TWO DAYS WORKSHOP ON

"MAINTENANCE 4.0 AN ADVANCE STRATEGY FOR IMPLEMENTATION"

(2-3 May 2019 at Udaipur, Rajasthan)

Description

A practical "**How-to-Do-it Guide**" for implementing, measuring results and successfully applying today's best practices for Introducing Maintenance 4.0 and details Predictive Maintenance (PDM), covering essential maintenance operations that range from equipment selection and maintenance interval planning to condition-based monitoring techniques and lifecycle costing; same time utilising the digital technology in the organisation. Elaborating the Maintenance maturity and measuring the Gap in your organization.

Elaborating up to date information first hand from representatives from industry and research. Exchange ideas and experiences about maintenance with international participants and speakers. Experience best practice examples directly from industrial practice. Learn about and assess new technologies and developments in maintenance at the "Maintenance - Predictive Analytics for Intelligent Asset Management" conference. The focus is on data analytics, predictive maintenance, maintenance strategies and service models. Take the opportunity to exchange ideas and experiences with other experts and to network. Several best practice examples make this a practically oriented event.

WHY ATTEND THIS WORKSHOP?

Maintenance in the age of digitization – a competitive advantage rather than a cost factor
Maintenance was long considered an inconvenient cost factor in many companies. But new technologies and developments now enable companies to secure substantial competitive advantages. The "Maintenance" conference gives you an overview of these developments and offers you a platform to exchange ideas and experiences with other experts. For example, learn about how to analyze and use maintenance data in a targeted way. Further themes of the conference include:

• Predictive Maintenance • Industrial IOT/IOP • Application of Augmented Reality for training • Asset Management • Maintenance 4.0 Strategy • Smart Maintenance Supply Chain • Motor Systems 4.0 • Reliability Engineering • Asset Data, Condition & Performance Management	IIoT & the Internet of Condition Monitoring • Big Data & Predictive Analytics in Maintenance • Smart Maintenance Services • Leadership & Reliability Culture 4.0 • Reliability and Performance Talks • Fundamental Maintenance Insights • Smart Tools, Drones & Robotics for Inspection and Maintenance • Work Execution Management • Health & Safety in Maintenance • Managing Risks Associated with Operating Assets • Asset Management & ISO55000

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.

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
- 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

- **Future of the Machines**

Predictive maintenance expands conventional condition monitoring approaches by looking into the "future of the machine", thereby offering new options for increasing efficiency and for reducing the total cost of ownership (TCO).by taking a big step forward in the direction of digitalized production and machine monitoring for the future.

- **The Scorecard for world class Maintenance Excellence with updated digital developments**

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 specifc 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.

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, CTOs, Chief digital officers, Supervisors, Foremen, Planners, Technicians, & Engineers from all departments responsible for productivity improvement and plant efficiency.

Contents Delivery Schedule Maintenance 4.0	
DAY 1: Identify The Problem	**DAY 2: Solve The Problem**
1.1 Introduction Participants Review Top 5 Areas for Improvement Historical developments of Maintenance till today and focus on growing tomorrow's need 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"	1.5 How to Develop and Install a Good PM System Ñ The 6-step PM installation program AI for Predictive Maintenance - Beyond the Hype • History of AI and Predictive Maintenance (PM) • Examples of real world PM use cases • State of the art AI methods • Best practices and pitfalls Ñ Keeping an effective and useful equipment history CASE STUDIES - PM work orders/PM checklists/PM reports - Review Delegate Examples
1.2 The Maintenance and Equipment Audit: Key Step Before Starting PM/PdM Differentiating between Maintainability, Reliability, vailability Industry X.0 – The Digital Re-Invention of Industry Digital disruption of industry: Challenges and opportunities From Industry 1.0 to Industry X.0 – The digital re-invention of industry How to measure Industry X.0 maturity Gap Analysis Innovation in Industrial Internet of People (IoP) IoP solutions for maintenance virtual digital twinning Establish your current equipment condition and equipment performance (baseline) Determine the need for PM/PdM and Condition Based Maintenance	1.6 How to Plan and Schedule PM and Measure Results Ñ Determining PM intervals and frequencies Ñ What is the best method to schedule PM Ñ Time-based or usage-based scheduling, measure PM effectiveness and results • Applications of new Technologies in Maintenance • Remote Monitoring Service as a Key for Availability of industrial Powertrains • Vibration monitoring of powertrain components • Remote monitoring ACTIVITIES Using the Reliable Maintenance Excellence Index

