

**Aromatics Complex Unit : Aromatics production**

**UHDE MORPHYLANE<sup>®</sup> Extractive Distillation**

**OPERATIONS TRAINING**

**Objective:** To provide in-depth knowledge of the **MORPHYLANE<sup>®</sup>** process and particularly the client's unit. By the end of the course, the participants will have:

- A general understanding of the significance of the unit within the refinery scheme
- A broad technical understanding of the catalyst and the chemical reactions involved in the process
- A solid knowledge of the Process Flow Diagram and equipment
- A thorough knowledge of operating conditions and their impact on performance
- A good overview of the start-up and shutdown activities  
(NB: a detailed review of procedures is not included in the course).
- A sound knowledge of the main troubleshooting actions

**Duration:** The training course lasts 3 days. The duration can be tailored to the participants' level of understanding.

**Attendance:** This course is targeted to unit process engineers, unit technical managers, shift leaders, and board men. Suitably qualified or experienced outside operators may attend to enhance their process knowledge.

**Program:** The program below may be modified due to specific customer requirements, subject to an agreement between the customer and AXENS.

### Day 1

#### 1. Introduction

- Supply/demand situation
- Market trends
- Environmental regulation
- Focus on the unit in its context

#### 2. Process Objectives

- General information
- Feed characteristics
- Unit duty
- Products' specifications
- Material Balance

#### 3. Process Description

- Process Flow Diagrams
- Piping & Instrumentation Diagrams
- Main equipment  
(Drawings, pictures and functions)
- Catalyst and chemicals loading procedures

### Day 2

#### 4. Normal Operating Conditions and Column Profiles

#### 5. Controlling Parameters

#### 6. Key Control Schemes

### Day 3

#### 7. Shutdown and Restart

- Planned shutdown
- Normal restart

#### 8. Troubleshooting

- Typical causes and resolution of product quality incidents
- Operational disturbances

#### 9. Solvent Regeneration

#### 10. Health, Safety and Environment

#### 11. Quiz