



# Centre For Industrial Solutions and Advanced Training

A Global HR and Industrial Solutions Provider Company

An ISO 9001:2015 Certified

T No: 27ABBPW5589J1ZV; www.cisat.co.in; cisat.nagpur@gmail.com; Contact: +91-7709012815

Communication Address: S-206, Saraswati Apartment, Opp Nisarga Lawn, Friends Colony, Katol Road, Aakar nagar Road, Nagpur-440013, MH

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THREE DAY`S WORKSHOP ON

## **WORLD BEST MAINTENANCE STRATEGIES, PRACTICES, EFFECTIVE PREDICTIVE, PREVENTIVE AND CONDITION BASED MAINTENANCE TECHNIQUES- PROACTIVE MAINTENANCE APPROACH**

*11-13 FEB 2020 AT MUMBAI*

### **Description:**

A practical “**How-to-Do-it Guide**” for implementing, measuring results and successfully applying today’ s best practices for Preventive (PM) and Predictive Maintenance (PDM), covering essential maintenance operations that range from equipment selection and maintenance interval planning to condition-based monitoring techniques and lifecycle costing.

### **WHY ATTEND THIS WORKSHOP?**

Maintenance’ s key objective is to increase uptime without over-doing maintenance and the challenge lies in how to determine the right mix of Preventive Maintenance and Predictive Maintenance. Many organizations are also facing key decisions on whether to repair or to replace aging physical assets. By utilizing life cycle costing and value engineering concepts, companies can fully capitalize on existing assets and save on unnecessary expenses.

This 3-day intensive Master-class “**World Best strategies and maintenance practices, Effective Preventive, Predictive & Condition-Based Maintenance**” is a practical “How-to-Do-it Guide” for implementing, measuring results and successfully applying today’ s best practices for Preventive (PM) and Predictive Maintenance (PdM), covering essential maintenance operations that range from equipment selection and maintenance interval planning to condition- based monitoring techniques and lifecycle costing. In addition, delegates will be introduced to strategies that will enhance and improve PM & PdM – Reliability-Centred Maintenance (RCM), Total Productive Maintenance (TPM), and Risk-Based Maintenance (RBM).

### **Course Objective**

- Assess your present Preventive (PM) & Predictive Maintenance (PdM) needs and improve current performance
- Apply Reliability-Centered Maintenance (RCM) & Total Productive Maintenance (TPM) principles to your maintenance strategy for PM and PdM.
- Define your critical asset repair or replacement problems via life cycle costing.



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- Develop the optimum strategic maintenance program for your physical assets.
- Communicate and obtain management buy-in for maintenance programs by justifying with costs versus benefits.
- Develop a phased installation or improvement plan for successful implementation
- Measure and validate your resulting benefits by benchmarking against best practices

## Learning outcome: EXCLUSIVE TAKE-AWAYS

- The Scorecard for Maintenance Excellence
- Helps you define where you are with your current maintenance practices against best practice categories and over 100+ best practice items. It is today's most comprehensive benchmarking tool
- The Computerized Maintenance Management System Benchmarking System
- Allows you to rank your current CMMS installation, identify specific improvement needs, and continuously monitor results after the course
- The Reliable Maintenance Excellence Index
- Provides complete procedures to develop your own world-class methodology to measure maintenance performance including the benefits from PM, PdM, RCM and other best practices

## Our Training Quality

### Limited Attendees

The course has limited seats to ensure maximum learning and experience for all delegates.

### Certificate of Attendance

You will receive a Certificate of Attendance bearing the signatures of the Trainer upon successful completion of the course. This certificate is proof of your continuing professional development. Interactive Training You will be attending training designed to share both the latest knowledge and practical experience through interactive sessions. This will provide you with a deeper and more long-term understanding of your current issues.



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## High Quality Course Materials

Printed course manual will provide you with working materials throughout the course and will be an invaluable source of reference for you and your colleagues afterward. You can follow course progress on your laptop with soft copies provided.

## Who should attend?

VPs, Directors, Division Heads, Managers, Superintendents, Specialists, Leaders, Supervisors, Foremen, Planners, Technicians, & Engineers from the following departments:

- Maintenance & Engineering
- Shutdown & Turnaround
- Reliability
- Preventative & Predictive Maintenance
- Condition Monitoring
- Rotating & Static
- Mechanical
- Facility Management
- Plant
- Production
- Process
- Inspection
- Asset Integrity
- Asset Management
- Operations



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## Contents and Delivery schedule:

### DAY 1: Identify The Problem

#### 1.1 Introduction

- Participants Review Top 5 Areas for Improvement
- Today' s Maintenance Challenge
- Maintenance Around the World
- Proactive vs Reactive Maintenance
- How to Ensure Other Best Practices are in Place
- Developing Your Maintenance Excellence Strategy

#### CASE STUDIES

Related to Audience Industries

#### ACTIVITIES

Using The Scoreboard for Maintenance Excellence to Define "Where You Are Now"

