

# ULTRASONIC TESTING (NDT-UT2)

SABAH SKILLS & TECHNOLOGY CENTRE



## OBJECTIVES

At the end of the course, attendees shall be able to:

- Select suitable NDT technique and test method to be used
- Define the limitations of application of the testing method
- Translate NDT standards and specifications into NDT instructions
- Measure thickness of steel plates & determine levels of attenuation
- Conduct test as per specifications
- Interpret and evaluate results according to applicable standards
- Organise and report the results of non-destructive tests
- Meets syllabus requirements for Level 2 – PCN or EN 473

## COURSE CONTENTS

Principles of Ultrasonic Testing

- Generation of ultrasonic waves
- Properties of the transducer or probes
- Acoustic impedance, Beam Divergence – Dead, Near and Far zone
- Influence of properties of test object on sound propagation
- Sound velocity and attenuation
- Equipment - controls and functions of ultrasonic instrument
- Signal presentation - A, B, C and D scans
- Scanning techniques – manual, semi-automatic, automatic
- Immersion testing and Through-transmission technique - basic principle
- Calibration of Testing Systems
- Sensitivity setting – simple methods, BWE, DAC
- Detectability of Defects – advantages and limitations of the test method with regard to defect detection
- Factors Affecting the Performance of the Ultrasonic Test
- Conducting and Recording the Test
- Procedure to be adopted to carry out the test and Flaw assessment, sizing techniques and reporting
- Snell's Law concerning reflection, Refraction, mode conversion and Calculations
- Interpretation of Test Results to acceptance standards
- Basic Welding Processes and product technologies
- Types of defect associated with particular parent metal/welding process combinations
- Examination of parent plate, butt welds and configuration joints

**Duration**  
14 Days

**SSTC Member**  
RM 9,243.20

**Non SSTC Member**  
RM 9,349.20

**FSI's Member**  
RM 9,296.20

Fee is inclusive of  
refreshment, lunch,  
course materials and  
certificate of attendance

\*Rates inclusive of 6% GST

### Sabah Skills & Technology Centre

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## WHO SHOULD ATTEND

Technicians, Instructors, Surveyors, Engineers, NDT supervisors, QA/QC inspectors or anyone who is interested in NDT and requiring a general knowledge of NDT methods and ideal preparation for PCN examinations.

## RESOURCE PERSON

**Nizaha binti Mohamed Ashari** is currently the full time instructor for Magnetic Testing and Penetrant Testing with MINDT since 2006. She also has a Master's degree in Telecommunication Engineering from Universiti Malaya and also an Electrical Engineering degree from Universiti Teknologi Malaysia.

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