RMS Reliability Training Institute

Condition Monitoring Training:

IMAGES TO BE ADDED

Quick facts:

Condition monitoring has a very important role to play. In a day at your site we can provide an overview of vibration analysis, oil analysis, wear particle analysis, ultrasound, motor testing technologies and other technologies listed below. If you are have an in-house program or use consultants, this seminar will provide a great overview to everyone associated with maintenance and production.

Duration: 1 day

Course Description:

This seminar will introduce each of the condition monitoring technologies; describing how it works, the equipment it should be applied to, and the faults that can be detected

Who should attend?

Everyone involved with maintenance and production, from the shop floor to upper management will benefit from a better understanding of the condition monitoring principles and technologies.

What is unique about this course?

RMS makes it unique. We spent a lot of time, effort and money to generate modern slides, illustrations, 3D animations, and software simulators to make these topics very easy to understand, and to captivate you during the course. There is nothing surer; if you are bored or confused you won't learn a thing and you will have wasted your precious time. Our presentations and instructors are lively and animated, and you will understand, and remember, the topics we teach. You will go back to your plant feeling energized and prepared to take on all the challenges.

Topics:

Understanding maintenance philosophies

Predictive or condition-based maintenance

- The benefits
- Planned maintenance versus unplanned
- Is your plant ready for it?

Condition monitoring overview

- Overview of condition monitoring
- Is condition monitoring still necessary if you improve reliability?

Vibration analysis

- A quick review of the fundamentals
- The time waveform, spectrum analysis, overall level measurements
- How to collect vibration readings
- A quick introduction to diagnosing unbalance, misalignment, resonance, looseness, rolling element and journal bearing faults
- Implementing a simple program to get started
- Using portable analysers, on-line monitoring systems, and protection systems

Oil analysis

- What information can be revealed?
- What do the different tests mean?
- Contamination, oil cleanliness, particle counting, elemental analysis, and more

Wear particle analysis

- Why is it needed?
- Relating particle size, shape,
- and color to machinery components

Infrared analysis or thermography

- Understanding thermography
- Spot temperature and the flawed measurement techniques
- Infrared image analysis
- Being aware of emissivity and environment conditions
- Understanding resolution and focal length
- Applying thermography to mechanical and electrical systems

Ultrasound or acoustic emission

- How does it work?
- Applying ultrasound to mechanical and electrical systems

Electric motor testing

- A quick introduction to how vibration analysis and motor current analysis can detect faults in electric motors

Rolling element bearing testing

- A quick introduction to how ultrasound testing, vibration analysis, and oil analysis can be used to detect bearing faults

Performance monitoring

- Integrating performance monitoring into the condition monitoring program
- Incorporating plant inspections into the condition monitoring program

Condition monitoring technologies and ISO and ASNT standards

- Training and certification
- The importance of plant-wide training

An overview to running a successful program

- Selecting the appropriate technologies
- Why programs succeed
- Why programs fail

Case studies will be presented throughout the course that demonstrate the effectiveness of the technologies.