



Work Identification

WI321

Airborne Ultrasound – Level I

Recommended for

Inspectors seeking to advance their knowledge in Airborne Ultrasound inspections. Supervisors, energy auditors, and service company personnel who perform PDM, energy audits, or leak detection for their clients. Service personnel who desire to demonstrate technical and inspection proficiency to their clients.

Course objective

At the end of this course, participants will have a better understanding of the theory, principles, and practices of Airborne Ultrasound Technology. This course fulfills training and testing requirements of Level I Certification.

Course description

Participants are introduced to the basics of Airborne Ultrasound, leak detection, electrical inspection, and mechanical inspection. General, specific, and practical tests are given at the end of the course. Students are expected to pass with a composite score of 80% or higher. Topics covered

Day 1:

- Theory of sound
- Basic physics of ultrasound
- Concepts of amplitude
- Wave modes
- Ultrasound wave transmission and effects
- Effectiveness of Airborne Ultrasound
- Technology integration
- Equipment/instrument overview
- ASTM standard test methods

Day 2:

- Leak detection
 - Fluids defined
 - Leak rates
 - Acoustic properties of leaks
 - Leak types
 - Leak strategies
 - Leak detection methods

Day 3:

- Electrical inspection
 - Safety considerations
 - Overview of types of electrical equipment
 - Voltages defined
 - Detection methods
 - Confirmation methods
 - Substation inspection
 - Low voltage inspection techniques
 - Inspection of motor control centers

Day 4:

- Mechanical inspection
 - Considerations of ultrasonic generation
 - Troubleshooting methods
 - Trending methods
 - Inspection methods
 - Monitoring and recording information

Day 5:

- General overview of Airborne Ultrasound technology
- Review of technology
- Practical experience review
- General, specific, and practical examination

2009 course schedule

Feb. 9–13	Charlotte, NC
March 16–20	Crystal River, FL
April 20–24	Houston, TX
April 27–May 1	St. Louis, MO
May 4–8	Edmonton, BC
May 11–15	Pittsburgh PA
June 8–12	Albany, NY
June 15–19	Portland, OR
July 13–17	Dayton, OH
Aug. 17–21	Des Moines, IA
Aug. 24–28	Denver, CO
Sept. 14–18	Toronto, ON
Sept. 21–25	Milwaukee, WI
Oct. 19–23	Nashville, TN
Nov. 2–6	Irwindale, CA
Dec. 7–11	Birmingham, AL

2009 tuition

Public classes	\$1,495
On-site	Tuition on request based on number of students

5 days

A written examination is included with this course and is conducted on the afternoon of the final day of class.