

Advanced Pump Maintenance

This five-day course is designed for plant personnel responsible for the maintenance and installation of positive displacement and centrifugal pumps. Hands-on exercises account for approximately 50% of this course, where concepts such as soft-foot, pipe strain, and alignment are emphasized. This course is ideal for maintenance personnel from apprentice level to journeyman.

I. Pump Design

- Standards
- Applications
- Classifications

II. Pump Operation and Theory

- Centrifugal Pumps
- Design Aspects
- Pump Laws
- Positive Displacement Pumps
- Pump Performance Comparisons
- Special Purpose Pumps
- Pump Characteristic Curves
- Performance Testing

III. Rotary Pump Troubleshooting and Maintenance

- Pump Performance
- Pump Tests
- Rotary Pump Problems
- Maintenance

IV. Reciprocating Pump Troubleshooting & Maintenance

- Steam Pumps
- Power Pumps
- Metering Pumps
- Piston Pumps

V. Centrifugal Pump Troubleshooting and Maintenance

- Centrifugal Pump Problems
- Troubleshooting
- Inspections

VI. Pump Alignment Methods

- Visual Line-Up
- Straight Edge and Feeler Gage
- Rim and Face
- Reverse Dial Indication
- Cross Dialing
- Laser Alignment

VII. Soft Foot Correction

- Definition
- Effects
- Types
- Measuring Soft Foot
- Correcting Soft Foot
- Tolerances

VIII. Alignment Calculation

- Mathematical Formula
- Graphical Solutions