

Mechanical Level II

This ten-day course is the second level of a fifteen-day training program designed to give plant technicians a greater depth of knowledge and skill in various mechanical equipment job functions. Major course topics include compressor maintenance, cranes and hoists, emergency diesels, pipes and pipefitting, pump maintenance, shaft alignment, static and dynamic sealing, and welding fundamentals.

I. Compressor Maintenance

- Air Compressors
- Compressor Air System Maintenance
- Maintenance of Compressed Air Systems
- Pneumatic System Troubleshooting

II. Cranes and Hoists

- Hydraulic Truck Cranes
- Mobile Floor Crane

III. Emergency Diesels

- Diesel Engines
- Fundamentals of the Diesel Cycle
- Diesel Engine Speed, Fuel Controls, and Protection
- Operation of Diesel Engines
- Diesel Engine Maintenance

IV. Pipefitting

- Piping Components
- Piping Materials
- Pipe Manufacturing Methods
- Pipe Insulation
- Pipe Hangers and Supports

V. Pump Maintenance

- Pump Classifications
- Pump Terminology
- Pump Operation
- Rotary Pumps
- Reciprocating Pumps
- Centrifugal Pumps

VI. Shaft Alignment

- Alignment Fundamentals
- Alignment Preparation
- Alignment Stages
- Precision Alignment

VII. Static and Dynamic Seals

- Operating Principles
- Sealing Basics
- Installation
- Maintenance

VIII. Welding Fundamentals

- Welding Safety
- Basic Welding Fundamentals
- Welding Processes
- Nondestructive Testing