



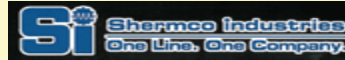
# “Motor Predictive Maintenance (PdM)”

OPEN TO OPMUG MEMBERS

**June 22-24th**

DEADLINE TO ENROLL IS May 22nd!

A great class offered by a partnership with the State of Oklahoma and Meridian Technology Center and OPMUG!



**Registration will be limited to the first 15 students that register!**

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 405-377-3333 x 251

## COURSE COSTS:

Oklahoma based company  
 Class: \$535

Non-Members  
 Class: \$655

**(it pays to be a member!)**



## Course Description:

Vibration and improper alignment are one of the leading causes of motor failures. Attendees will learn why vibration is damaging, how to measure, diagnose and correct vibration issues. Motor electrical testing is covered in detail, as well as bearing selection. Alignment considerations, alignment calculations, couplings and specifications are all covered in detail. Attendees will use a variety of field test and alignment equipment to ensure they can perform these critical functions on the job. Lecture sessions are alternated with hands-on lab sessions to optimize learning.

## Who Should Attend:

Designed for electricians, technicians, field engineers, supervisors and others with the responsibility of testing and maintaining motors. Preventive Maintenance (PM) is compared to Predictive Maintenance (PdM) and the benefits and drawbacks of each are discussed. Attendees will learn proper alignment techniques, how to determine the vibration severity, how much vibration is harmful and how to correct problems causing vibration, enhancing their productivity and eliminating damage to expensive motors and connected equipment.

Provides 16 Contact Hours! Certified CEU's  
 Through Shermco's Training program.



**Shermco Industries**

# Course Schedule/Outline

## I. Introduction

- A. Comparison of Predictive vs. Preventive
- B. Vibration – How Much is Too Much?
- C. Other Forces at 1x RPM
- D. Vibration Data Collection
- E. Exception Reporting

## II. Vibration Analysis

- A. Signature Analysis
- B. Anti-Friction Bearing Defects
- C. Lubrication Guidelines

## III. Enhancing Vibration Diagnosis

Running Soft Foot Checks

Stroboscopic Views  
Shaft Run Out  
Coupling Inspections

## IV. Plant-Specific Applications

- A. Visit Selected Equipment
- B. Lab on Lubrication While Monitoring Bearing Vibration
- C. Lab on Spectrum Analysis

## IV. Electric Motor Diagnosis

Visual Inspection & Cooling (Insulation Life)  
Ground Wall Insulation Test  
Surge Comparison Test (Turn-to-Turn)

- A. Current Signature Analysis (Rotor Bar Condition)
- B. Core Testing & Rewind
- C. Bearing Selection Considerations
- D. Electrical-Related Vibration (Soft Foot)

## VI. Pre-Alignment Considerations

Shaft Run Out  
Coupling Run Out  
Excessive Clearances  
Lift Check  
Soft Feet

## VII. Couplings & Specifications

- A. Gear, Lovejoy, Faulk
- B. Disk Pack
- C. Elastomeric

## VIII. Alignment Lab

- A. Selecting Alignment Equipment
- B. Set Up of Equipment
- C. Alignment Calculations
- D. Taking Measurements & Graphing
- E. Collecting Alignment Data
- F. Calculating Corrections
- G. Executing Alignment Moves
- H. Rechecking Alignment



Since 1974, Shermco has defined the standard for reliability in electrical services. Our independent status means one call takes care of every major brand of equipment you own. And our commitment to long-term customer relationships establishes the trust, economy and quality you expect from a turnkey electrical services provider.

### **\*\*Cancellation Policy\*\***

A training class can be cancelled when, less than 75% funded and is less than 30 days from the start of class (training). In this case there will be a 100% fee refund for registered participants. If a registered participant cancels less than 10 days before the start of class (training) they will forfeit 50% of the registration fee.