Training - Extractive Distillation

DISTEXT-EN-P | **Face-to-face only** | **3 days**

This course provides a deeper technical understanding of an extractive distillation column, its principle and consequences on the operation of the whole unit

Level
Skilled

Public
Anyone involved in the operation/troubleshooting of extractive distillation columns (process/operation engineers, shift leaders, panel operators, field operators)

Objectives
Attendees will be able to implement the following skills:

- Describe the role of the solvent and the functioning of the different extractive or non-extractive zones
- Explain the influence of each parameter on the conduct of the column and on the quality of the separation
- Identify the most frequent malfunctions and incidents

Pedagogical & technical resources

- The content of this course can be adapted to the customer's needs. The pedagogy is focused on the units concerned, under cover of a secrecy agreement if necessary
- Implementation of static simulation results with C4/ACN and C6/NMP processes
- The case studies are dealt with in group and based on typical situations encountered in the operation of the related process units

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites
No prerequisites are necessary to follow this course

Responsable
IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

SOLVENT EFFECT ON VAPOR-LIQUID EQUILIBRIA — 0.75 day

Typical composition of cuts to be processes: C4 and C6 cuts of a steamcracker or other units.
Natural volatility of compounds and focus on impurities to be removed, highlighting constraints and available processes.

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Action of the solvent and effects on relative volatilities of the compounds to be separated.
Effects of pressure, solvent ratio and feed composition.

BEHAVIOR OF AN EXTRACTIVE DISTILLATION COLUMN — 0.75 day

Feed composition. Required specifications.
Mass balance, product recovery ratio, losses of solvent.
Analysis of operating parameters: pressure and its pressure control system, solvent ratio, solvent temperature, thermal balance and vapor-liquid traffics.
Concentration profile: hydrocarbons and solvent, behaviors in extractive and non-extractive zones.
Meaning of temperatures and of temperature profile.

DOWNSTREAM PROCESSES — 0.5 day

Solvent recovery system and purification.
Make-up of solvent and adjustment of its composition in the solvent loop.
Superfractionation if needed.

OPERATING VARIABLES OF AN EXTRACTIVE DISTILLATION COLUMN — 0.5 day

Instrumentation and process control scheme.
Meaning of controlled parameters.
Impact of the modification of: solvent ratio, reboiler ratio, solvent composition and temperature and other parameters depending on the process configuration. Consequences on the yields, the composition of products and the energy consumption.

TROUBLESHOOTING & PROCESS INCIDENTS — 0.5 day

Solvent: decrease in flowrate, temperature modification, regeneration failure.
Feed: unexpected change in flowrate or composition.

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Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com

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