

*Tutorial Course on*

# **Power Plant Performance Analysis & Optimization**

**25<sup>th</sup> - 26<sup>th</sup> April 2017**

**Conference Hall, CBIP  
Malcha Marg, Chanakyapuri, New Delhi**



*Organised by*



**Central Board of  
Irrigation & Power**

*in association with*



**Society of Power  
Engineers (India)**



**International Association on Electricity  
Generation, Transmission and Distribution  
(Afro-Asian Region)**

## **ABOUT CBIP**

The Central Board of Irrigation & Power (CBIP) has been serving the nation with great distinction as a premier institution for dissemination of knowledge and exchange of professional experiences in the field of Power Generation (including Thermal, Hydro and Nuclear) Transmission and Distribution of electricity, Renewable energy besides various fields of Water Resources. The objective is achieved by the Board through various modes like organizing Conferences/ Workshops/imparting Trainings and preparation of Manuals etc. With the above aim and to help the Indian Engineers to update their knowledge and help them to gain practical know how CBIP is organizing an Tutorial Course on 'Power Plant Performance Analysis & Optimization' on 25-26 April 2017 at Conference Hall, CBIP Building, Malcha Marg, New Delhi 110021.

## **PROGRAM OVERVIEW AND OBJECTIVE**

India has a total installed capacity of 3,14,642 MW(as on 31.01.2017) out of which 2,14,654 MW is Thermal based plants. In present day's scenario, the spiraling cost of fuels and increasing competitiveness in the field has enforced a paradigm shift in managerial approach in the Power and Utility Industries. Earlier, we used to calculate Efficiency, where generation was important and was placed on the Top (Numerator). And now we calculate Heat Rate, where fuel consumption has replaced generation in the numerator.

In the present scenario efficiency improvement of Thermal Power Plants has become prime concern. The achievement of aforesaid potential requires very close monitoring of performance and use of latest state-of-the-art analytical tools, techniques, systems etc. to arrive at the appropriate time.

Performance of Boiler, Turbine & Auxiliaries has got significant impact on the overall performance of the unit. This program provides the participants an overview of the methodology and identification of performance deviation of various parameters.

## **COURSE PROFILE**

This program covers the latest systems & practices adopted by utilities for performance assessment and diagnosis including the following:

- Assessment of boiler losses and efficiency computation
- Interrelationship of boiler performance controllable parameters and optimization of boiler efficiency
- Air heater performance indices, calculations and analysis
- Turbine cycle performance assessment and Cylinder efficiency
- Turbine losses, controllable parameters & analysis
- Condenser Performance and analysis
- HP Heater Efficiency
- Mill performance assessment, testing and Optimization, PF – balancing
- Factors affecting mill performance
- Excess Air optimization
- Performance Improvement, Sustenance and New Challenges
- Performance & Combustion optimization
- Operational Challenges
- Efficiency, capability and gap analysis
- Use of multiple technology for condenser air ingress identification

## **METHODOLOGY**

The program would be delivered through class room sessions, interactive group discussions and case studies.

## **PRESENTATIONS BY EXPERTS**

The lead faculty for this Tutorial shall be Mr. Shankar Bandyopadhyay, Former Executive Director, NTPC and Dr. D. Banerjee, Former AGM, NTPC.

## ABOUT FACULTY



Shri Sankar Bandyopadhyay, Former ED (CENPEEP), NTPC is Mechanical Engineering Graduate from BE College, Howrah (now BESU), M. Tech in Thermal Engineering from IIT Delhi and MBA in Finance from IGNOU, Chartered Engineer of Institution of Engineers (India), Qualified auditor for ISO-9001, Lead auditor ISO -14001 & Auditor for OHSAS -18001, and BEE certified Energy Auditor Cum Energy Manager. He has experience of about 38 years in NTPC in major areas of O&M, such as Operation, Commissioning, PG test, Efficiency, Commercial, Maintenance Planning (MTP), Energy Conservation, R&M and O&M contracts.



Dr. Debdas Banerjee, former Addl. General Manager, Centre for Power Efficiency & Environmental Protection, NTPC Ltd. is Ph.D from IIT Bombay and has about 36 years of experience in various fields, out of which he has about 26 years experience in R&D and CENPEEP, NTPC. He has mainly worked in Boiler Performance & gap analysis through off-line monitoring of process parameters, Performance assessment of Air Heater, Mill, ESP & their computations, Combustion optimization in power plant, optimization of Coal blending in Power Station, Assessment of combustion reactivity of Non-Coking coal. He is faculty for training programmes of Power Management Institute of NTPC and also guest faculty of IIT Dhanbad & NPTI.

Some more experts are expected to deliver lectures on the subject during Tutorial Course.

## WHO MAY ATTEND

Professionals and Stakeholders associated with operation, maintenance, design, erection and efficiency divisions of boiler & turbine.

## DATE AND VENUE

The Tutorial Course will be held on 25<sup>th</sup> -26<sup>th</sup> April, 2017 (Tuesday & Wednesday) in the Conference Hall, CBIP, Malcha Marg, Chanakyapuri, New Delhi

The Tutorial Course is non-residential. The Tutorial Course timing will be 10.00 AM to 5.30 PM. The registration will start at 9.00 AM on 25<sup>th</sup> April 2017.

## REGISTRATION FEES

The perspective participants, desirous of attending the Tutorial Course may register themselves by sending the details to CBIP along with necessary payments.

The registration fee for attending the Tutorial Course is given below:

(i) Rs. 12,000/- per participant.

(ii) Discounted Fees of Rs. 10,000/- per participant for members of CBIP

**Service Tax 14%, Swachh Bharat Cess @ 0.5% & Krishia Kalyan Cess 0.5% extra**

Registration fee shall cover the registration kit, and Tea/ coffee / lunch during the Tutorial Course. Participants will have to make their own arrangement for travel, boarding and lodging, etc. All payments should be made by cheque at par/Demand Draft drawn in favour of “Central Board of Irrigation and Power”, payable at New Delhi or by transfer the amount to HDFC Bank, Address: 209-214, Kailash Building, 26, Kasturba Gandhi Marg, New Delhi 110001; Saving Bank Account No. : 00031110004411; Swift Code: HDFCINBBDEL; IFSC: HDFC 0000003; MICR Code: 110240001.

## CONTACT PERSON AT CBIP:

**Shri S. K. Batra**, *Chief Manager*

Central Board of Irrigation & Power

Malcha Marg, Chanakyapuri, New Delhi-110021

M : 9811943812 E-mail : batra@cbip.org

Tutorial Course on

# Power Plant Performance Analysis & Optimization

25<sup>th</sup> - 26<sup>th</sup> April 2017, New Delhi

## REGISTRATION FORM

(To be filled in block letters preferably)

Delegate \_\_\_\_\_

(Surname)

(First Name)

Designation \_\_\_\_\_

Name of Organisation \_\_\_\_\_

Mailing Address \_\_\_\_\_

\_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ PIN \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

E-mail \_\_\_\_\_

Dated \_\_\_\_\_

Signature \_\_\_\_\_

Registration Form, duly filled in, is to be mailed to the following address:

**Shri V.K. Kanjlia**

*Secretary*

Central Board of Irrigation and Power

Malcha Marg, Chanakyapuri, New Delhi 110 021, India

Tel : 91-11-26115984/26116567 Fax: 91-11-26116347

Email : batra@cbip.org M: 9811943812; Web-site: <http://www.cbip.org>

**Note:**

- Photocopies of the registration form can be used for additional requirements, if any.
- Spot registration facilities will also be available, provided the prior information is received.