EnVision
e-Learning & Universal Simulation

# Compressor with Lube/Seal Oil

A self-paced MultiMedia based Tutorial/CBT and real-time dynamic simulation of a Compressor with Lube and Seal Oil System.

## Tutorial/CBT:

This interactive tutorial provides an Overview, Fundamental Principles, and Control and Operating Principles for a Centrifugal Compressor with Lube and Seal Oil System using Voice, Video, Animation and Graphics.

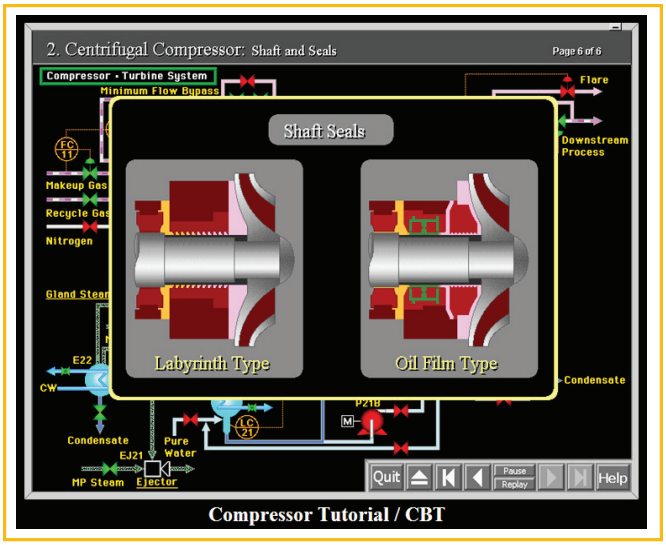
### Overview
- Application of Compressors
- Types of Compressors
  - Reciprocal
  - Rotary
  - Axial-Centrifugal

### Centrifugal Compressor System
- Compressor Casing, Impeller
- Shaft and Seals
- Lube Oil System
- Seal Oil System
- Driver: Steam Turbine

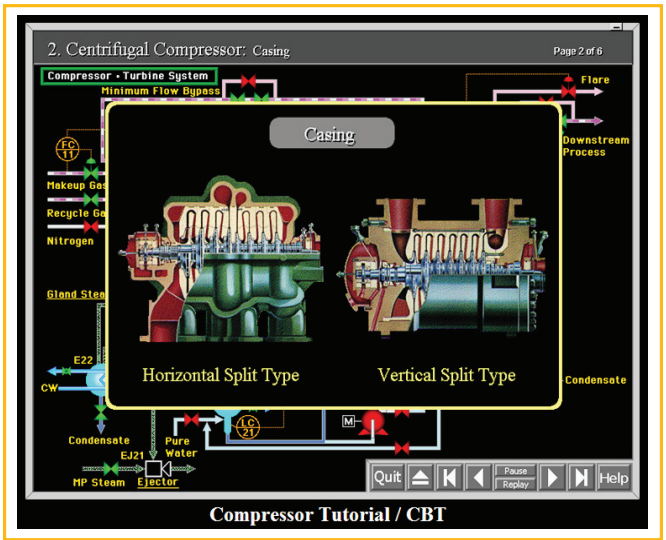
### Centrifugal Compressor Performance
- Compressor Performance Curves
- Surging
- Multi-Stage

### Centrifugal Compressor Operation
- Pre-Startup
- Startup Operation
- Shutdown Operations

### Troubleshooting
- Turbine Trip
- Gas Release
- Seal Oil Circulation
- Lube Oil Circulation



Compressor Tutorial / CBT



Compressor 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

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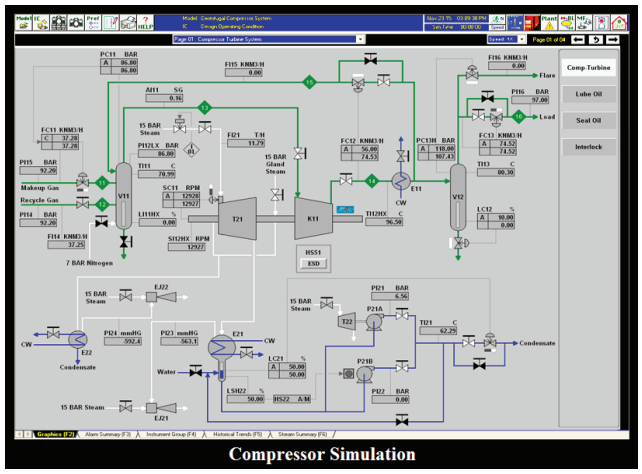
# Compressor with Lube/Seal Oil

## 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.

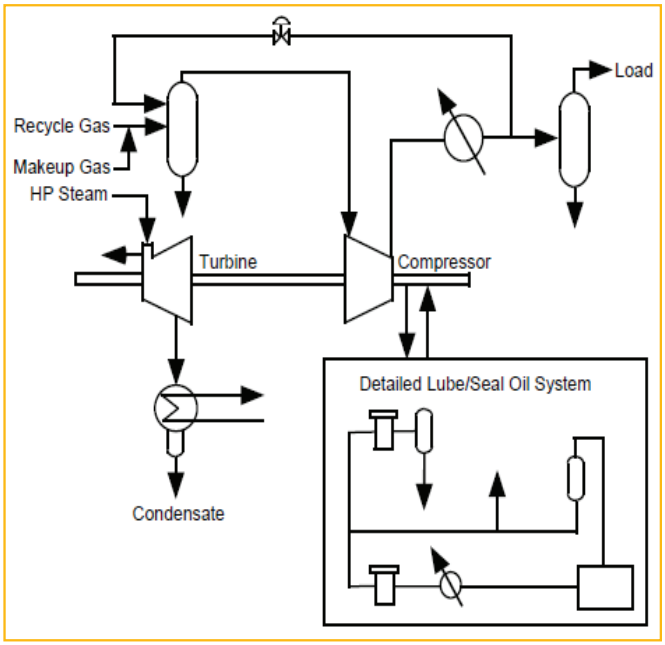
The Simulator allows a Trainee to Practice:

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


Compressor Simulation

### Major Equipment:

- Steam Turbine
- Centrifugal Compressor
- Surface and Gland Steam Condenser
- Suction & Discharge Drums
- Gas Cooler
- Lube Oil Tank
- Lube and Seal Oil Headers
- Lube Oil Coolers
- Lube and Seal Oil Filters
- Degassing Tank




### Key Operating Variables:

| | | | |
|---|---|---|---|
| • Feed Gas: | 74.5 | KNM3/H | ( 2630 MSCFH ) |
| • Gas Suction Pressure: | 86.8 | BAR | ( 1260 PSIG ) |
| • Gas Discharge Pressure: | 107.4 | BAR | ( 1560 PSIG ) |
| • Speed: | 12900 | RPM | |
| • Steam Flow: | 11.8 | T/H | ( 26.0 MLB/HR) |
| • Steam Inlet Pressure: | 15.0 | BAR | ( 220 PSIG ) |
| • Steam Inlet Temperature: | 230.0 | C | (446.0 F ) |

- 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

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