



Engineering Staff College of India
Autonomous Organ of The Institution of Engineers (India)
(An ISO 9001:2008 Certified, AICTE & CEA Recognised Institution)
Old Bombay Road, Gachi Bowli, Hyderabad – 500 032. TS, India



Management and Technology Division

Continuing Professional Development Programme
Welding Technologies and NDT Techniques
(Theory & Practical Orientation with Technical Visit)

18-22 September 2017



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

Centre for Promotion of Professional Excellence

INTRODUCTION:

Worldwide, welding is a multi-billion dollar fabrication technology, used extensively in the construction of building, bridges, manufacturing automobile, aircraft, aerospace applications, power & energy sector, shipbuilding and electronic industries. Defects in welds or poor performance of weld can lead to catastrophic failures with costly consequences including losses to property and life.

Virtually every manufacturing industry uses welding process at some stage of manufacturing or in repair or maintenance of process equipment like Industrial Boilers and heavy duty welding of steels plates for ship building etc.

Non-destructive Testing is the 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 background and varying experience of entrants to the field of NDT, the course has been developed from fundamentals through advanced.

OBJECTIVES:

The main objective of the programme is to:

- Impart through knowledge to the engineers and managers on advances that are coming up in the area of welding and its application in various industries
- The objective of the programme is to provide an 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:

- **Overview of Welding Technology**
 - Normal arc welding processes TIG, MIG Welding
 - Welding power sources and consumables
 - Electron beam welding
 - Laser Welding
 - Aluminium Welding Metallurgy
 - Monitoring and quality control of welding process
 - Advanced Welding process & its applications
 - Advances in Welding Metallurgy
- **Overview of NDT Methods in identifying defects**
 - Application of Infrared Thermography in material testing & NDE
 - Industrial Computed Tomography
 - Ultrasonic Testing & Development
 - Phased Array Ultrasound Testing
 - Eddy Current Testing
 - Real time and Digital Radiography of Welds and castings & case study
- **Technical Visit to Modern Welding Technology & NDT Implementation Units.**

METHODOLOGY:

Methodology of the programme includes class room Sessions with Lecture/discussion with audio visual aid, bench 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. Technical Field and Social visits are integral part of the training methodology

FACULTY: -

The faculty for the programme consists of Eminent Experts from various Research and Manufacturing organisations besides the core faculty from ESCI.

PROGRAMME ADVISORY COMMITTEE & RESOURCE PERSONS:

Dr Komal Kapoor, Scientific Officer-G, NFC, Hyderabad
Dr. G. Padmanabham, Associate Director, ARCI, Hyderabad
Dr GM Reddy, Scientist G, Group Head, Metal Joining Group DMRL
Mr. LV Rama Rao MD APT Inspection Technologies

TARGET PARTICIPANTS: -

Engineering Executives, Scientists from various Defence Labs, Engineering managers, supervisors working in production, welding, R&D units, process planning, designs, maintenance and Quality Control / Quality Assurance in manufacturing and process industries like heavy equipment fabrication sectors, automobile, defence, aeronautical, electronics, power sectors (Generation–Thermal, Nuclear, Gas) medical products & precision instruments, petrochemicals, fertilizers, ordnance factories, public & private sectors enterprises will be highly benefited by attending the programme.

BENEFIT TO THE PARTICIPANTS.

- Awareness on the **Best Practices** and **Current Trends** in the fields of Welding and NDT discipline.
- Great Exposure and unique opportunity to share experience and learn from large numbers of experts and participants from various organizations and eminent faculties, on different approaches various organizations are following in the field Welding and NDT discipline.

- An understanding of the benefits and drawbacks of each form of non-destructive examination can help participant to choose the best method for his specific application.
- A platform to give an opportunity to receive life time support on welding and NDT aspect even after the programme is over.
- Opportunity to have practical exposure during Technical visit to prestigious establishment.
- Opportunity to present case study in case found suitable.
- Awareness on Certification schemes NDT Levels.

PROGRAMME VENUE, DATES & TIMINGS

Venue: *Engineering Staff College of India* (ESCI) Campus, Old Bombay Road, Gachi Bowli, Hyderabad. 500032. T.S., India.

Dates

18-22 September 2017

Timings

On the first day Registration will commence at **0900 hrs**. On all other days the programme timings will be from 0945-1715 h with breaks in between for tea and lunch.

COURSE DIRECTOR



Gp Capt (Retd) BS Phillora BE (ETC), AE (L), MMS (DS), M Phil, FIE, Certified lead auditor ISO 9001-2015

Dean of Studies ESCI & Sr. Faculty, Head, Management & Technology Division, & Design & Prototyping Centre, ESCI

COURSE FEE

₹ **25,000/- (Residential Fee)** per participant. 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.

DISCOUNTS

- ❖ **Non-Residential Fee-** 10% discount on course fee is allowed for non-residential participants.
- ❖ **Group Discount:** Additional 10% discount for three or more participants, if sponsored by the same organization.

(All discounts are applicable only if fee is received at ESCI before the commencement of the programme.)

Goods and Service Tax @ 18% is to be paid extra over and above the training fee. PAN Card No AAATT3439Q; **GST No. 36AAATT3439Q1ZV.** (Under commercial training or coaching services).

Programme fee is to be paid in favour of **“THE IE (I) – ENGINEERING STAFF COLLEGE OF INDIA”** in the form of demand draft payable at Hyderabad / at par cheques payable at any Bank Branches.

Alternatively, the payment may be made by Electronic Fund Transfer (EFT) to ESCI - **SB A/c No.0432104000039631 with The IDBI Bank Ltd., Gachi Bowli Branch, Plot No. 2-53/2, JNIBF, IIIT Junction, Gachi Bowli, Hyderabad-500032 by RTG's/ NIFT / IFSC Code No: IBKL0000432. ESCI PAN No. is AAATT3439Q.** While using EFT/ Draft method of payment, kindly forward a covering letter giving details on the names of the participants, Title and the programme schedule so that proper accounting can be done.

REGISTRATION

Online registration shall be available on ESCI website. **(Please visit our Web portal : www.escihyd.org.** To visit Management & Technology Division Webpage click <http://escihyd.org/index.php/mt-upcoming-trainings>

To register, manually please send your nominations giving details of name, designation, contact address, email address, mobiles no, telephone and fax number of the participant along with the details of mode of payment of fee, addressed to:

Head, Management & Technology Division

Engineering Staff College of India
Old Bombay Road, Gachi Bowli, Hyderabad. 500 032 TS, INDIA
Phone : Direct 040 6630 4111, 6630 4112, 6630 4105 & 6630 4105
Fax : 040-23000336 & 040 6630 4103
Email : mt@escihyd.org

Contact for registration:
Mr. L.V. Rao
Programme Manager,
Land line 040 66304105
Mob: 09949145865

CERTIFICATION

A certificate of participation will be awarded to each participant on conclusion of the programme.

General Information

- ESCI encourages participants to present case studies from their respective organizations.
- For the convenience of outstation participants, ESCI will facilitate pick-up and drop from Airport / Railway Stations / 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 participant directly to the Cab.
- 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.