Engineering Staff College of India

Autonomous Organ of The Institution of Engineers (India)

Old Bombay Road, Gachi Bowli, Hyderabad – 500032. TS, India

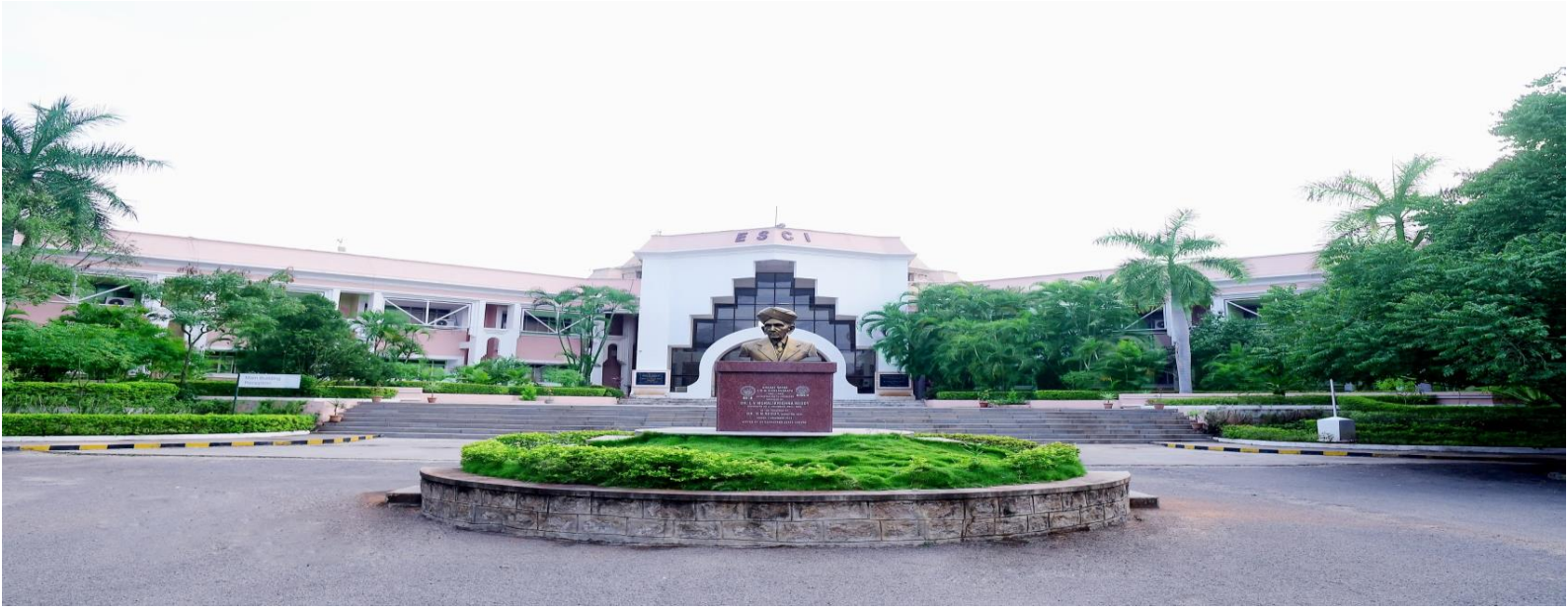
POWER & ENERGY DIVISION

Classroom Continuing Professional Development Programme on

Condition Based Maintenance aspects of Power Plant Equipment & Process Industries

12 – 15 December 2023

at ESCI, Hyderabad



(An IMS Certified (ISO 9001:2015 QMS, ISO 14000:2015 Envtl. Mgmt., ISO 45001:2018 (OH&SM), ISO 50001:2018 EnM), AICTE & CEA Recognized Institution)

Centre for Promotion of Professional Excellence

INTRODUCTION

The energy landscape is undergoing a major change in the country. As TPPs are preparing for flexible operations, they are transitioning to cyclic operations as against baseload operations. This will lead to faster deterioration of plant components, higher O&M expenses due to the reduced life of components, additional costs owing to an increase in the heat rate and auxiliary power consumption, and an increase in oil consumption on account of frequent starts/stops. Therefore, utilities are required to adopt best in class Operational & Maintenance practices including Condition based maintenance of Power Plant equipment to achieve business excellence and ensure long-term economic viability. Condition based Maintenance emerged as a new management discipline and these techniques are useful for modern management of maintenance of all equipment.

To keep the cost of generation low, activity-based budgeting and cost-cutting measures, as well as optimal fuel mixing are required. Root cause analysis, reliability-centred maintenance, multi-year overhaul plans, zero-forced-outage strategies and systematic inventory management are some of the key maintenance procedures being deployed by utilities to improve their O&M practices.

Utilities should aim to reduce start-up time to achieve operational excellence, maximise plant availability, and load factors. Overall, the adoption of new and innovative technologies, cost savings and work mechanisation should be prioritised. Capacity building and training could also enable TPPs to improve their O&M. Furthermore, best practices in O&M enable reliability of power plants, help maintain plant safety and availability and enhance asset flexibility, while keeping maintenance costs at a minimum. Going forward, utilities should adopt tailored O&M strategies based on their requirements.

OBJECTIVE

To sensitize the participants with importance of condition based maintenance of static & rotating equipment used in power plants & process industries along with case studies.

COURSE COVERAGE

- Overall Equipment Efficiency (OEE) Concepts
- Condition Monitoring – Approach & Techniques
- Difference between Preventive & Condition Based Maintenance in Power Station/ Process Industries
- Condition Based Maintenance Framework-Advantages over Traditional System, Approach, Issues & Challenges in its implementation
- Types of Condition based Maintenance-Vibration Analysis, Infrared thermography, Ultrasonic analysis, Wear Debris Analysis, Electrical analysis & Pressure analysis etc.
- Condition Monitoring of Mechanical equipment such as turbines & pumps including, electrical equipment like Transformers & Motors
- Diagnostic Techniques in Condition Monitoring
- Challenges, Issues of Condition Based Maintenance.
- Condition Based Maintenance (CBM)- Practical Case Studies

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, Domain Experts from various segments of Power sector/ Process industries. will share their experience, besides, faculty from Consulting Firms, Government Organizations, Manufacturing, Academic and Research Institutions etc..

TARGET PARTICIPANTS

O&M Engineers, Managers& Executives from Power Utilities, Independent Power Producers, Chemical & Process Industries.

PROGRAMME VENUE

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

DATES

12 – 15 December, 2023

TIMINGS

On the first day, registration will commence at 0900 Hrs. On all the 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

Dr. V. Vidyasagar
Sr. Faculty - Power & Energy Division, ESCI
(Mob: 9421801203)

COURSE FEE

Residential Fee is Rs.22,000/- per participant. Residential 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. **GST No. 36AAATT3439Q1ZV, PAN Card No. AAATT3439Q.**

The course fee is to be paid in favor 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 – Current 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 4170 to 4176 ; 040-6630 4173 / 4176, 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 participants shall pay the charges 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, (Food will be charged extra).
- Well-developed Information Centre and Internet facilities are available to the participants free of cost.