EnVision
e-Learning & Universal Simulation

Crude Distillation Unit

A self-paced MultiMedia based Tutorial/CBT and real-time dynamic simulation of a Crude Distillation Unit(CDU).

Tutorial/CBT:

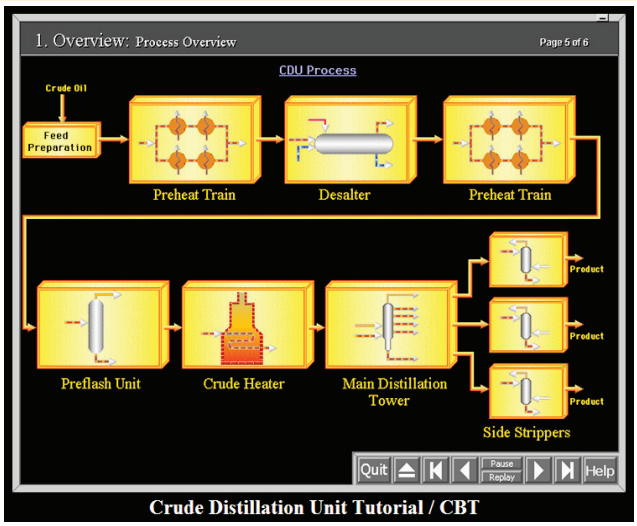
This interactive tutorial provides an Overview, Fundamental Principles, and Control and Operating Principles for an Atmospheric Crude Distillation Unit using Voice, Video, Animation and Graphics.

Overview
- Introduction
- Crude Oil
- Process Overview
- Downstream Refinery Units

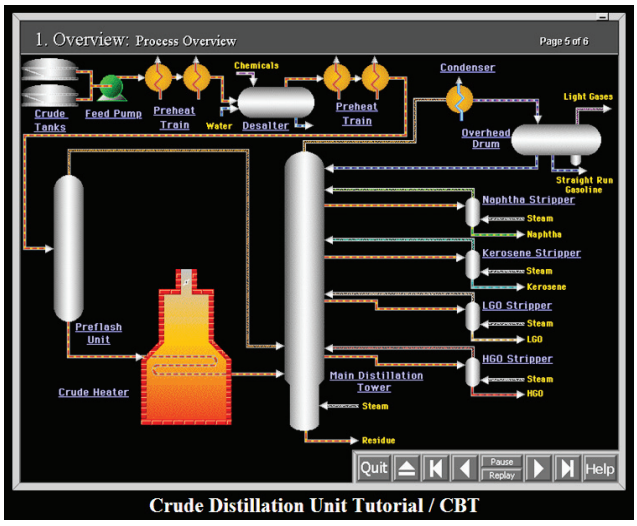
CDU Process Components
- Crude Preparation
- Desalter
- Preheat Train
- Preflash Unit
- Crude Heater
- Distillation System

Operating Examples
- Change in Crude Characteristics
- Increase Kerosene Production Rate
- Decrease IBP of LGO

Key Performance and Operating Variables
- Introduction
- Product Specification
- Desalter
- Crude Heater Outlet Temperature
- Tower Pressures
- Tower Temperatures
- Pumparound Rates
- Overflash Flow
- Product Rates
- Main Tower Stripping Steam Rate
- Side Stripper Stripping Steam Rates



Crude Distillation Unit Tutorial / CBT



Crude Distillation Unit Tutorial / CBT

- Tutorial has a built-in Quiz and comes with a Learning Management System (LMS) called TutAdmin. The LMS allows an instructor to register trainees and monitor their performance and Quiz scores
- Tutorial is available as a Standalone or Web based application
- Available in English, Chinese, Danish, Dutch, French, German, Spanish and Swedish

