



December 7, 2004

Proactive Maintenance Management

Prerequisites:	Minimum 6 months industrial plant experience
Course Length	16 Hours
Certification Exam	20 questions, 1 hours time limit, closed book but a summary sheet of formulae is provided, passing score is 75% correct
Recommended Text	Chapter entitled "<i>Proactive Maintenance Management</i>" from <i>Applied Vibration Analysis</i> (Supplied by Pioneer Engineering)
Maximum # Students:	15

Course Objectives

Students who successfully complete this course will be able to:

- **Understand the current maintenance practices available, including a thorough understanding of the condition monitoring technologies**
- **Estimate the costs associated with implementing such programs, as well as expected savings**
- **Understand how spare parts selection, work control, and design change control can improve plant reliability**
- **Understand the basics of RCM and RCFA, and how to apply them in the plant**
- **Have a familiarity with the fundamentals, including terminology, of vibration signature analysis**



December 7, 2004

Syllabus and Seminar Schedule

Day One

8:00AM – 9:50AM	Evolution of Maintenance and Maintenance Strategies
<i>9:50AM – 10:10AM</i>	<i>Break</i>
10:10AM – 12:00PM	Condition Monitoring Fundamentals and Technologies (<i>Vibration, Oil Testing, Infrared, Motor Current Signature Analysis</i>)
<i>12:00PM – 1:00PM</i>	<i>Lunch</i>
1:00PM – 2:50PM	Program Economics (<i>Estimating program costs and justification techniques</i>)
<i>2:50PM – 3:10PM</i>	<i>Break</i>
3:10PM – 5:00PM	Introduction to Reliability Centered Maintenance (RCM) and Root Cause Failure Analysis (RCFA)

Day Two

8:00AM – 9:50AM	Spare Parts Optimization (<i>Choosing critical spares</i>)
<i>9:50AM – 10:10AM</i>	<i>Break</i>
10:10AM – 12:00PM	Work Control, Design Change Control (<i>Using repair and operations procedures, as well as purchasing and installation specs to improve reliability</i>)
<i>12:00PM – 1:00PM</i>	<i>Lunch</i>
1:00PM – 2:50PM	Fundamentals of Vibration Technology (<i>Frequency, amplitude, spectra, instruments</i>)



December 7, 2004

Day Two (continued)

2:50PM – 3:10PM

Break

3:10PM – 4:00PM

Review

4:00PM – 5:00PM

Certification Examination