



Centre for Industrial Solution and Advanced Training

# TRAINING PROGRAM ON TESTING OF ELECTRICAL EQUIPMENT'S, ADVANCED TESTING METHODS & CBM

28-29th April 2016, Pune, India





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## **2 Days Training Program on Fundamentals and Testing of Electrical Equipment`s, Advanced testing Method and CBM**

As per standards & specifications 28-29 April 2016, Pune

### **Course Objective:**

The participants will learn about various diagnostic Testing methods like: Offline & Online testing and monitoring techniques, high level test like Motor Current and Torque Signature, Acoustic Emission, Surge Testing (IEEE522), Tan Delta & Capacitance Measurement, Partial Discharge Measurement, Dielectric Response Analysis. The latest VLF (Very Low Frequency) HIPOT will be discussed in comparison to DC HIPOT and AC HIPOT Testing as per IEEE 433.

### **Course Content:**

#### **Introduction to Substation: Design, Specifications and Standards**

##### **1. Power Cable:**

- Fundamentals of cable construction.
- Commissioning testing / acceptance tests at site
- Diagnostic testing
  - a. Insulation resistance test
  - b. Polarization Index
  - c. Tan delta and capacitance measurement
  - d. Partial discharge Measurement
  - e. Low frequency testing; HIPOT Testing

##### **2. Transformers**

- Fundamentals of transformers
- Acceptance tests
- various diagnostic testing online and offline
- Online and offline testing and Condition based monitoring

##### **3. Advanced CBM** · Online testing for condition monitoring, methods and Advantages.

- Offline testing of electrical Equipments
- Interpretation of the test Results

##### **4. Circuit Breaker, Isolator, Instrument Transformer (CT or PT), Relay, Control Panels**

##### **5. Various other CBM Techniques (Informative)**

- a. Current Signature Analysis
- b. Thermography
- c. Vibration Analysis
- d. eddy Current & Magnetic Particle



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

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### d. Case Studies & Discussion

#### Who can attend:

Electrical / Manager / Supervisor, Application Engineer, Condition Monitoring Engineer, Design Engineer, Maintenance Engineer /Manager/Supervisor/Reliability Engineer/Manager/Supervisor

**Prerequisite:** Basic knowledge of Electrical Equipments and experience in maintenance will be helpful.

#### Delivery Methodology:

- Introduction and Objective Setting
- Pre and Post Test,
- Knowledge Presentations,
- Assignments & Exercise,
- Hands on (High Voltage testing, partial Discharge, Insulation etc)
- site visit and Case Study,
- Model display,
- Feedback and Assessment

### Registration Details:

**Dates of the program:** 28-29 April 2016 Pune, Maharashtra.

**Participation Fees:** Rs.15000 + ST, per delegate (Training program includes training material hard/soft copies, tea, Snack & lunch excluding lodging & Boarding)

**Payment:** ECS/NEFT/DD in favor of “SAN Techno Mentors Private Limited.”  
Payable at Pune, Maharashtra, India. Account details will be provided for ECS.

**Venue:** San Techno mentors, Kothrud, GA Kulkarni path, Pune, MH

*For Registration, please do contact to,*

*We prefer on line Registration through our web [www.cisat.co.in](http://www.cisat.co.in) [cisat.nagpur@gmail.com](mailto:cisat.nagpur@gmail.com)*

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2. Mrs Sphoorti Govade; 020-25455935; 020-65000982

Online registration form can be filled available on web page.

### List of Few other Training Programs

- A. Safety
- ❖ Behavior based Safety Leadership Training program.
  - ❖ Electrical Safety
  - ❖ General Safety; Crane Safety

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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- B. Supervisory Development Training programs
  - C. Technical Training programs
    - ❖ Electrical Engineering
      - Fundamentals of Electrical Engineering
      - Operation, maintenance & protection of Electrical Equipments
      - Substation maintenance
      - HT/LT Motor & Transformer: operation, maintenance & protection
      - PLC, SCADA & DCS
      - Process Control & Instrumentation etc.
    - ❖ Mechanical Engineering
      - Hydraulics and Pneumatics
      - Welding Technology
      - Bearing O & M
      - Pumps and Compressors etc.
  - D. Management Development
    - ❖ Managerial Effectiveness
    - ❖ Leadership Development
    - ❖ Problem solving techniques etc.
  - E. Behavioral & Soft skill
    - ❖ Time Management
    - ❖ Business Etiquettes & Communication Skill etc.
  - F. Business Excellence
    - ❖ 5S, Six sigma & Quality Circles
    - ❖ Lean Manufacturing; TPM, TQM
    - ❖ Hoshin Planning; A3: A strategic Thinking
  - G. **Specially designed customized Training program for operators/GT/GET/DET/ITI employees.**
  - H. **Induction programs.**

**Please do call/email for more detailed proposal and implementation.**

We can contribute to undertake following responsibilities:

- Training Needs Analysis
- Training Centre Development
- Training Material Development
- Design of Training Modules
- Courseware Development
- Design of Practical's
- Establishment of Laboratories for Hands on Practice
- Conducting Training Programs
- Mentoring for Career Development and Growth
- Training Software Development

We assure you to fulfill all of Training need at group level with the expertise associated with us. We can work out from Training Need Identification (TNI) to individual analysis report for every employee on various parameters of performance. Please do visit web for more updates.

*We undertake complete Outsourcing of Training for a Plant. Do email [vikas@cisat.co.in](mailto:vikas@cisat.co.in); [www.cisat.co.in](http://www.cisat.co.in)*