



# Bahrain Society of Engineers Training Centre

## - TRAINING WORKSHOP -

# NDT



## General **N**on-**D**estructive **T**esting Knowledge

28 October -01 November 2018 (8am -4pm) \* Manama, Kingdom of Bahrain

### **INTRODUCTION:**

Non-destructive testing is the use of physical methods which will test materials, components and assemblies for flaws in their structure without damaging their future usefulness.

NDT is concerned with revealing flaws in the structure of a product. It, however, cannot predict where flaws will develop due to the design itself. NDT plays an important role in the quality control of a product. It is used during all the stages of manufacturing of a product.

Use of NDT during all stages of manufacturing results in increasing the safety and reliability of the product during operation, decreasing the cost of the product by reducing scrap and conserving materials, enhancing the reputation of the manufacturer as producer of quality goods, and boosting the sales of the product which bring more economical benefits to the manufacturer.

NDT is also used widely for routine or periodic determination of quality of the plants and structures during service. This not only increases the safety of operation but also eliminates any forced shut down of the plants.



## OBJECTIVES & BENEFITS:

- ❖ Know the principals of Non-Destructive Testing methods including (UT, RT, MT & PT).
- ❖ Know the importance of NDT in the monitoring of products integrity through various stages (Raw material, Fabrication, in-service and maintenance) as a tool for Quality Control and Assurance, where these tests are conducted according to the international standards, and presenting the participants with the advantages and disadvantages of these test methods.
- ❖ Know the importance of the Non-Destructive Testing in evaluation the samples in according to the international standards.

## METHODOLOGY:

Quizzes, role play, class room discussions and team work will be part of our training course to enhance the learning process. Participants will be asked to share their experience and ideas for enriching the overall benefit of the course.

## WHO SHOULD ATTEND:

- Manufacturing Eng. / Tech.
- Design Eng. / Tech.
- Maintenance Eng. / Tech.
- Inspection and Testing Eng. / Tech.
- Production Eng. / Tech.
- QA-QC Eng.
- Product Development Eng.
- Plant and Site Eng. and Managers

**COURSE FEE: BD 600.000**

*Course Fee inclusions:* Course manual, certificate of achievement, Lunch & Refreshments

## Quality Procedures:

### Assessment:

All assessments will be conducted during the course. Assessment tasks consist of *e.g.*: quizzes, practical discussions, case studies, role plays, on-site exercises, hands-on.

### Certificates:

Certificates will be awarded to the learners who pass in the assessments and completed at least 75% of the attendance report.

### Course Language:

English

### Progress Reports:

Progress and attendance reports will be sent to the learner's employer indicating the progress made towards the training objective.

## COURSE OUTLINE:

- ✓ Basic Theory and Physical Principle of NDT methods
- ✓ Test Equipment and Accessories
- ✓ Tested Objects and Materials (Detection of Flaws)
- ✓ Special Requirements and Considerations
- ✓ Produced Data and Interpretation of Results
- ✓ Advantages and Disadvantages of each method
- ✓ Health Safety Requirements



### Day 1

Introduction to NDT

Qualification & Certification Systems of NDT Personnel

### Day 2

Materials & Metallurgy Processes & Defects

### Day 3

Radiographic Testing (RT)

### Day 4

Ultrasonic Testing (UT)

### Day 5

Magnetic Particle Testing (MT)  
Liquid Penetrant Testing (PT)

## COURSE TRAINER: *Eng. Saed Barakat*

Eng. Saed Barakat is a Mechanical Engineer from Jordan University of Science & Technology University (Jordan). He worked 17 years in the field of NDT, QA/QC, Industrial Inspection, Radiation Protection, Consultations & Training.

- Senior Welding Inspector.
- ASNT NDT Level III (UT, RT, MT & PT) - (ID No. 187859).
- ISO 9712 NDT Level III (UT, RT, MT & PT) - (PERSON Reg. No. 3001).
- Registered Internal Quality Management System Auditor, by Lloyd's Register.
- Authorized Inspector by INTERTEK, TUV & BV.
- Assigned Examiner by Jordanian Certification Body – Conformity Assessment Center (CAC) in the field of NDT Certification of Personnel in accordance with the requirements of ISO 9712.
- Assigned Inspector by Jordan Institution for Standards and Metrology (JISM) for inspection works related to LPG pressurized vessels.
- Technical Assessor in the field of Non-Destructive Testing (NDT) for Laboratories Accreditation, approved by Accreditation Unit (AU) in Jordan Institution for Standards and Metrology (JISM).
- Assigned Expert by the International Atomic Energy Agency (IAEA) to the Radiation Protection & Control Department (RPCD) – Federal Environmental Agency (FEA) / Dubai - United Arab Emirates.

# REGISTRATION FORM

## “General Non-Destructive Testing Knowledge”

Name: .....

Organization:.....Department: .....

Position ..... Email: .....

Address: .....

Telephone:..... Mobile: .....Fax: .....

Course Title	Duration	Date	Venue	Timing	Course Fee
<b>General Non-Destructive Testing Knowledge</b>	<b>5days</b>	<b>28 Oct - 01 Nov 2018</b>	<b>Manama Kingdom of Bahrain</b>	<b>8:00 am to 4:00 pm</b>	<b>BD 600</b>

**Note:**

- For Individual/ overseas, payment shall be received upon submission of the completed registration form.
- Registration shall be reconfirmed only once payment has been made prior to the course.
- No Show of participant/s during the course will be charged in full amount accordingly.
- Cancellation of participant/s shall be submitted in writing to BSE ten days (10 days) before the course.

**Method of payment:**

- I will pay by Cash
- Invoice the Organization (Please attach the authorization/nomination letter)
- I enclose a Banker’s Draft payable to Bahrain Society of Engineers-Training Centre
- Bank BIC: NBOBBHBM / IBAN: BH18 NBOB 0000 0099 0989 11
- National Bank of Bahrain-Manama Main Branch
- Please Debit to Amex: \_\_\_\_\_ Visa: \_\_\_\_\_ Master Card: \_\_\_\_\_

Card Number:..... Expiry Date:.....

Card Holder’s name and address (if different from above) .....  
.....

Signature.....

Date:.....

*Please send this form to:*

**BSE - Training Centre**

Tel: +973 17-810725 or 17-727100, Fax: +973 17-827475

Email: bsetraining@batelco.com.bh