

Sigma Reliability Solutions - Dollars & \$ense Seminar Series: Created and Taught by Drew Troyer, CRE, CMRP

Data is the Difference Between Deciding and Guessing™

Machine condition monitoring is essential to managing plant maintenance because it enables corrective maintenance of equipment to be performed on-condition, thus minimizing unscheduled downtime, collateral equipment damage during a failure event and reducing health, safety and environmental risks. It also enables us to avoid the execution of irrational “hard time” replacement or rebuild of the assets on time, which has proven over the years to have a neutral - or in some cases even a negative effect on reliability due to early life failures association with flawed new parts and workmanship. Condition monitoring is also essential for improving the reliability of our assets by supporting proactive control of the primary root causes of machine failure – misalignment, unbalance, looseness and poor lubrication.

Who Should Attend and Why...

- Experienced reliability engineers and technologists - You’ve previously attended technical courses on vibration analysis, oil analysis thermography, etc. - you need this course to focus your technical knowledge to create value for your organization.
- New reliability engineers and technologists - Before pursuing your technical training in the various condition monitoring technologies, attend this course to get your bearings and develop vision for your career development.
- Maintenance planners and schedulers – Learn how to communicate with reliability engineers and technologists to use condition monitoring information to increase craft wrench-time, improve work quality and optimize work scheduling decisions.
- MRO inventory managers – Learn how to utilize condition monitoring information to rationalize inventory of consumption items, critical spares and insurance spares and work with planners to get inventory “just-in-time.”
- Maintenance managers - Utilize machine condition monitoring information to reduce your maintenance spend and be sure that every dollar that you do spend creates value for the organization.
- Operations managers – Learn how to combine machine condition and operating process information to optimize machine settings and operating procedures, optimize production runs, and rationalize product/package SKUs.
- Design engineers – Utilize machine condition monitoring information to design equipment that’s more reliable, maintainable, operable and flexible and offers the organization the lowest overall life-cycle cost of ownership.
- Corporate Managers – Replace your “cost center” mentality view of maintenance with a “value center” view of reliability, which is based upon the rational collection and analysis of data.

Turn Training into a Game Plan!

2-Day Machine Condition Monitoring

Price: \$7,000 for up to 25 Students.

Additional Students: \$130 each.

Courses can be customized to meet your needs.

Additional fees may apply.

Schedule Your Business Transforming Event Today!

Contact **Stacey McCauley** for Availability:

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In this two-day, power-packed seminar, you'll learn how to:

- Increase your firm's profit, return on net assets (RONA) and share price
- Achieve your Lean Manufacturing goals with machine condition monitoring
- Optimize and rationalize preventive maintenance with machine condition monitoring..
- Effectively increase your maintenance staff by 25%, 50% or more – without hiring a single person.
- Precisely control the proactive aspects of equipment reliability.
- Cut inventory – saving the 15-22% of value you're currently losing in carrying cost.
- Focus on value creation, instead of technology, by integrating condition monitoring activities to identify and troubleshoot specific failure modes and causes.
- Mine machine condition monitoring and equipment process control data to cut losses due to poor operation
- Buy from the equipment suppliers that truly deliver reliability.

Seminar Content:

Reliability and the Bottom Line

- How reliability management drives profit – comparing the leaders to the laggards.
- How reliability translates to maximized return on net assets (RONA) and share price.
- Machine condition monitoring and reliability = Lean business.

Reliability Engineering Basics

- Understanding time to failure and the failure risk profile
- The important role of data collection and analysis in reliability engineering

Machine Condition Monitoring in the Modern Maintenance Organization

- Condition-based Maintenance
 - Protective monitoring – last chance intervention.
 - Predictive monitoring – plan your work, and work your plan.
 - Proactive monitoring and control – keep it from breaking in the first place.
- Value-driven preventive maintenance rationalization.
- Maintenance work planning and scheduling – driving wrench time.
- Minimizing MRO stores with condition-based maintenance – optimizing consumption, critical spares and insurance spares inventory.

Building Reliability Into the Equipment and Process

- Data mining processes using condition monitoring and process data to refine operational settings and procedures.
- Driving equipment design and procurement decisions with equipment condition monitoring.
- Mining condition monitoring, process and profitability data to rationalize the product/package mix and production run-size decisions.

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Introduction to Condition monitoring Technologies for Protective, Predictive and Proactive Reliability Management

- Vibration analysis
- Oil analysis
- Thermgraphy
- Airborne ultrasonic analysis
- Motor analysis
- Sensory inspections
- Non-destructive testing (NDT)

Interactive workshop – Multi-technology Detection and Diagnosis of Common Failures

Executing Condition Monitoring for Dollars & \$ense and Achieving Cultural Change

- Why condition monitoring “programs” are often on again - off again
- The proposition – cost justification techniques for machine condition monitoring
- Understanding the social psychology of change and why people and organizations resist it
- Systems approach to creating lasting cultural change – a new business as usual

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