



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

**Centre For Industrial Solution and Advanced Training**

**AN ISO 9001:2015 CERTIFIED**

**“A complete Training Solution Under One roof”**

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## **2 Day` s Training program on Pumps, Air Compressors and Industrial Plant Machinery Operation, Maintenance and Condition monitoring (21-22 Jan 2019@ Nagpur)**

### **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

**Branch Office:** A-306 Creative Home Apartment, Anupam Society, Katol Road, Friends Colony Nagpur-440013, MS, India.

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

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## 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, 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, Final Quiz, Assessment & Feed back

### Prerequisite:

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

### Delivery Methodology:

- Introduction and Objective Setting
- Pre and Post Test,



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- 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.

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**Trainer`s:** Trainers have Industrial work experience of more than 30 Years.

### Registration Details:

**Dates of the program:** 21-22 Jan 2019@ Nagpur (2 Days).

**Participation fees:** INR 20000/- per delegate (Excluding GST@18%; Training program includes training material hard copies, Tea, Lunch & snack)

**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:** Nagpur.

### For Registration please do contact to,

We prefer on line Registration through our web [www.cisat.co.in](http://www.cisat.co.in).

1. Vikas +91-8669546332; 7709012815; vikas@cisat.co.in; cisat.nagpur@gmail.com;
2. Mahendra Dhande 09168326662,

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

### Centre For Industrial Solution and Advanced Training

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