



2 Day's Training program on **Pumps, Air Compressors and Industrial Plant Machinery** Operation, Maintenance and Condition monitoring (19-20 March at Kolkata)

Training Program Objective and Description:

The objective of this program is to provide the participants with latest operation & maintenance strategy for Pump, Compressor & Plant machinery. Maintenance time can be reduced by adopting new techniques and methods including some Predictive maintenance techniques and condition monitoring tools. Knowing in and out will do help in understanding and predicting faults. It will also help in planning O&M activities.

Learning Outcomes:

Identification of the condition of the Pump, Compressor & Plant machinery (plant equipment), Reduction of breakdown time, predictive maintenance implementation, extending the life of the equipment's, improving the whole plant efficiency.

Who Should Attend?

Practicing engineers of all levels, GETs & DETs with Electrical, Electronics, Instrumentation, Mechanical, Production background.

Program Contents:

Module 1:

Pumps - Operation and Maintenance:

- ❖ Pumps - Principles And Characteristics
- ❖ Pump Details and Materials
- ❖ Selection of Pumps
- ❖ Routine Maintenance of centrifugal Pumps
- ❖ Pumps - Operation , Maintenance and Trouble Shooting
- ❖ Energy Saving in Centrifugal Pumps
- ❖ Pump shaft Couplings – Types and Method of Alignment

Module 2:

- ❖ Type of Lubricants & Selection of Lubricant
- ❖ Handling, Storage and Application of lubricants
- ❖ Bearing Lubrication & Method of Applying Lubricants.

Module 3: Bearings- Types, Selection & its fitting and Failure Analysis
Antifriction Bearings- Types



Centre For Industrial Solutions and Advanced Training

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(Technical- Electrical/Mechanical/Automation/Chemical, Behavioral & Soft Skill, Safety, Business Excellence, Safety & Energy Audit)

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Care in Bearings fitting and dismounting
Bearing Failure Analysis

Module 4: Gears & Gear Boxes

- ❖ Type of Gears
- ❖ Gear Teeth Construction Details
- ❖ Gears Failure

Module 5: Air compressors & Blowers –Operation and Maintenance

- ❖ Selection and Application of Air Compressors
Reciprocating Air Compressor
Screw Compressors
- ❖ Centrifugal Air Compressor; Overview of API 610 and API 674

Module 6: Air Compressors

- ❖ Maintenance of Air Compressors
- ❖ Compressed Air System and Compressor Efficiency
Air Dryers
Energy Conservation and How to save energy?
- ❖ Review and Feed back
- ❖ Final Quiz, Assessment, Feedback,

Prerequisite:

Basic knowledge of Mechanical Engineering and experience in maintenance will be helpful.

Delivery Methodology:

- Introduction and Objective Setting
- Pre and Post Test,
- Knowledge Presentations,
- Assignments & Exercise,
- Case Study & Learning through Animations.
- Feedback and Assessment
- Discussion and Interaction.
- Delivery 9:30 AM to 17:00 PM including lunch/Tea breaks.

About CISAT: Centre For Industrial Solution and Advanced Training is an ISO 9001:2015 certified Training Provider Company managed by professionals with rich Industry and teaching experience. Company involves in professional trainings and been providing training on various topics of Industry interest through various experts associated. More details are available on www.cisat.co.in.

Trainer: Trainers have Industrial work experience of more than 30+ Years.



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Registration Details:

Dates of the program: 19-20 March at Kolkata (2 Days).

Participation fees: INR 20000/- 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 IBKLINBB007; MICR Code 442259001. (GST Code:27ABBPW5589J1ZV; SAC Code 99-9293; State Code 27; PAN No: ABBPW5589J)

Venue: At CISAT, Pratapnagar Square, Nagpur, MH.

For Registration please do contact to,

We prefer on line Registration through our web www.cisat.co.in.

1. Vikas +91-8669546332; 7709012815; vikas@cisat.co.in; cisat.nagpur@gmail.com; rupali@cisat.co.in.

TERMS & CONDITIONS FOR Workshop:

1. All training courses will require a minimum of 6 participants.
2. 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.
3. 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.
4. Special arrangements can be made for group bookings.
5. 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.



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- 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

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Web: www.cisat.co.in; Email: cisat.nagpur@gmail.com ; Contact: +91- 7709012815; 8669546332