview
    E. Molecular Sieve and Acetylene Reactor Catalyst Review
    F. Flare Safety Review
    G. Ethylene Economics

4. Introduction to Ethyl Benzene Plant

    A. Process Overview
    B. Process Variables
    C. Catalyst Review
    D. Economics

5. Introduction to Styrene Plants

   A. Process Overview
   B. Process Variables
   C. Catalyst Review
   D. Economics

6. Introduction to Hydrogenation / Desulphurization Units

   A. Process Overview
   B. Process Variables
   C. Catalyst Review
   D. Economics

7. Introduction to BTX Separation Plants

   A. Overview of BTX Separation
   B. Liquid / Liquid Extraction versus Extractive Distillation
   C. Process Variables
   D. Benzene and Toluene Derivative Overview

Who Should Attend:

- People who are making day to day decisions regarding operation, design, and economics of processing plants;

    1. 1st Line Operations personnel,
    2. Operation Supervisors,
    3. 1st Line Maintenance personnel,
    4. Maintenance Supervisors,
    5. Senior Plant Supervisors,
    6. Operations Engineers
    7. Process Support Engineers,
    8. Design Engineers,
    9. Cost Engineers

- Attendance at this course will be beneficial to support personnel such as

    1. Environmental professionals,
    2. Accountants,
    3. Business managers,
    4. Administrative and legal staff,
    5. Sales and marketing personnel
    6. Insurance representatives,
    7. Personnel managers,
    8. Financial professionals, and
    9. Government officials.

- Ideal for veterans and those with only a few years of experience who want to review or broaden their understanding in Processing Plant Operations.

- Other professionals who desire a better understanding of subject matter

What you can expect to gain:

- An introduction of petrochemical operations, processes and economics
- Gain an understanding of the equipment of a petrochemical plant
- Gain an understanding of the petrochemical flow sheets
- Gain an understanding of petrochemical chemistry and catalyst
- Gain an understating of petrochemical margins