



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
**Maintenance Strategies for Power Plants,
Manufacturing & Process Industry**
Including Introduction to Reliability Centred Maintenance (RCM)
06 – 08 February, 2018



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

Centre for Promotion of Professional Excellence

INTRODUCTION:

Maintenance is a vital function in any power and process industry to keep plant running smoothly at optimal cost without break downs. Proper maintenance of plant equipment can significantly reduce the overall operating cost, while boosting the productivity and profitability of the organization. With the advent of technological advances, and a better understanding of the behaviour of materials and machines, different **maintenance strategies** have evolved with advanced techniques to **monitor, measure** and appropriately **diagnose condition of critical plant machines**. By giving “early indication of potential failure”, they provide relatively longer time intervals for corrective action.

Maintenance entails financial consequences not only due to cost of material and labor for maintenance activities but also down-time of equipment and eventually loss of production/business opportunity. For Critical Equipments, it is essential to develop special methods of maintenance viz the combination of different maintenance strategies like corrective, preventative, predictive, condition-based, and risk-based maintenance techniques for improving maintenance quality and reducing operating costs. Further, Remaining-Life-Assessment (RLA) techniques enable rational and objective estimate of remaining life in critical parts of major plant equipment while advanced practices in engineering design have enabled refurbishment of critically aged plant system components wherever required. Also, reverse engineering and advances in design and material science have enabled **Life-Extension** and **Performance Enhancement** through modernisation of critical plant equipment. Based on these findings and a “Run-Repair-Replace Analysis”, the **most appropriate techno-economic decision** can be taken, for the benefit of all stakeholders

OBJECTIVE:

The primary objective of this training programme is to give participants an exposure and in-depth understanding of different maintenance strategies, concepts, approaches and practices, reinforced through exercises, real life examples and national / international case-studies.

COURSE COVERAGE:

- Functional Requirements of Maintenance for Power Manufacturing & Process Industry
- Understanding Failures , Types of Failures: Induced -Intermittent- Wear Out
- The Bath-tub Curve of failures
- Failure Modes and Effects Analysis (FMEA)
- Maintenance Strategies
- Run To Failure Maintenance
- Periodic Maintenance
- Potential Failures and the P-F Curve
- Contemporary Techniques for Diagnostics and Condition Assessment
- Predictive Maintenance and Reliability Centred Maintenance.
- How To select Appropriate Maintenance Strategy based on Techno-Economic Decisions
- Remaining Life Assessment (RLA) of Critical Plant Equipment
- Run-Repair-Replace Analysis
- Life Extension of Critical Components
- Selected Real Life Case Studies and Individual and Group Exercises

METHODOLOGY:

- highly interactive participative learning
- practical orientation with emphasis on “HOW TOs”

- reinforcement through individual and group exercises
- intellectual impact to participants provided through selected real life case studies

TARGET PARTICIPANTS:

Middle to Senior level executives/managers associated with Maintenance: (Mechanical-Electrical-Instrumentation and Control), Operation/Production, Plant Performance Management, Safety and Environment Management, Material Management, Logistics functions in Power Plants, Manufacturing and Process Industry.

FACULTY

Apart from Core Internal Faculty, Faculty from Power Plant industry, Consulting Firms, Manufacturing, Academic and Research Institutions etc. will share the sessions.

PROGRAMME VENUE, DATES & TIMINGS

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

DATES

06 – 08 February, 2018

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 ADVISOR

B Prahlad

Former Dy. Chief Executive, Nuclear Fuel Complex, DAE

RESOURCE PERSON

M Venkat Ram

Former Deputy General Manager, Tata Power, Mumbai. Former Senior Consultant – Tata Quality Management Services. Former Certified Senior Business Excellence Assessor – Tata Business Excellence Model former Member, Central Boilers Board – Government of India

COURSE FEE

Residential Fee is Rs.15,000/- (Residential) 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. 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. 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 I/c, Power & Energy Division

Engineering Staff College of India

Gachi Bowli, Hyderabad – 500 032

Phone 040–6630 4170 to 4177; 040-6630 4100 (General), 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.