



Quality Training Center - 13339 NE Airport Way, Suite 100
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Level II - Ultrasonic Testing

Course: A 40 hour course intended to address the body of knowledge outlined in ASNT CP-105.

Instructor: John R. Clark
ASNT Level III

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REFERENCE & TRAINING MATERIAL:

1. ASNT UT Level I/II Powerpoint Presentation
2. ASNT – Ultrasonic Testing Student Guide (2009 edition)
3. ASNT PTP Ultrasonic Testing Classroom Training Book (2007 edition)
4. AWS D1.5 Part C. Ultrasonic Testing of Groove Welds
5. ASTM E 114 (2005)

UT Level II Lesson Plan Outline

Day 1

Lesson 6 Review of Ultrasonic Techniques

- A. Ultrasonic Instruments
- B. Ultrasonic Screen Displays
- C. Transducers
- D. Base Material Testing
- E. Weld Testing
- F. Quiz (UT Lesson 6)
- G. Lab Exercise 1 (UT Lesson 6)

Reading Assignment: Chapter 6 and 7 of The Ultrasonic Training Classroom Training Book



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Day 2

Lesson 7 Equipment Calibration

- A. Transducer Performance Checks
- B. Straight Beam Calibration
- C. Angle Beam Calibration
- D. Quiz (UT Lesson 7)
- E. Lab Exercise 1 (UT Lesson 7)

Reading Assignment: Chapter 8 of The Ultrasonic Training Classroom Training Book

Day 3

Lesson 8 Evaluation of Base Materials

- A. Castings
- B. Slabs
- C. Billets
- C. Bars and Rods
- D. Plate and Sheets
- E. Extrusion Process
- F. Forging
- G. Composites
- H. Welds
- I. Quiz (UT Lesson 8)
- J. Lab Exercise (UT Lesson 8)

Reading Assignment: Chapter 9 of The Ultrasonic Training Classroom Training Book

Day 3

Lesson 9 Ultrasonic Testing Applications

- A. Testing Applications
- B. Detecting Planar Discontinuities
- C. Scattering Discontinuities
- D. Test Objects with Curved Surfaces
- E. Test Objects with Irregular Surfaces



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- F. Compressed Discontinuities
- G. Material Characterization
- H. Quiz (UT Lesson 9)
- I. Lab Exercise (UT Lesson 9)

Reading Assignment: Chapter 10 of The Ultrasonic Training Classroom Training Book

Day 4

Lesson 10 Transducer Characteristics

- A. Transducer Characterization Equipment
- B. Recording of Transducer Beam Profiles
- C. Analysis of Transducer Data
- D. Quiz (UT Lesson 10)

Reading Assignment: Chapter 11 of The Ultrasonic Training Classroom Training Book

Day 5

Lesson 11 Evaluation Standards

- A. ASTM
- B. ASME
- C. API
- D. AWS
- E. Sample Specifications
- F. Quiz (UT Lesson 11)
- G. Review of Level II Ultrasonic Testing
- H. Final Examination