



Engineering Staff College of India  
Autonomous Organ of The Institution of Engineers (India)

Old Bombay Road, Gachi Bowli, Hyderabad – 500 032. TS, India



**POWER & ENERGY DIVISION**

*Continuing Professional Development Programme on*  
**Operation & Maintenance, Testing of Power  
Transformers and HT Circuit Breakers**  
**06 – 09 August, 2019**



(An ISO 9001:2015 Certified, AICTE & CEA Recognized Institution)

**Centre for Promotion of Professional Excellence**

## **INTRODUCTION**

Major losses involving large oil-cooled transformers continue to occur on a frequent basis. Increased equipment utilization, deferred capital expenditures and reduced maintenance expenses are all part of today's strategies for transformer owners. To make matters worse, power consumption is increasing, and the load on each aging transformer continues to grow.

The largest number of transformers failure occurred in the Utility Substation sector, but the highest among them is Generator Step Up transformers. If the extraordinary Business Interruption loss is ignored, the generator step-up transformer is still significantly higher than any other category. (This is to be expected due to the very large size of these transformers.)

Severe and Unhealthy competition among manufacturers, coupled with anxiety of power utilities to hold the price line had led to lowering of quality in design and manufacturing by some people.

The rapid expansion of power systems, and utilities unable to spare the transformers for maintenance and coupled with shortage of skilled personnel in maintenance has aggravated the situation. So it is time to train and retain engineers in Condition Monitoring and Preventive maintenance techniques.

## **OBJECTIVE**

To train in Failure analysis and designing Condition monitoring techniques of transformers. Testing and commissioning at different stages. Protection and earthing practices of transformers to save from fire hazards.

It is in this context that ESCI considered it befitting to conduct a course on “**O&M Testing of Power Transformers and HT Circuit Breakers**” with a view to providing a forum for exchange of information and sharing of experiences & expertise among those involved in design, manufacturing, installation, operation and maintenance of Power Transformers. Such interaction should pave the way for speedy introduction of cost effective and resource efficient technologies, which will help to reduce the rate of failure of Transformers.

## **COURSE COVERAGE**

- Concept of Zero Failures
- Analysis of failures through case studies,
- Factory acceptance testing and Field quality plans,
- Power transformer Testing and Commissioning at site,
- Condition monitoring- DGA, Furan & Sweep Frequency Response Analysis
- Preventive Maintenance Best Practices in Circuit Breakers
- Protection and Earthing of Power transformers
- LA and Surge suppressors in sub stations
- Field Visit

## **METHODOLOGY**

The programme will be conducted in an interactive environment providing greater scope for discussions. Emphasis will be on a highly participative style of learning. The classrooms are provided with latest audio – visual teaching aids. The ambience in the campus and classrooms facilitate in effective learning by participants.

## **FACULTY**

Apart from Core Internal Faculty, Consulting Firms, Government Organisations, Manufacturing, Academic and Research Institutions etc. will share the sessions.

## **TARGET PARTICIPANTS**

Senior officers of Power Utilities / Corporations / SEB's, State Govt. Organisations, Power Distribution Companies, Nodal agencies, Energy Planners, Private Entrepreneurs, Manufacturers, Industries, Research / Academic Institutions, Construction Companies etc.

## **PROGRAMME VENUE**

Engineering Staff College of India (ESCI) Campus, Old Bombay Road, Gachi Bowli, Hyderabad - 500032, Telangana, India.

## **DATES**

**06 – 09 August, 2019**

## **TIMINGS**

On the first day registration will commence at 0900 Hrs. On all other days the programme timings will be from 0945 to 1715 hrs with breaks in between for tea and lunch.

## **ACCOMMODATION**

Participants will be accommodated in our Executive Hostel located within ESCI Campus. The accommodation will be on twin sharing basis.

## **COURSE DIRECTOR**

**A Chandra Mohana Rao**

Head & Sr. Faculty - Power & Energy Division, ESCI

## **RESOURCE PERSON**

**J N Karamchetti**

Sr Consultant - Power & Energy Division, ESCI

## **COURSE FEE**

**Residential Fee** is Rs.20,000/- per participant. Fee includes Course Material, Course Kit, and Twin-sharing / Single AC accommodation as per availability, Breakfast, Lunch, Dinner, Tea / Coffee and Snacks.

## **DISCOUNTS**

**Non-Residential Fee:** 10% discount on course fee is allowed for non-residential participants.

**Group Discount:** 10% discount for three or more participants if sponsored by the same organization.

**(All discounts are applicable only if fee is received at ESCI a week before the commencement of the programme)**

**GST @18% (as applicable)** is to be paid extra over and above the training fee. ESCI's **Provisional ID No. 36AAATT3439Q1ZV, PAN Card No. AAATT3439Q.**

The course fee is to be paid in favour of “**IE (I) – ENGINEERING STAFF COLLEGE OF INDIA**” in the form of demand draft payable at Hyderabad.

Alternatively the payment may be made by **Electronic Fund Transfer (EFT) to ESCI – SB A/c No. 33705165550** with The SBI, Manikonda Branch, Gachi Bowli, Hyderabad – 500 032 by **NEFT / RTGS / IFSC Code No: SBIN0011076 – MICR No: 500002107**. While using EFT method of payment, please ensure to communicate us your company name, ESCI invoice reference and programme title.

Online registration is available on ESCI website. To register, manually please send your nominations (**10 days** prior to date of commencement of the programme) giving details of name, designation, contact address, email address, mobile number, telephone and fax number of the participant along with the details of mode of payment of fee, addressed to:

### **Head, Power & Energy Division**

Engineering Staff College of India

Gachi Bowli, Hyderabad – 500 032

Phone:040–6630 4171, 4173 & 4174; Fax: 040 – 23000336 / 66304103

Email:pe.esci@gmail.com / pe@escihyd.org; Website: www.escihyd.org

**CERTIFICATE:** A certificate of participation will be awarded to each participant on conclusion of the programme.

### **GENERAL INSTRUCTIONS**

- ESCI encourages participants to present case studies from their respective organizations.
- For the convenience of the outstation participants ESCI will facilitate pickup and drop from Airport / Railway Station / Bus Stations, if travel plans are received at least 3 days in advance along with mobile number by fax or email. The charges shall be paid by the participants directly to the cab driver.
- ESCI provides complimentary accommodation to participants a day prior to the commencement and after the conclusion of the programme. (Check in at 12:00 hrs a day prior to the commencement & check out at 12:00 hrs a day after completion of the programme)
- Overstay charges of @ Rs.990/- per day / per head including hospitality (Bed Tea / Coffee to Dinner) will be charged.
- Well developed Information Centre and Internet facilities are available to the participants free of cost.