ENGINEERING STAFF COLLEGE OF INDIA

Autonomous Organ of The Institution of Engineers (India)
(IMS [ISO 9001:2015, ISO 14001:2015, ISO 50001:2018, ISO 45001:2018],
ISO/IEC 17025:2017 Certified, AICTE & CEA Recognized Institution)
Old Bombay Road, Gachibowli, Hyderabad – 500 032. Telangana, India

Management and Technology Division

Continuing Professional Development Programme on

Non – Destructive Testing and Failure Analysis of Castings, Forgings, Weldments and Tubes

Dates: 14-17 November 2023

at ESCI Campus, Hyderabad

INTRODUCTION

Non-destructive Testing is a bridge between design and production and it has become a most versatile tool to assess quality of components and to ensure their reliability in service. The increasing applications of Non-Destructive Testing Methods necessitate that the tests and evaluation of components are conducted by competent personnel ensuring uniformity of practice and soundness of technical approach.

The competence of personnel involved can only be ensured by exposing them to a systematic training in the science and practice of non-destructive evaluation. In view of the multi-disciplined back ground and varying experience of entrants to the field of NDT, the course has been developed from fundamentals through advanced.

OBJECTIVES

The objective of the programme is to provide a practical insight into the various aspects of NDT and to update the knowledge of personnel working with manufacturing and process industries, automobile, defence, aeronautical or aerospace, ordnance factories, public & private sectors enterprises.

COURSE COVERAGE

The following course content will be detailed during the training programme:

- ✓ Overview of NDT Methods in identifying defects in Welds, Castings, Forgings and Tubes
- ✓ Failure Analysis of Castings, Forgings, Weldments and Tubes
- ✓ Ultrasonic Testing & Developments
- ✓ Real time and Digital Radiography of Welds and castings
- ✓ Eddy Current Testing
- ✓ Liquid Penetrant Testing & Magnetic Particle Testing
- ✓ Industrial Computed Tomography
- ✓ Electromagnetic Techniques for Residual Stress Measurement
- ✓ Acceptance Standards for Castings, Forgings, Welds, and Tubes
- ✓ NDE in Failure Analysis with Case studies on failures related to defects in
  - Casting
  - Forging
  - Welds
  - Tubes
- ✓ Root cause analysis & TQM in manufacturing

METHODOLOGY

Methodology of the programme includes class room Sessions with Lecture/discussion with audio visual aid, benched marked practices if any, video shows, Chalk & Talk sessions, group discussions, case studies, debates, sharing of experiences, etc. All the sessions will be interactive demanding active participation from all the members. Case Method of Instructions will be the main method of knowledge facilitation.

TARGET PARTICIPANTS

Senior engineering executives and engineering managers working in quality control, quality assurance, design, production, process planning areas in manufacturing and process industries, automobile, defence, aeronautical, ordnance factories, public & private sectors enterprises will be highly benefited by attending the programme.

BENEFITS TO THE PARTICIPANTS

- Exposure to various NDT Techniques in vogue.
- An understanding of the benefits and drawbacks of each form of nondestructive examination can help participant to choose the best method for his specific application.
- Programme will provide a platform to the participants to share and enrich his experience with the galaxy of Experts either participating or coming as guest speakers during sessions.
- Opportunity to have practical exposure during Technical visit to prestigious establishment.
- Opportunity to present his case study in case found suitable.
- Awareness on Certification schemes NDT Levels.

EXPERT FACULTY

The faculty consists of experts from industry, research establishments and academia besides that from ESCI.

PROGRAMME DIRECTORS

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PROGRAMME DATES & TIMINGS

Dates: 14 – 17 November 2023

Timings : On the first day Registration will commence at **09:00 Hrs**. On all other days the programme timings will be from **09:45-17:15 Hrs** with breaks in between for tea and lunch.

COURSE FEE:

Rs.22,000/- (Rupees Twenty Two Thousand only) per Participant + GST@18% Extra. Fee includes, course material, course kit, twin-sharing/single AC accommodation as per availability, breakfast, lunch, dinner, tea / coffee and snacks during the actual days of training programme.

PAN Card No AAATT3439Q; GST No. 36AAATT3439Q1ZV. **H.S. No. 999293** (Under commercial training or coaching services – clause 65(105) (ZZC) of Finance act – 1994).

Programme fee is to be paid in in favor of **"THE INSTITUTION OF ENGINEERS (INDIA) – 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.0432104000039631 with The IDBI Bank Ltd., Gachibowli Branch, Plot No. 2-53/2, JNIBF, IIIT Junction, Gachibowli, Hyderabad-500032 by RTG's/ NIFT / IFSC Code No: IBKL0000432.** While using EFT method of payment, please ensure to communicate us your company name, our Invoice reference and programme title.

CERTIFICATION

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.
- ESCI provides complimentary accommodation and boarding to the participants one day before commencement (Check-in 1200 h) and one day after conclusion (Check-out 1200 h) of the programme duration. Overstay charges will be applicable as per ESCI rules (subject to availability of accommodation).
- Well-developed Information Centre and Internet facilities are available to the participants free of cost.