1. Course Details:

Course Code : ICPE-008
Course Title : Distillation Basics Troubleshooting
Course Duration : 5 Days

2. Course Overview:

- The goal of the course would be to refresh the knowledge of those who have a basic understanding of distillation and to build a foundation to those who are new to the distillation.

3. Learning Outcomes:

- This course will guide the participates to develop key concepts and techniques to operate and troubleshoot a distillation system.
- These key concepts can be utilized to make operating decisions. Training and development are an investment in future success - give yourself and your employees the keys to success.
- Product recoveries, purities and energy utilization can be improved in most distillation systems. This cannot be achieved without first an understanding of distillation operation principles.
- These principles need to be understood in advance of operating and troubleshooting a distillation column for the operator or problem solving to be effective.

4. Course Contents:

GeneralIntroduction
General ColumnDesign

- The components of a distillation system, more than just a tower – it is a system of differentcomponents
- History ofdistillation
- Different types of distillation columns
- Differences among batch, flash, and multistage distillationprocess
- Relative advantages of tray and packedcolumns
- Steps in the processdesign

DistillationEquipment
Tray ColumnEquipment

- The major design differences between traytypes
- The operational limits for trays – operatingwindow

Packed ColumnEquipment

- The different types of packing and their characteristics
- The best type of packing for a given system

Operating columns in foulingservice

Operating columns in vacuumservice
Optimizing Columns for improved operation andmaintenance
ProcessControl
Distillation ColumnControl

- Functions of Process Control
- Characteristics of a Continuous Process
- Select appropriate composition and column pressure control schemes
- Process settings during column operation

Typical controlled and manipulated processvariables

- Level
- Pressure
- Composition
- Temperature
- Flow

Controller PerformanceCriteria
Feed Forward Control of an IdealProcess
Feedback and Feed Forward ControlLoops
Commissioning
Tower Pre-CommissioningGuidelines
Tower Start UpGuidelines
Tower Shut DownGuidelines
Troubleshooting

- Evaluate operation of a packed column
- Evaluate operation of a tray column
- Use tools to diagnosis problems

Installation

- Common column installation mistakes
- List tasks to insure a proper installation

5. Our Methodology:

- Make coaching and monitoring innovative and using modern
- Media training also using on the go training by using interactive means and focusing on
- The exercises, practical applications and real situations study.
- Live delivery method, instructor-led training.
- Experienced consultant, trainers, and professional.
- Qualified trainer with high-level experience

6. Attendance Reports:

- Send daily attendance reports to trainingdep
- Send full attendance report to training dep. by the end of thecourse
- Attend 100 % from the course days also providedaily
- Issue attendance certificate for participant who attend minimum 80% from the course duration

7. Pre/Post Reports:

- Pre- assessment before starting training.
- Post assessment after finish training
- Full report for the deferent between Pre-& Post assessment

8. Who Should Attend?

- Operation and Maintenance Supervisors
- Senior Plant Supervisors
- Operations Engineers
- Process Support Engineers
- Design and Cost Engineers