1.3 Determining the Right Maintenance Strategy for Your Type Maintenance Operation Introducing Gap analysis exerciseAn Overview of Reliability-Centred Maintenance (RCM) Ñ Key Elements of Value Engineering Ñ Lifecycle Costing – Optimizing Repair/ Replacement Decisions Ñ Different types of maintenance strategies and tasks: ¤ Preventive Maintenance ¤ Predictive Maintenance and Continuous Monitoring - Boost your Business with Predictive Analytics• Importance of feature engineering for the development of Predictive Maintenance solutions • Key-success factor: Combination of data science and domain knowledge• Life cycle management of analytics models with AI • Open source platform and vendor independent architectures CASE STUDIES Reliability-Centred Maintenance / Maintenance 4.0	1.7 Predictive Maintenance Techniques, Applications, and Instrumentation A. Predicting potential equipment breakdowns and expensive repairs B. The Mechanical Elements of PdM C. The Electrical Elements of PdM CASE STUDIES Examples of Continuous Monitoring Systems with Multiple PdM Being Used
1.4 PM Techniques Supported By the Operators A. Strategies for Total Productive Maintenance (TPM) B. Involve Operators in Basic PM Tasks C. How to determine PM requirements/ digital implementation for your equipment & train operators D. Equipment inspections, adjustments and servicing CASE STUDIES Asset Management / RCM / FMEA /TPM Implementation	1.8 Specific PdM Techniques and Applications ▪ Overview of PdM Technologies Now Available ▪ Vibration analysis/monitoring, shock pulse method Non-destructive testing (NDT) Intelligent Digital Services • Exemplary application: Intelligent Service Initiative • From Customer to OEM: Digitalizing the service communication process • Intelligent service reporting & Big Data Analytics Digitalization of Maintenance requires organizational Change - What are the Challenges, Opportunities and Approaches? Operational Excellence

Registration:

Dates of the program: **2-3 May 2019 at Udaipur, Rajasthan**.

Participation fees: **Rs. 24000/- per delegate** (Excluding GST@18%; Training program includes training material hard copies, Tea, Lunch & snack, excluding lodging and Boarding)

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.

***Venue:* Udaipur (Exact Location to be informed a week before the commencement of Course)**

For Registration,

1. ***We prefer on line Registration through our web* www.cisat.co.in.**
2. **In other case do send confirmation via email to Vikas** 00-91-7709012815; vikas@cisat.co.in; cisat.nagpur@gmail.com; or you can do call Vikas +91-7709012815 or 8669546332

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TERMS & CONDITIONS FOR Workshop:

- All training courses will require a minimum of 6 participants.
- In the event of cancellation of a course, we will endeavor to inform all candidates a week before the course is due to take place. In such case all course fees paid will be reimbursed in full or the payment will be transferred in full to another course.
- CISAT shall not accept liability for any consequential loss and shall have no liability to reimburse any other costs that may have been incurred, including transport costs, accommodation etc.
- Special arrangements can be made for group bookings.
- Certificate of participation will be issued when payment has been received in full.

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

- HR Solutions and complete professional Training (HR/Soft Skill/Technical-Electrical/Mechanical/Automation /Process/Certification/Out Bound/Safety/Manufacturing excellence- TPM, TQM, 5S, Six Sigma etc)
- Course Content and presentations development – Customized to your company requirement.
- E-learning Development, Virtual Learning
- Online LMS or HR Automation system- Automated
- Employee Certification, skill or competency mapping and testing, Mentoring etc. From workers to Management level employees