

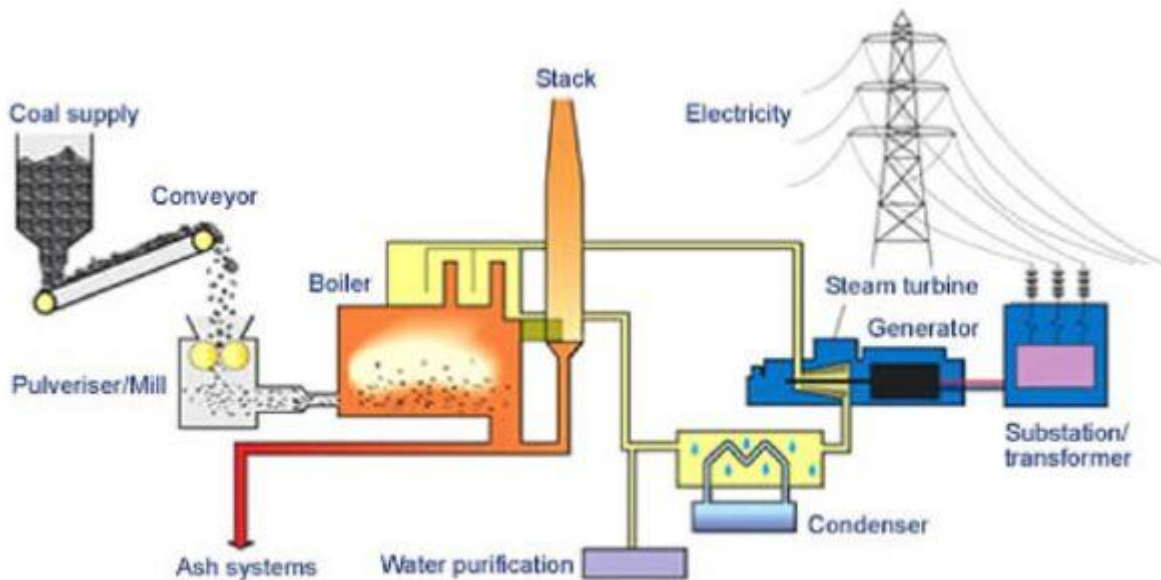


Engineering Staff College of India  
Autonomous Organ of The Institution of Engineers (India)

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



**POWER & ENERGY DIVISION**



*Continuing Professional Development Programme on*

# Performance Optimization of Thermal Power Plants

13 - 16 February, 2017



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

**Centre for Promotion of Professional Excellence**

## **INTRODUCTION**

The aim of any thermal power plant operator is to obtain the best possible, optimal performance from the plant under all operating conditions. This is necessary to achieve economies in power generation and the course aims to achieve the following objectives.

## **OBJECTIVE**

Thermal Power plants have the following optimization objectives:

- Heat Rate Improvement
- CO<sub>2</sub> Reduction
- NO<sub>x</sub> Reduction
- Improved Unit Availability – Less Forced Outages
- Reduced use of Reheat and Superheat Sprays
- Reduced Soot Blowing
- Conservation of Water
- Reduced auxiliary consumption and Performance Improvement
- PAT Cycle Improvement

Overall thermal efficiency of a power plant can be expressed as a product of Combustion efficiency (Heat addition) and Cycle efficiency, which converts heat to mechanical work. This is where greater potentiality for optimization exists. Continuous efforts are needed to implement innovative and best practices and methodologies in operational area in order to maintain thermal power plants to achieve higher PLFs. With this scenario, ESCI thought it appropriate to conduct a programme on “Optimisation of Thermal Power Stations” for the benefit of practicing engineers. Optimisation of auxiliary consumption and plant heat rates at low loads have greater bearing in the merit order dispatch of the plant in the present regulatory regime.

## **COURSE COVERAGE**

- Thermal Cycle Efficiency and Heat Rate Improvements of Thermal power Plants
- Optimization of Boiler and Turbine Operations
- Improvements in Combustion and Coal Additives
- Turbines, Boiler Efficiency Calculations
- Plant Automation
- Process Optimization
- Water Optimisation
- Optimization of Coal and Ash Handling Practices
- Improvements in Alternator Performance with Improved Cooling System
- Reduction of Auxiliary Power Consumption
- PADO
- Case Studies on Performance Improvement 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 equipped with latest audio-visual aids for better learning process.

## **FACULTY**

Apart from core internal faculty, experts from industry, consulting firms, government organisations, academic and research institutions etc. will share the sessions.

## **TARGET PARTICIPANTS**

Power Engineers and Managers from Power Utilities, CPPs, Generating Companies, Independent Power Projects associated with Planning, Design, Construction, Operation & Maintenance, System Operation, Manufacturing Industry, Academic and Consultancy Firms etc.

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

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

## **DATES**

**13 – 16 February, 2017**

## **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 I/c & Sr. Faculty - Power & Energy Division, ESCI

## **COURSE FEE**

**Residential Fee** is Rs.20,000/- per participant. This fee includes course material, course kit, and twin-sharing / single AC accommodation as per availability, Breakfast, Lunch, Dinner, Tea / Coffee and Snacks during the actual days of training programme.

## **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)**

**Service Tax @ 15%** is to be paid extra over and above the training fee. ESCI's **Service Tax Registration No** AAATT3439QST008 (under commercial training or coaching services – clause 65(105) (ZZC) of Finance act – 1994). **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. 10007111201** with The SBI, PBB Rajbhavan Road Branch, Khairatabad, Hyderabad – 500 004 by **NEFT / RTGS / IFSC Code No: SBIN 0004159 – MICR No: 500002075**. 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 – 6555 3371 / 3370/ 3372; 040-6630 4100, Fax: 040 - 23000336

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.