



Optimizing Equipment & Facilities Maintenance



Introduction:

Not all of the plant facilities and equipment require high reliability; economically some components can be allowed to run to failure and a reasonable level of reliability is acceptable for other components. A cost effective maintenance program should therefore address the 'required' reliability only. Poor maintenance programs and activities often lead to lost production and spiraling upward costs resulting from escalating equipment unreliability. Conversely, an effective maintenance program can be the target of budget cuts since the benefits of the existing expenditures occasionally go unrecognized by those outside the maintenance organization. Ideally, therefore, a good maintenance program should provide the required reliability at minimum cost. Further, the validity of the program should be continuously acknowledged by management. This course will present the ingredients of an effective, cost efficient maintenance program together with continuous improvement aspects. It will also show not only how to validate the cost of the program but will also show how to justify to management any additional funding that may be necessary.

Who Should Attend?

Personnel involved in the maintenance of equipment and facilities including plant engineers, supervisors and managers; maintenance engineers, supervisors and managers; maintenance planners; property, facility managers who are responsible for ensuring that equipment and facilities operate in an economic and reliable fashion; consulting engineers; design engineers; industrial engineers; production and managers

Course Objectives:

By the end of this course delegates will be able to:

- Be familiar with the components of good maintenance practices that can produce the required reliability in the most cost effective manner
- Appreciate how an existing maintenance activities can be both improved and acceptable
- Understand the techniques and benefits for good, efficient maintenance planning
- Recognize the need for and interpretation of maintenance measures
- Become conversant with techniques for maintenance budgeting and effective reporting
- Gain an understanding of how to implement maintenance activities in line with your company's requirements

Course Outline:

Maintenance Philosophy and Strategy

- Overview of maintenance programs
- Definition of maintenance terms
- Roles and responsibilities
- Maintenance strategy
- Prioritizing maintenance work

Effective Maintenance Practices

- Regulations, Codes and Standards
- Preventive maintenance tasks and frequencies

- Maintenance procedures
- Maintenance spare parts
- Reviewing an existing preventive maintenance program
- Making the right economic decisions
- Management systems

Maintenance Staffing

- Shift scheduling
- Multi-skilling
- Total Productive Maintenance (TPM)
- Contracting out maintenance activities

Efficiently Applying Reliability Centered Maintenance

- Background
- Description of process
- Templates

Maintenance Planning and Scheduling

- Overview of planning and scheduling
- Preventive maintenance program planning, scheduling and time estimating
- Corrective maintenance planning, scheduling and time estimating
- Corrective maintenance planning tools
- Backlogs
- Emergencies
- Minor adjustments and repairs
- Unexpected outage opportunities
- What the planner/scheduler needs to know
- Long term maintenance requirements

General Maintenance Information

- Equipment lockout/tagout
- Lubrication
- Material degradation
 - Non-Destructive Examination (NDE)
 - Vibration monitoring
 - Acoustic monitoring
 - Equipment condition instrumentation

Monitoring and Reporting Maintenance Activities

- Useful measures
- Benchmarking
- Maintenance auditing
- Reporting
- Budgeting

Effectively Managing Maintenance Work

- Limits for corrective maintenance and acceptability
- Documentation
- Historical records and analysis