

Precision Maintenance Training

Description: This course is designed to train Maintenance Personal, with a “Hands On” approach, to understanding precision maintenance. The purpose of this course is to present Modern Maintenance Tools to the participant. Infrared Spot Radiometers, Infrared Imaging, Precision Balancing, Vibration Analysis, Precision Alignment, Strobe Lights, Multi- Meters, Ultrasonic Listening devices as well as Belt and Chain Tensioning Gauges.

Course Length: Level I, Introduction to Precision Maintenance class is a 16 hour course. The Intermediate Level II course is a 32 hour course. The Level III, Precision Maintenance Specialist course is a Certification Course and is 64 hours in length.

Prerequisites: There are no Prerequisites for this course except for a willingness to learn. This class is recommended for those actively employed as Maintenance Personal.

Outline:

- Introduction to Machinery Measurements, Torque, Tension and Amperage
- Belt and Chain Alignment Techniques
- Proper Tensioning Procedures and Standards for Industrial Belts
- Installing and Properly Adjusting Chain Tension
- The Spot Radiometer as an inspection tool to enhance the Maintenance Process
- Strobe Lights as used as a Mechanical Inspection Tool
- Precision Alignment, the importance of Precision Machinery Alignment
- What is Soft Foot and how to test for it and correct it
- Vibration Analysis as an Inspection Tool for Precision Maintenance
- Determining the source or Root Cause of the Vibration
- Tracing the Path of a Vibration to correct a problem.
- Unbalance as a Machinery Running Problem
- Using Heat Thermography as a Machinery Inspection Tool
- Using Heat Thermography for Trending Equipment Failures
- Ultrasonic Analysis as a Precision Maintenance Tool
- The Importance of Record Keeping in developing a Precision Maintenance Program

Performance Objectives:

- Understanding how to improve Maintenance Inspections with the usage of the various Precision Maintenance Inspection Tools

- Demonstrate the knowledge of how to improve Maintenance Procedures through the use of Technology
- Correctly Demonstrate the ability to implement a Machinery Inspection Program
- Correctly Demonstrate Proper Chain and Belt Tensioning Procedures
- Understand how to Troubleshoot failures with the use of Ultrasonic listening devices
- Understanding the need to Correctly Torque and Tension Fasteners
- Demonstrate the proper usage of a Multi-Meter to Troubleshoot Working Amperages
- Understanding the importance of Record Keeping in regards to Machinery Maintenance Program