#### 1.2 The Maintenance and Equipment Audit:

##### Key

##### Step Before Starting PM/PdM

- Differentiating between Maintainability, Reliability, Availability
- Key Drivers in making Equipment Selection Decisions
- How to determine your current craft labor productivity
- Establish your current equipment condition and equipment performance (baseline)
- Determine the need for PM/PdM and Condition Based Maintenance

#### 1.3 Determining the Right Maintenance Strategy

##### for Your Type Maintenance Operation

- An Overview of Reliability-Centred Maintenance (RCM)
- Key Elements of Value Engineering
- Lifecycle Costing – Optimizing Repair/ Replacement Decisions
- Different types of maintenance strategies and tasks:
- Preventive Maintenance
- Predictive Maintenance and Continuous

##### Monitoring

- Overhaul/Rebuild
- Remove and Replace
- Run to Failure
- PM organization and staffing

#### CASE STUDIES

Reliability-Centred Maintenance

#### 1.4 PM Techniques Supported By the Operators

- Strategies for Total Productive Maintenance (TPM)
- Involve Operators in Basic PM Tasks
- How to determine PM requirements for your equipment operators
- Equipment cleaning and lubrication
- Equipment inspections, adjustments and servicing

#### CASE STUDIES

Asset Management / RCM / FMEA /TPM Implementation

## CONCLUTIONS

- Summary of the Day 2 purpose, objectives, and organization
- Review of participants' objectives

Web: [www.cisat.co.in](http://www.cisat.co.in); Email: [vikas@cisat.co.in](mailto:vikas@cisat.co.in); Contact: +91- 7709012815 (Branches: Thane/Pune/Nagpur/Bhilai/Wardha)

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- Questions and answers
- Workshop evaluation

## DAY 2:

### Solve The Problem

### 1.5 How to Develop and Install a Good PM System

- The 6-step PM installation program
- Phase I Management Awareness
- Phase II Management Commitment
- Phase III Pilot Program Design
- Phase IV Evaluate Pilot Program
- Phase V Expand and Operate the Total Program
- Phase VI Continuous Improvement and Evaluation of Total Program
- Keeping an effective and useful equipment history

### CASE STUDIES

- PM work orders/PM checklists/PM reports
- Review Delegate Examples

### CONCLUSION

- Team Presentations and Closing Remarks
- Summary of the Day 2 purpose, objectives, and organization
- Review of participants' objectives
- Questions and answers
- Workshop evaluation

### 1.6 How to Plan and Schedule PM and Measure Results

- Determining PM intervals and frequencies
- What is the best method to schedule PM
- Time-based or usage-based scheduling
- How to measure PM effectiveness and results
- Measuring and analyzing downtime and downtime trends

### ACTIVITIES

Using the Reliable Maintenance Excellence Index

### 1.7 Predictive Maintenance Techniques, Applications, and Instrumentation

- Predicting potential equipment breakdowns and expensive repairs
- The Mechanical Elements of PdM
- The Electrical Elements of PdM

### CASE STUDIES

Examples of Continuous Monitoring Systems with Multiple PdM Being Used

### 1.8 Specific PdM Techniques and Applications

- Overview of PdM Technologies Now Available
- Vibration analysis/monitoring
- Shock pulse method
- Spectrographic oil analysis
- Ferrographic particle analysis
- Thermography/temperature measurement
- Non-destructive testing (NDT)
- Ultrasonic testing, and many more



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## Registration Details:

**Dates of the program:** *11-13 FEB 2020 AT MUMBAI* (3 Days).

**Participation fees (Nonresidential Programme):** INR 34500/- per delegate (Excluding GST@18%; Training program includes training material soft/hard copies, Tea, Lunch & snacks)

**Payment:** ECS/NEFT/DD in favor of "Centre for Industrial Solutions and Advanced Training"  
Payable at Nagpur, Maharashtra, India. Account No: 0509102000003353 Bank: IDBI, Wardha-442001, MS, India; IFSC Code: IBKL0000509; Swift Code IBKLINBBNGP; MICR Code 442259001.  
(GST Code: 27ABBPW5589J1ZV; SAC Code 99-9293; State Code 27; PAN No: ABBPW5589J)

**Venue:** Mumbai.

**For Registration please do contact to,**

We prefer on line Registration through our web [www.cisat.co.in](http://www.cisat.co.in). or email cisat.nagpur@gmail.com; or call Vikas +91-8669546332; 7709012815; vikas@cisat.co.in;

## Contact for any In-house Training Program at your plant or location.

With Best Regards and Thanks,

**Vikas S. Wadnerkar** (Contact:+91-7709012815 )

ME (Electrical Engg), BE (Power Electronics), PGDHRM  
PE (IE India- 700116-4), IOSH (UK) Certified, OHSAS 18001

Head Technical Consultant and Expert Training

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*"A Complete Training Solution (Outsourcing) under One roof"*

(Technical- Electrical/Mechanical/Automation/Chemical, Behavioral, Soft Skill, Safety, Out Bound training, Business Excellence, Safety Audit, Energy Audit, Skill Gap

Analysis/Automation Solution/Sales & Service; PLC/Drives, Productivity and Time and motion study, Improvement Projects, TPM, 5S and Six Sigma Implementation, Technicians Training)

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