

## Introduction to Predictive Maintenance

The Introduction to Predictive Maintenance is a three-day seminar designed to give workers an introduction to the methods, procedures, and philosophies used in Predictive Maintenance. The student will be introduced to the various techniques used to predict and prevent failure of various types of industrial equipment found in the workplace.

### I. Establishing a Predictive Maintenance Program

- Program Organization
- Elements of Program
- Philosophy
- Personnel Requirements
- Budget Estimates

### II. Implementation and Operation

- Overview
- Plant Equipment Selection
- Task Selection
- Determining Predictive Method
- Task Frequency
- Procedures and Training
- Data Tracking
- Trend Analysis
- Diagnostic Analysis

### III. Insulation and Monitoring

- Theory
- Properties of Insulation
- Factors Affecting Insulation Resistance
- Measuring Insulation Resistance (and Interpretation)

### IV. Oil Analysis

- Properties of Lubricating Oils
- Analysis of Oil Samples

### V. Vibration Monitoring

- Terminology
- Sensors and Applications
- Vibration Monitoring vs. Analysis
- Vibration Severity
- Causes of Vibration

### VI. Thermography

- Heat Transfer Concepts
- Imaging Radio Meters
- Applications
- Accuracy
- Frequency

### VII. Non-Destructive Evaluation

- Liquid Penetrant
- Particle Inspection
- Eddy Current Testing
- Radiography
- Ultrasonics
- Comparing NDE Inspection Methods