



## Towards Reliability for *Maintenance Supervisors*

A four-day Training Course presented in two Units:

Unit 1	Condition Monitoring for Supervisors
Unit 2	Precision Maintenance for Supervisors

This course is run either in-house or as a public seminar when there is sufficient demand. Enquire for dates for the public seminar.

The in-house course may be run as two 2-day units about one month apart (as for the public seminar) or as four 1-day sessions at intervals to suit the client – usually 2 to 4 weeks.

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### **Benefits to be gained from this Course**

- Understand the technical and operational aspects of establishing and supervising an effective integrated condition monitoring programme on your site, or in your area.
- Learn to understand and interpret condition monitoring data and reports to prioritise maintenance planning and reliability improvements. Be aware of what CM can do and cannot do.
- Be conversant with relevant Australian and International Standards for rotating machinery.
- Learn to apply condition monitoring data to Root Cause Failure Analysis studies.
- Understand how precision maintenance techniques can improve machinery reliability and reduce non-routine maintenance costs on your site.
- Learn to establish workshop standards and tolerances and incorporate these into a Workshop Quality Information System.
- Confidently supervise precision maintenance work.

## **Course Content**

### **UNIT 1: Condition Monitoring for Supervisors**

#### DAY 1

- Towards Reliability – Course Overview and Objectives
- Condition Monitoring in the Context of Reliability Improvement
- Measurable Parameters in Dynamic Systems
- The Technology of Vibration Measurement and Analysis
- Vibration Measurement Applied to Condition Monitoring
- Vibration Analysis for Fault Diagnosis
- Rolling Element Bearing Testing
- Workshop: Estimating Safe Remaining Bearing Life.

#### DAY 2

- Standards for Machinery Acceptance Testing and Balancing
- Vibration Isolation – Theory and Practice
- Using Thermography for Rotating Machinery Monitoring
- Performance Monitoring of Machines and Systems
- Oil Analysis: Making a Good Program Better
- NDT applied to Condition Monitoring
- Maintenance Planning based on CM Reports
- Workshop: Managing Condition Monitoring for Reliability Improvement.

### **UNIT 2: Precision Maintenance for Supervisors**

#### DAY 1

- Towards Reliability – Course Overview and Objectives
- The Justification for a Precision Maintenance Programme
- Creative Disassembly
- Machine Overhaul – Fits and Tolerances
- R/E Bearings – Handling, Storage and Installation
- R/E Bearings – Optimising Bearing Service Life
- Workshop: Methods to Improve Tolerances and Document Data



# INDUSTRIAL TRAINING ASSOCIATES

providing learning opportunities in precision maintenance

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## DAY 2

- Alignment for Engineers
- Developing a Workshop Quality Information System to ISO 9001-2000
- An Overview of Root Cause Failure Analysis
- Career Development for Maintenance Personnel
- Optimising the Benefits of Condition Monitoring
- Workshop: Priorities for Implementing a Precision Maintenance Culture