

Tutorial Course on

GAS TURBINE POWER PLANT PERFORMANCE IN OPEN CYCLE AND COMBINED CYCLE – ANALYSIS & OPTIMIZATION

10 - 11 May 2018, New Delhi



Organised by



Central Board of Irrigation & Power

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, 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 Training and preparation of Manuals, etc.

CBIP is conducting long term and short term training programs in the field of power generation, transmission and distribution including water resources at New Delhi and also at its CBIP Centre of Excellence at Gurugram (Gurgaon), Haryana. Realizing the constraints being faced by the professionals in leaving their stations/headquarters for attending various training programs organized by CBIP, we, at CBIP have started conducting Door Step/ On Site training programs at required project sites etc. with the aim to provide training and develop skills of various professionals of the organizations dealing in Power Sector as well as Renewable Energy Sector.

CBIP is organizing a Two days Tutorial Course on “GAS TURBINE POWER PLANT PERFORMANCE IN OPEN CYCLE AND COMBINED CYCLE – ANALYSIS & OPTIMIZATION” on 10th - 11th May, 2018 at CBIP Conference Hall, Malcha Marg, New Delhi, with the aim to help the Professionals and Engineers to understand the need to optimize the performance of Gas Turbine power plants .

PROGRAM OVERVIEW AND OBJECTIVE

India has a total installed capacity of 334399.83 MW (As on 31.01.2018) out of which 25150 MW is Gas Turbine plants. In present day’s scenario, how machine to be operated in best efficiency to achieve the minimum selling power to gain the number one in merit order is need of country.

Worldwide the emissions of gas turbines are being advocated which has to be controlled and to be kept within prescribed limit in different fuel firing (natural gas and liquid fuel firing). In the present scenario efficiency improvement and reliability of Gas 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 HRSG, 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 and also cover the following:

- *Efficiency and Performance Guarantee Test of Gas Turbine* : Efficiency Calculation, PG test Procedure, PG test conductance, PG test Evaluation, Open cycle and combined cycle calculation, Readiness of unit for PG test, Correction Curves (AMB temp, Frequency, AMB pressure, Relative Humidity, CW inlet temp)
- *Efficiency Monitoring in Gas Turbine by way of Maintaining Compressor Efficiency* : Introduction, Indications of Compressor Deteriorations, Factors affecting compressor, Reason of fouling, Effect of fouling, Gas Turbine Compressor efficiency calculation, Parameters measurement for compressor efficiency, Recommendations of OEM during Gas turbine Trip, Assessment of Compressor Efficiency and Fouling of Compressor.
- *Gas Turbine Parameter Calculation* : Study of Heat balance of different gas turbine make, Compressor air mass flow calculation, TIT calculation of different manufacturer (ABB, Siemens, GE, MHI), High heat calorific value calculation, Low heat calorific value calculation.

METHODOLOGY

The program would be delivered through classroom sessions, case studies, and interactive group discussions

PRESENTATIONS BY EXPERTS

The lead faculty for this program shall be Shri Ausaf Ahmad Usmani, Additional General Manager (MTP&BE) along with invited eminent experts from organizations, power utilities; academic & consulting institutions who shall be sharing their in-depth experiences with the participants.

WHO MAY ATTEND

Executives working in operation, maintenance, design, erection, chemistry Dept. and efficiency divisions in gas power stations.

DATE AND VENUE

The program will be held on 10th - 11th May, 2018 (Thursday and Friday) at the Conference Hall, CBIP, Malcha Marg, Chanakyapuri, New Delhi-110021.

ABOUT FACULTY

Shri A.A. Usmani, Additional General Manager, Faridabad Gas Power Station, NTPC is M.E (Electrical) from M.N.R. Engineering College, Allahabad and B.E. (Electrical) from MMM Engineering College, Gorakhpur and also Energy Manager from National Productivity Council. He has more than 37 years of experience in various fields of power generation, out of which he has about 30 years of experience in various gas turbine power plants of NTPC including Ratnagiri Gas Power Project and also operation services-gas turbine group of NTPC corporate office.

He has also visited two gas power stations of Saudi Electric Co. at Damman (SA) and identified and prepared instrument list for performance testing and also prepared gas turbine open cycle & combined Cycle performance test procedure for Saudi Electric Company.

He has handled trouble shooting of various gas turbines such as MHI701D, ABB Machine 13 D2, ABB Machine 13E, GE Frame 9E, GE Frame 9Fa+ and Siemens Frame V94.2



A.A. Usmani

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

GST @ 18% extra. GST No. 07AAAJC0237F1ZU

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

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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 : mahesh@cbip.org M: 9871997542 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.