



## Flow Assurance Fundamentals for Surface Facilities

### MODULE

#### About the Skill Module

This skill module reviews the typically employed sand control/mitigation options, and the key issues associated with the oil desanders. It also discusses what wax, asphaltene, and scales are, the problems caused, and how to mitigate them will be described. This skill module covers the following topics:

- Sources of Sand and Typical Characteristics in Surface Production Facilities
- Problems Resulting from Sand Production
- Sand Detection Equipment Options and Applications
- Sand Control / Mitigation and Disposal Options
- Wax in Crude Oil Systems and Associated Operational Issues
- Asphaltenes in Crude Oil and Associated Operational Issues
- Scale and Scale Control Options in Oil Production Facilities



[See example online learning module](#)

### **Target Audience**

Process/facilities engineers and senior operating personnel involved with the design and operation of oil and produced water processing facilities.

### **You Will Learn**

You will learn how to:

- Describe what is oil treating and why it is important
- List typical sales oil specifications
- Outline typical emulsion heating methods and their applications
- Describe design parameters; treating temperature, treating flux, heat flux, and heat release density

- Perform basic sizing of a heater treater
- Describe chemical demulsifiers, what are they and how they destabilize and eliminate emulsions
- List the key factors and criteria considered for selection of chemical demulsifiers
- Estimate demulsifiers injection rate and cost
- Explain how electrostatic treaters work and what their advantages are over other treating methods
- List different types and typical configurations
- Perform basic sizing of an electrostatic treater
- Identify the two gravitational treating units
- Describe pros and cons of gravitational treaters
- Explain the purpose of crude oil desalting
- Describe the main desalting process configurations, i.e., process flow diagrams, major equipment, etc.
- List the main steps involved with desalting
- Outline the primary applications of the main desalting configurations
- Identify typical problems encountered in desalting operations, their causes, and solutions

## Product Details

Categories: Midstream

Disciplines: Process Facilities Production and Completions Engineering

Levels: Foundation

Product Type: Individual Skill Module

Format: On-Demand

Duration: 4 hours (approx.)

**\$795.00**