



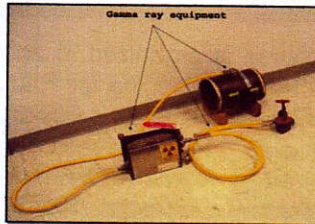
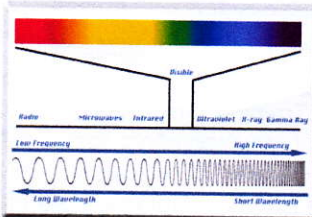
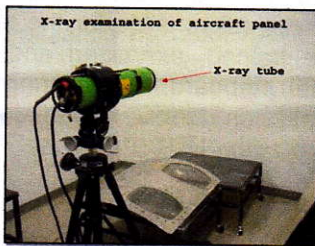
National Training Course  
on  
Non-Destructive Testing



**PROSPECTUS**

## Radiographic Testing Level-2

16 July – 10 August 2017



Organized by  
**Bangladesh Atomic Energy Commission**  
*in collaboration with*  
**NDT Personnel Certification Committee**

## Purpose of the Course

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Non-Destructive Testing (NDT) is the science of testing materials used for the detection of hidden flaws without destroying it or impairing its serviceability. NDT can be used to:

- ensure structural integrity
- prevent accident to save environment and human life
- control manufacturing process to minimize wastage of time and material
- minimize unscheduled plant shutdown
- ensure product reliability and customer satisfaction

The Radiographic Testing (RT) is one of the most popular and indispensable NDT methods used to detect hidden defects in machinery parts, semi-finished products and welded joints etc. that may cause catastrophic failure of parts or the plant as a whole and lead to loss of production or human life. It is well known that ionizing radiation has an adverse effect on human body; therefore safety should be a paramount importance at all time.

It is recognized that the effectiveness of NDT application depends on the capability of the persons who perform or are responsible for the test. For this purpose, the NDT personnel should be trained, examined and certified in accordance with national or international standard. Considering the above theme, Bangladesh Atomic Energy Commission (BAEC) has taken up training and certification program in collaboration with "NDT Personnel Certification Committee (NDTPCC)" since 1986.

## Nature of the Course

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The training course is organized in accordance with the standard IAEA syllabi comprising 80 hours of training for Radiographic Testing Level-2 as specified in IAEA-TECDOC-628/Rev.3, 2013 Edition "Training Guidelines in Non-Destructive Testing Techniques". This course covers both theoretical lectures and practical sessions followed by **formal examinations and certifications in accordance with International Standard ISO-9712:2012** "General Standard for the Qualification and Certification of Non-Destructive Testing Personnel".

## Course suitable for

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All categories of personnel such as Inspectors, Engineers, Surveyors and Technicians (Possessing RT-1 Certificate) who require a thorough and comprehensive knowledge on RT techniques, application standard, film interpretation, evaluation of test results, exposure & recording media and wants to acquaint with scope and limitations of RT method to inspect welds and other industrial products can attend the course.

## **Course Contents**

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- Definition, application, advantage and limitation of NDT, Basic principles of various NDT methods like: Visual Inspection, Liquid Penetrant Testing, Magnetic Particle Testing, Radiographic Testing, Ultrasonic Testing, Eddy Current Testing etc.
- Basic manufacturing processes and its associated defects
- Various Welding processes and associated defects and their causes
- Properties of X-ray & gamma ray, knowledge on Radiographic Equipment, uses of filters
- Construction and types of Radiographic Image Recorder, Sensitometry, Film selection, processing & artifacts, application of screen, factors controlling the quality of Radiographic image
- Effect of unsharpness & its measure for improvement
- Selection of technique, setup, exposure, image quality indicators
- Defect identification, characterization and its depth location
- Ionizing radiation hazards, maximum permissible doses, protection & safe practices, instrumentation & personal monitoring, regulations
- Practical exercises on test specimen containing artificial and natural flaws
- Codes, specifications and standards of NDT
- Recording and evaluation of discontinuities in accordance with standards
- Instruction writing for Level – 1 Personnel

## **Course Language**

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Course manual and language of instruction will be in English.

## **Course Duration**

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16 July – 10 August 2017 (9:00 am - 5:00 pm)

## **Participant's Eligibility for Application**

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Candidate should be Radiographic Testing Level – 1 Certified by NDTPCC, Bangladesh as per ISO 9712.

## **Liability of Organizer**

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While extreme care will be taken to ensure occupational safety, the organizers of the training course do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personnel property or from illness, injury, disability or death of a participant while he/she is traveling to and from or attending the course.

## **Application Procedure**

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The application should be submitted on the prescribed form along with passport size photographs, attested copies of certificates, experience certificates etc. The application should be sent on or before the last date to the following address:

**Md. Faruque Hossain Chowdhury**  
Course Coordinator &  
**Head, NDT Division**  
Atomic Energy Centre, Dhaka  
4, Kazi Nazrul Islam Avenue  
Ramna, Dhaka-1000

**Phone: 9669828**  
Fax: 58617946  
**e-mail: faruquephy@yahoo.com**

## **Venue**

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NDT Division, Atomic Energy Centre, Dhaka  
4, Kazi Nazrul Islam Avenue, Ramna, Dhaka-1000.

## **Last Date of Application**

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The last date of receiving application is:

**29 June 2017**

## **Payment of Course Fee**

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The course fee of Tk. 15,000/= (Taka Fifteen Thousand) only for each participant is to be paid in **advance** at the time of application. Payment should be made by Bank Draft/Pay Order in favor of "**Atomic Energy Centre, Dhaka**". The course fee does not include any **TAX/VAT**, accommodation, TA/DA or food.