Reliability Centered Maintenance for Rotating Equipment: Optimization & Continuous Improvement

TR146

Course Overview:

-The participant will understand the history, the benefits, and the fundamentals of RCM and how it applies to day-to-day operations. Successful completion of this course will foster the students understanding of RCM concepts and processes and enable participation in a RCM analysis.

-We'll provide a new perspective on troubleshooting mechanical and rotating equipment. Rather than teaching about "equipment specific" situations. We'll teach you how to troubleshoot based on the common components that make up a piece of specified equipment. You will learn about basic mechanical applications, failures, life expectancy and maintenance of shafts, bearings, couplings, chains, sprockets, bushings, gears, belts, sheaves and other mechanical components, what data to measure, track and trend, so that when equipment fails you can get quick answers to what is wrong.

Course Objective:

-The seminar covers the fundamental technology of rotating and reciprocating machines, in terms of how they work and how they fail. It addresses wear and fatigue related failure mechanisms, and the role of lubrication. The interaction of the machine with the process is discussed, and the need for maintenance and condition monitoring personnel to work more closely together is demonstrated. The seminar provides participants with the knowledge that they will need to inspect and maintain machinery, and to make informed decisions about the condition of plant. The seminar includes an introduction to condition based maintenance and condition monitoring, and in this respect it aims to dispel rumors and demonstrate capabilities.

-The aim of this training is to provide participants the necessary knowledge of the maintenance strategy review reliability centered maintenance methodology.

Course Outline:

-Introduction
-The Technology of Machine
-Centrifugal Pump Principles
-Positive Displacement Pump Principles
-Centrifugal Compressor Principles
-Machinery maintenance requirements
-Typical trouble
-Machinery troubleshooting, Operation
-Reliability Optimization
-Lubrication, Bearings, Couplings & Alignment, Sealing Devices, Rotors & Shafts
-Wear induced failures
-Maintenance strategies (corrective, preventive & predictive)
-The role of vibration monitoring
-The role of lubrication monitoring

Training Language:

Eng

Training Methodology:

-Presentation & Slides
-Audio Visual Aids
-Interactive Discussion
-Participatory Exercise
-Action Learning
-Class Activities
-Case Studies
-Workshops
-Simulation

-Structured problem solving sequence

-Evolution of Maintenanace

-Reliability centered maintenance introduction

-Introduction to Maintenance

-RCM Process

-Select the equipment to be analyzed

-Identify the functions

-Identify the functional failures

-Identify and evaluate (categorize) the effects of failure

-Identify the causes of failure (failure modes)

-Select maintenance tasks

Who Should Attend:

This seminar is intended for maintenance engineers, supervisory and technical staffs working in maintenance related roles, which need either a greater awareness of, or to get more involved in, preventive maintenance activities and the troubleshooting of rotating and reciprocating machines. Because the methods and examples are generic, personnel from all industries will benefit.

-Maintenance, Plant/Facility Engineering Staff

-Rotating Equipment Engineers

-Maintenance Supervisors

-Managers at Industrial Plants

-Reliability Engineers and Those Interested In Rotating Equipment Performance