



# TUV / IICS 5.5 ULTRASONIC THICKNESS MEASUREMENT EXAMINER

**COURSE BASED ON ISO 16809 & ASME BPVC SEC V  
SE797 / SE797M**

**COURSE DURATION: 4-DAY** (3-DAY TRAINING + 1-DAY EXAM)

## **COURSE DESCRIPTION**

The course is designed to equip technical personnel with necessary knowledge in ultrasonic testing and practical training in carrying out UT thickness measurement as part of their routine plant construction and maintenance program.

## **COURSE OBJECTIVE**

Candidates who successfully completed the course will be able to:

- ✓ Understand the basic working principal of ultrasonic testing in thickness measurement
- ✓ Utilize ultrasonic flaw detector and digital thickness gauge to appraise wall thickness of various materials
- ✓ Measure residual thickness through protective coating for in-service equipment various operating conditions

## COURSE OUTLINE

### DAY 1

- Ultrasonic fundamentals
- Behavior of sound beam
- Factor affecting the propagation of ultrasound
- Ultrasonic testing equipment set
- Probe design & probe selection
- Type of couplant and coupling techniques
- Equipment set-up & calibration
- Practical session: thickness measurement for various materials with flat uncoated surface

### DAY 2

- Measurement modes in accordance to ISO 16809 & sizing techniques
- Thickness measurement during manufacturing stage
- Residual thickness measurement during in-service inspection
- Factor influence on thickness measurement accuracy
- Practical session: Thickness gauging for plates with lamination, pipe through coating

### DAY 3

- Course assessment
- Instruction writing
- Practical session: Thickness gauging for plates with heavy corrosion

### DAY 4

- Examination
  - Session 1 (Morning)
  - Session 2 (Afternoon)

## WHO SHOULD ATTEND

Highly recommended for all technical personnel who are involved in new plant construction and maintenance across the entire manufacturing, power plant, oil & gas, chemical processing and petrochemical industries including:

- API 510/ 570/ 653 Inspectors
- Incoming Material Controller
- Quality Control Personnel
- Plant Maintenance Professionals
- Corrosion Engineers and Construction Supervisors

This course is also suitable for all school leavers, fresh graduates and candidates who are inspired to build their careers in the field of Non-destructive Testing.



### DURATION

3-Day Training + 1-Day Exam

### LANGUAGE

English

### ITEMS TO BRING

- Ultrasonic Thickness Gauging with A-Scan (If available)
- OR
- Ultrasonic Thickness Flaw Detection (If available)
- Scientific Calculator
- Laptop
- Lots of Questions
- A "CAN-DO" Attitude

**Stationeries such as pen and highlighter will be provided.**



## TRAINER'S PROFILE

# DENNIS OON

Dennis Oon has more than 8 years hands-on experience in the oil and gas EPIC projects and construction of downstream processing plant. He first started his career as a trainee operations engineer in the steel fabrication yard with SapuraKencana HL (formally known as Kencana HL). He later pursued his career into EPIC projects and decommissioning of offshore assets for various clients such as Petronas, Sarawak Shell, Brunei Shell Petroleum in Malaysia, Brunei, Vietnam, Myanmar, Indonesia and Thailand.

He also involved in various downstream petrochemical and oleochemical plant construction as inspection engineer for UOP, Knauf Engineering and KLK Oleomas in Malaysia, Vietnam and Philipines. He has broad experience in NDT, quality assurance and quality control and outage inspection. Dennis is currently an active trainer and inspection engineer acting for third party and client site representative in quality control, welding & painting inspection and construction of pressure vessels, process piping and steam boilers.

## SPECIAL SKILLS

- Inspector for third party and owner in welding, non-destructive testing, quality assurance and quality control and inspection
- Qualified API Inspector for inspection in piping and pressure vessels
- Qualified Ultrasonic weld and thickness gauging examiner for new built and periodic inspection of static equipments
  - \* Pressure vessels
  - \* Steam boilers
  - \* Piping systems

## TECHNICAL QUALIFICATIONS:

- BEng (Hons) in Mechanical Engineering majoring in acoustic and corrosion monitoring
- MSc in Petroleum Engineering majoring in well testing and interpretation
- Certified API 510 Pressure Vessel Inspector
- Certified API 570 Piping Inspector
- Certified CSWIP 3.1 Welding Inspector
- Certified PCN UT Inspector Level 2
- Certified CSWIP Ultrasonic Thickness Measurement Inspector Level 2
- Certified CSWIP Radiographic Interpreter Level 2
- Certified BGAS CSWIP Site Coating Inspector Level 2