

**Training Title**

**SEPARATION TECHNIQUE IN OIL/PETROLEUM INDUSTRIES**

**Training Duration**

5 days

**Training Venue and Dates**

REF PE050	Separation Technique In Oil/Petroleum Industries	5	22 – 26 December, 2019	\$4,250	Dubai, UAE
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**Training Fees**

4,250 US\$ per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Buffet Lunch

**Training Certificate**

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

**TRAINING OVERVIEW**

**TRAINING METHODOLOGY**

A highly interactive combination of lecture and discussion sessions will be managed to maximize the amount and quality of information, knowledge and experience transfer. The sessions will start by raising the most relevant questions, and motivate everybody finding the right answers. The attendants will also be encouraged to raise more of their own questions and to share developing the right answers using their own analysis and experience.

All attendees receive a course manual as a reference.

This interactive training workshop includes the following training methodologies

30% Lectures

30% Workshops and work presentation

20% Group Work & Practical Exercises

20% Videos & General Discussions

**WHO SHOULD ATTEND?**

This course is designed for Junior Engineers, Senior Operators, and Operators who are working in Oil Production Facilities and Oil Refineries.

Technical personnel involved in the activities of oil desalting. Specifically, technical, operations and maintenance personnel who had limited exposure to this area, or professionals involved in other areas of the gas/oil industry who require a comprehensive overview of natural gas processing will find this course ideally suited for them.

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**DAILY OUTLINE**

**The following topics will be covered in 5 days**

**Course Contents**

- 3.7 Introduction**
  
- 1.2 Separation Process**
  
- 1.3 Principles of Separation**
  - 1.3.1 Gravity Separation**
  - 1.3.2 Separation System Problems**
  - 1.3.3 Factors Affecting Separation**
  
- 1.4 Phases Separation**
  - 1.4.1 Primary Separation**
  - 1.4.2 Secondary Separation**
  - 1.4.3 Mist Extraction**
  - 1.4.4 Liquid Accumulation**
  - 1.4.5 Oil and Water Separation**
  
- 1.5 Terminology and Applications:**
  - 1.5.1 Vessels Terminology**
  - 1.5.2 Separator Application**
- 1.6 Stage Separation**
  
- 1.7 Separators Classification**
  - 1.7.1 The Vessel Shape**
  - 1.7.2 The Number of Fluids to be Separated**
  
- 1.8 Separator Internals**
  - 1.8.1 Inlet Configuration**
  - 1.8.2 Intermediate Configuration**
  - 1.8.3 Outlet Configuration**
  
- 1.9 Separator Sizing**
  - 1.9.1 Definitions**
  - 1.9.2 Sizing Knock Out Drum**
  - 1.9.3 Sizing Liquid Accumulators**
  - 1.9.4 Sizing Vapor Liquid Separators**

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**1.10 Separation Operation and Troubleshooting**

**1.10.1 Separator Control**

**1.10.2 Troubleshooting**

**1.11 Operating Problems**

**1.11.1 Foamy Crudes**

**1.11.2 Paraffin**

**1.11.3 Sand**

**1.11.4 Emulsion**

**1.11.5 Slugging**

**2.1 Fundamentals of Separation in Towers**

**2.1.1 Distillation**

**2.1.2 Principles of Distillation 4.1.4 Reflux**

**2.1.4 Reboiling**

**2.2 Crude Distillation**

**2.1 Process Description 4.2.2 Product Specifications**

**2.3 Crude Distillation Operation**

**2.1 Reflux Rate Changing**

**2.4.2 Feed Temperature Changing**

**2.4.4 Side Product (Draw off) Rate Changing**

**2.4 Fractionator Control**

**2.1 Feed Surge Control**

**2.4.2 Feed Temperature (Thermal Condition)**

**2.4.4 Column Pressure Control**

**2.4.4 Reboiler Control**

**2.4.5 Variable Feed Tower**

**2.5 Operating Difficulties**

**2.5.1 Fouling**

**2.5.2 Temperature Profile**

**2.5.4 Operation near Critical Properties**

**2.5.4 Use of Grid Trays**

**2.5.5 Loads in Rectifying Section**

**2.5.6 Way of Introducing Feed**

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2.5.7 Reboiler

2.6 Troubleshooting Operating Problems

2.6.1 Flooding

2.6.2 Dry Trays

2.6.4 Damaged Trays

2.6.4 Water in Hydrocarbon Column 4.6.5 Foaming

2.6.6 Condenser Fogging

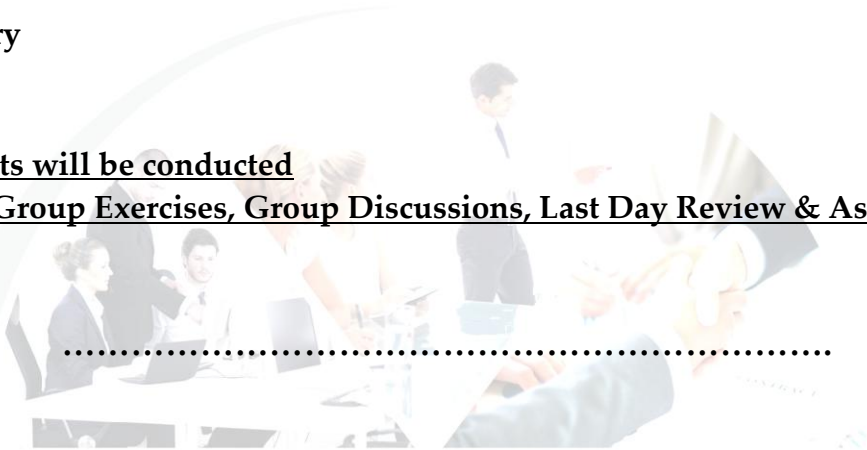
2.6.7 Suspect Laboratory Analysis

3.7 Glossary

NOTE:

Pre & Post Tests will be conducted

Case Studies, Group Exercises, Group Discussions, Last Day Review & Assessments will be carried out.



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