

Course Content**Title:** Visbreaking**Potential PDH:** 16**Code:** BTT081**Description:**

- To further improve knowledge and experience with Visbreaking processes applications in general
- To become more familiar with specific challenges and how to effectively deal with these challenges in practice.
- The transfer and sharing of knowledge and best practices in the area of Visbreaking processes.

Outline:

Introduction

- Visbreaking history
- Crude Oil
- Visbreaking as margin improver

Visbreaking Technology

- Physical Chemistry of Vacuum Residue
- Conversion and Stability
- Visbreaker Products

Visbreaking Process Flow Diagram

- Characteristics
- Process variables
- Process control

Process Equipment Overview

- Fired Heaters
- Soaker
- Fractionation

Process Safety

- Over and under pressure
- Instrumentation
- Emergency systems
- Emergency Block Valves
- Fouling and Corrosion Risks

Operational Procedures

- Start Up
- Shut Down
- Emergency Shut Down

Course Content

- Furnace Decoking
- Water Washing

Process Optimization

- Equipment Reliability
- Performance Monitoring and KPI's
- Operational Cost

Instructor:

James Sheldon has over 30 years of experience in software and technology development, consultation on profit improvement programs (PIPs), refinery upgrades, and strategic investment studies in the petroleum refining industry. James has managed various PIP-type projects (i.e., PIP at a 200 KBD FCC/visbreaking conversion refinery, PIP at a two-site FCC, hydrocracking, coking, visbreaking conversion refinery and petrochemicals plant, and many more). He has managed a series of studies to determine the changes in operation and the new equipment required to comply with new auto-oil specifications for a 140 KBD conversion refinery. James has managed refinery modernization and fuel oil minimization study, including working closely, on-site, with refinery technical specialists and refinery linear program (LP) specialists. He has Managed a study into the technical and economic feasibility of processing a new, heavy crude in three linked, complex refineries. Dr. Sheldon holds a B.Sc., degree (1st Class Honors) and a Ph.D. degree, both in Chemical Engineering and both from B.Sc. Birmingham University, Birmingham, UK.