



# Engineering Staff College of India

Autonomous Organ of The Institution of Engineers (India)

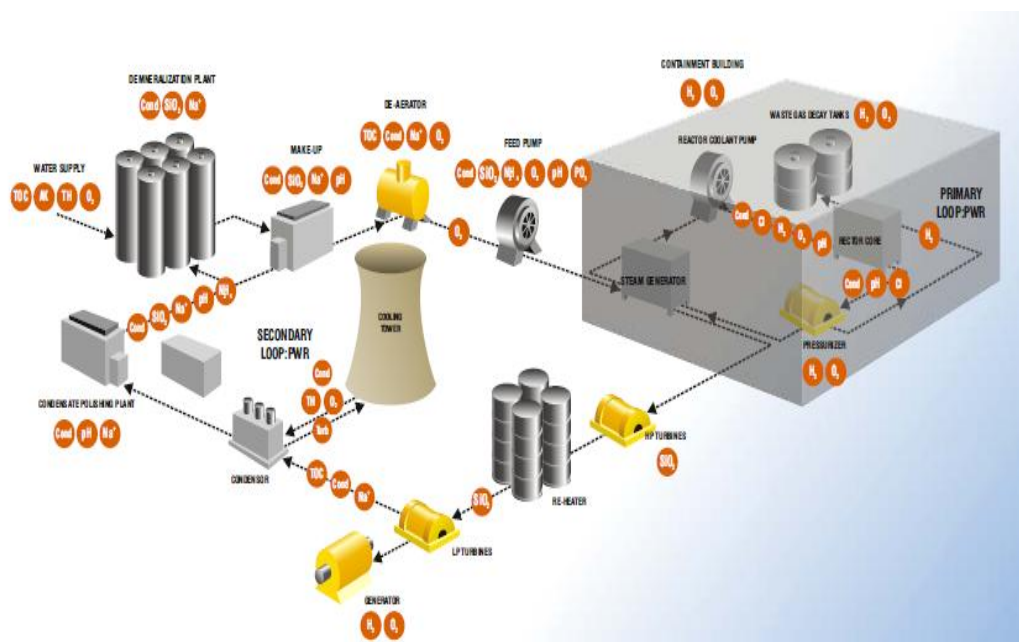
Old Bombay Road, Gachi Bowli, Hyderabad – 500 032. TS, India



## POWER & ENERGY DIVISION

### Continuing Professional Development Programme on Issues and Challenges of Boiler and Cooling Water Chemistry in Power Plants and Process Industries

17 – 20 September, 2019



(An ISO 9001:2008 Certified, AICTE & CEA Recognized Institution)

Centre for Promotion of Professional Excellence

## **INTRODUCTION**

Thermal Power Generation contributes a major share of the total electricity generated in the country. In a thermal power plant, steam-water system and cooling water system constitute the most important energy transport media transporting heat energy from boiler to turbine to condenser and then to cooling tower and ultimately to environment. Corrosion, scaling, fouling and erosion of components in these systems have direct bearing on the plant availability, which in-turn impact the plant load factor and efficiency of the power station. Hence maintenance of proper water chemistry plays a very vital role in this aspect.

The performance evaluation reports of thermal power stations annually generated by CEA as well as data available at various thermal power stations highlight problems associated with corrosion and erosion in different components of power plants such as Boilers, Condensers, Deaerators, coal and ash handling plants, etc. There is still large scope to increase the availability and out-put of the existing coal based thermal power plants by reducing the down time by maintaining proper chemistry in steam-water system and cooling water system.

## **OBJECTIVE**

Knowing the importance of this area, ESCI considers it fit to conduct a training program on “**Issues and Challenges of Boiler and Cooling Water Chemistry in Power Plants and Process Industries**”. This will provide an opportunity to the practicing engineers / chemists / executives in the thermal power stations to have an exposure to these problems and to the technical advancements that have taken place in different areas for effectively tackling these issues, thus paving the way to reduce these problems to a large extent.

## **COURSE COVERAGE**

- Water Chemistry – Guidelines for H.P. and Super Critical Boilers
- External and Internal Corrosion in Boiler Tubes
- Corrosion in Condensers, LP Heaters and Deaerators
- Conditioning the Steam to Avoid Corrosion where Evaporator System is used
- Erosion of Boiler Tubes, Conduits, Ash Handling Systems and Slurry Disposal, etc.
- Corrosion, scaling and fouling in Cooling water system and its treatment.
- Chemical Cleaning of Power Plant Equipments
- Water Chemistry Instruments and Control
- 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, Consulting Firms, Government Organisations, Manufacturing, Academic and Research Institutions etc. will share the sessions.

## **TARGET PARTICIPANTS**

Power Engineers in O&M, Commissioning & Construction / Gas Power Stations etc., / Executives / Station Chemists working in Thermal Power Plants / CPPS / IPPS /

Power Utilities / Corporations, State Govt. / SEB's, Nodal Agencies, Energy Planners, Research / Academic Institution / College Faculties /Lab In-charges etc.,

### **PROGRAMME VENUE, DATES & TIMINGS**

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

### **DATES**

**17 – 20 September, 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.

### **COURSE DIRECTOR**

**A Chandra Mohana Rao**

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

### **COURSE FEE**

**Residential Fee** is Rs.20,000/- (Residential) 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– 66304170 - 4175, 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.