



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

Classroom Continuing Professional Development Programme on
NDT Level II Certification in Radiography Film Interpretation (RTFI)
(In Accordance with ASNT Document No. SNT-TC-1A 2020)
Dates: 26 – 30 October 2026
at ESCI Campus, Hyderabad

INTRODUCTION

Radiographs are taken for various purposes in Industry then industry. Apart from producing high quality radiographs, the radiographer must also be skilled in radiographic interpretation. Interpretation of radiographs takes place in three basic steps: (1) detection, (2) interpretation, and (3) evaluation.

All of these steps make use of the radiographer's visual acuity. Visual acuity is the ability to resolve a spatial pattern in an image. The ability of an individual to detect discontinuities in radiography is also affected by the lighting condition in the place of viewing, and the experience level for recognizing various features in the image. The radiographers need to acquire a definite skill to look the radiographs. Programme is also linked with the award of Level-II certification as per ASNT SNT TC 1A 2016 in case the participants successful undergo the programme and pass the examination with Min 80% marks.

OBJECTIVES

This certification course is developed to enable radiographers to develop an understanding of the types of defects found in weldments, casting and other wrought products and how they appear in a radiograph and how to report them.

COURSE COVERAGE

MODULE 1: RADIATION AND SAFETY

- Units
- Dosage and Health Effects
- Radiation detectors including Dosimeter, survey meter, film badge, TLD
- Types of Radiation
- X-Ray & Gamma Rays
- Properties of Radiation
- Attenuation of Electromagnetic Radiation

MODULE 2: RADIATION SOURCES

- X-rays
- Gamma rays

MODULE 3: FILM RADIOGRAPHY

- Film Speed
- Selection of Film
- Radiographic Screens
- Intensifying Screens
- Codes & Standards

MODULE 4: IMAGE QUALITY

- Geometric un-sharpness and definition
- Radiographic Sensitivity
- Radiographic Density
- Radiographic Contrast

MODULE 5: RADIOGRAPHIC EXPOSURE TECHNOLOGY

- Establishing 2mR boundary
- Radiographic Techniques
- Exposure Time
- Setup and Geometrical Un-sharpness
- IQI Selection and Placement
- Location markers

MODULE 6: VIEWING RADIOGRAPHS

- Equipment
- Acceptable Densities
- Film Viewing Considerations
- Indications: Relevant and Non-Relevant

MODULE 7: Weldments and Castings

- **Evaluation of Casting Radiograph**
 - Types of Castings
 - Origin and Orientation of discontinuities
 - Casting – Specifications/Standards/Codes
- (b). **Evaluation of Weldments**
 - Welding Process
 - Special welding processes
 - Discontinuities in welds

Overview on Examination (Objective/Subjective) test for the awards of Level –II Certificate in Radiographic Interpretation as per ASNT SNT TC 1A 2016.

METHODOLOGY

Methodology of the programme includes class room Sessions with Lecture/discussion with audio visual aid, benched marked 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. CMI will be the main method of instruction. Social /management Visits will also be conducted to encourage participants learning from each other's experiences in an informal platform. Besides the participant will be given intensive practice to interpret the films and give correct diagnosis.

TARGET PARTICIPANTS

Practicing Radiographers, Supervisors and Engineers and any other individual meeting the QR & Minimum Qualifications from the industries, who requires an in-depth knowledge of the radiographic interpretation of welds. The course concentrates on the identification of weld defects, assessment of radiographic quality and sentencing to example specifications

BENEFIT TO THE PARTICIPANTS:

- Hands on experience to go through large no of Radiographs and discussion on the interpretation techniques and best methods
- Refreshment on the defects generated in production
- Various Quality relate issues in the Radiography
- Gaining confidence in Film Interpretation

FACULTY

Mr. Lella Venkata Rama Rao



Certified ASNT NDT Level-III in UT, RT, MPI and LPT over 25 years of progressive experience, trained and certified more than 100 engineering graduates in NDT techniques

Beside Faculties of ESCI will also be sharing their experience

PROGRAMME DIRECTORS

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PROGRAMME DATES & TIMINGS

Dates: 26 – 30 October 2026

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.27,500/- (Rupees Twenty Seven Thousand and Five Hundred 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:

ASNT NDT Level II certification will be issued after successfully completion of the course and clearing exam. A Certificate of participation will also 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.