

Introduction to Condition Monitoring



Institute

Course Horizon

Condition Monitoring describes various techniques used in surveillance, testing and analysis of assembly, plant and equipment with a mutual goal to detect any signs of malfunction or deterioration and any developing wear.

Industrial operations worldwide agree the significance of condition monitoring in implementing a successful maintenance strategy. It is a valuable tool in reliability defect elimination program. Due to current business competitiveness, condition monitoring is a major component of predictive maintenance and enables optimisation of resources.

On the other hand, Industry 4.0 has brought tremendous transformation in digital space, plant maintenance has been a partaker of advanced machine data gathering and analysis capabilities, enabling flexible and swift decision making. This has brought a need to empower maintenance teams.

This course introduces participants to various techniques used in condition monitoring together with benefits and opportunities of condition-based maintenance. Participants will learn about some of the digital tools being brought by Maintenance 4.0.

Who will benefit?

- Production and Operations Managers
- Asset and Maintenance Managers
- Reliability Engineers
- Maintenance and Production Engineers
- Supervisors
- Planners
- Engineering Technicians

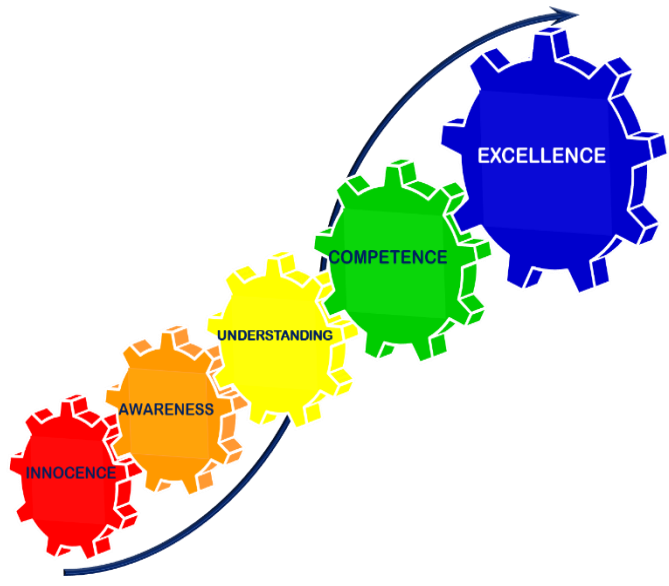
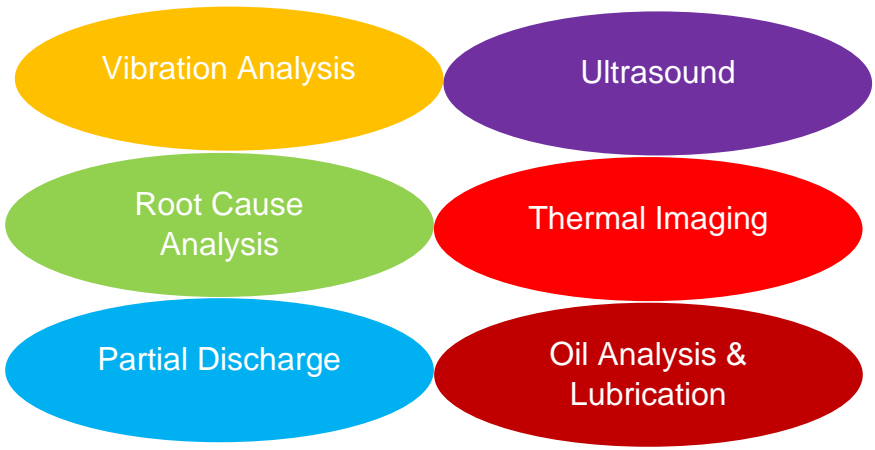
Delivery Platform

- Public Training – available at in all cities and towns
- Onsite Training
- Virtual Instructor-Led Training
- E-Learning
- Customized Training

Training Duration

- Delivery – 2 days

Integrated Condition Monitoring Techniques



REALISE YOUR POTENTIAL

Learning Objectives

By the end of this course, participants should be able to:

- Demonstrate a clear understanding of various techniques used in condition monitoring
- Appreciate and define the benefits of condition monitoring
- Identify the various maintenance strategies used in condition monitoring and determine the factors, which influence maintenance strategies
- Determine the optimum maintenance strategy for different types of plant and equipment
- Appreciate Industry 4.0 condition monitoring technologies
- Gain an in-depth understanding on machinery vibrations: recognize phase and vibration measurement

Course Content

- Developing a maintenance strategy
- Managing Condition Based Maintenance
- Infrared Thermography
- Oil Analysis and Lubricant Management
- Wear debris and mechanical wear analysis
- Vibration Analysis
- Ultrasound / Acoustic Monitoring
- Precision Alignment
- Electrical Signature Analysis
- Partial Discharge
- Remote Condition Monitoring (IIOT)
- Root Cause Analysis

Main Elements

Delivery

- The 2-day session equips participants with both knowledge and skills
- Self-assessment quizzes and interactive group discussions on each learning area foster great understanding
- Interactive group sessions and illustrative videos will be delivered to enhance content comprehension