GSE Solutions
www.gses.com/EnVision

EnVision

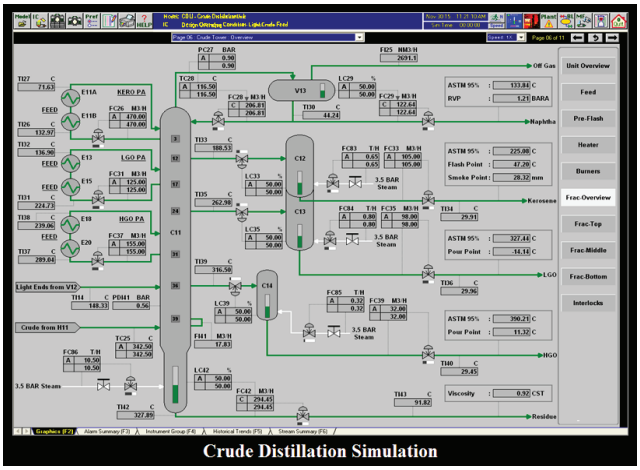
Crude Distillation Unit

Simulation

GSE's EnVision simulation is a real-time dynamic process simulation program used for Operator Training. It is based upon a rigorous and High-Fidelity mathematical process model to provide a realistic dynamic response of a process unit.

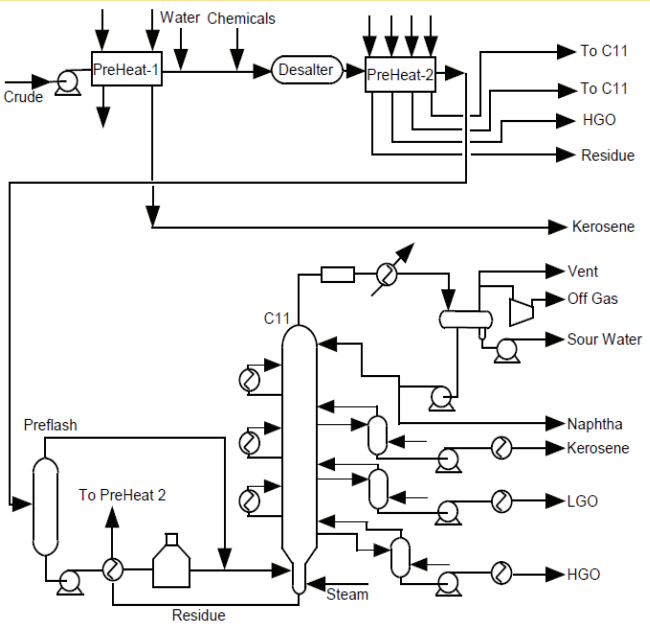
The Simulator allows a Trainee to Practice:

- Startup and Shutdown Operations
- Normal Operations
- Emergency Shutdown Operation
- Control Exercises
- Troubleshoot and practice recovery from Equipment, Instrument, and Control Valve Malfunctions



Major Equipment:

- Crude Desalter
- Crude Preheat Trains
- Pre-flasher
- Crude Heater
- Crude Tower
- Overhead Condenser & Cooler
- Overhead Accumulator
- Kerosene Stripper
- LGO Stripper
- HGO Stripper
- 3 Pumparounds



Key Operating Variables:

• Feed:	662 M3/H	(100.0 MBPD)
• Naphtha:	122 M3/H	(18.5 MBPD)
• Kerosene:	105 M3/H	(15.8 MBPD)
• Light Gas Oil:	98 M3/H	(14.8 MBPD)
• Heavy Gas Oil:	32 M3/H	(4.8 MBPD)
• Residue:	295 M3/H	(44.5 MBPD)

- Simulation comes with a Learning Management System (LMS) called SimAdmin that allows an instructor to register trainees and monitor their performance
- Simulation is available as Standalone (Single or Dual Monitor) and Instructor-Trainee versions

EnVision™ is a trademark of GSE Systems, Inc. All other trademarks are the property of their respective owners. The information in this literature is subject to change without notice and is not to be construed as a warranty.

GSE SOLUTIONS
Future of Power Operations

info@gses.com | www.gses.com