



Standard Specification for Agencies Performing Nondestructive Testing¹

This standard is issued under the fixed designation E543; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This specification has been approved for use by agencies of the Department of Defense.

1. Scope*

1.1 This specification covers minimum requirements for agencies performing nondestructive testing (NDT).

1.2 When using this specification to assess the capability of, or to accredit NDT agencies, Guide E1359 shall be used as a basis for the survey. It can be supplemented as necessary with more detail in order to meet the auditor's specific needs.

1.3 This specification can be used as a basis to evaluate testing or inspection agencies, or both, and is intended for use for the qualifying or accrediting, or both, of testing or inspection agencies, public or private.

1.4 The use of SI or inch-pound units, or combination thereof, will be the responsibility of the technical committee whose standards are referred to in this standard.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

E94 Guide for Radiographic Examination

E114 Practice for Ultrasonic Pulse-Echo Straight-Beam Contact Testing

E125 Reference Photographs for Magnetic Particle Indications on Ferrous Castings

E127 Practice for Fabricating and Checking Aluminum Alloy Ultrasonic Standard Reference Blocks

E164 Practice for Contact Ultrasonic Testing of Weldments

E165 Practice for Liquid Penetrant Examination for General Industry

E213 Practice for Ultrasonic Testing of Metal Pipe and Tubing

E215 Practice for Standardizing Equipment for Electromagnetic Testing of Seamless Aluminum-Alloy Tube

E243 Practice for Electromagnetic (Eddy Current) Examination of Copper and Copper-Alloy Tubes

E273 Practice for Ultrasonic Testing of the Weld Zone of Welded Pipe and Tubing

E309 Practice for Eddy-Current Examination of Steel Tubular Products Using Magnetic Saturation

E317 Practice for Evaluating Performance Characteristics of Ultrasonic Pulse-Echo Testing Instruments and Systems without the Use of Electronic Measurement Instruments

E376 Practice for Measuring Coating Thickness by Magnetic-Field or Eddy-Current (Electromagnetic) Testing Methods

E426 Practice for Electromagnetic (Eddy-Current) Examination of Seamless and Welded Tubular Products, Titanium, Austenitic Stainless Steel and Similar Alloys

E427 Practice for Testing for Leaks Using the Halogen Leak Detector Alkali-Ion Diode (Withdrawn 2013)³

E428 Practice for Fabrication and Control of Metal, Other than Aluminum, Reference Blocks Used in Ultrasonic Testing

E431 Guide to Interpretation of Radiographs of Semiconductors and Related Devices

E432 Guide for Selection of a Leak Testing Method

E433 Reference Photographs for Liquid Penetrant Inspection

E479 Guide for Preparation of a Leak Testing Specification (Withdrawn 2014)³

E493 Test Methods for Leaks Using the Mass Spectrometer Leak Detector in the Inside-Out Testing Mode

E494 Practice for Measuring Ultrasonic Velocity in Materials

E498 Test Methods for Leaks Using the Mass Spectrometer Leak Detector or Residual Gas Analyzer in the Tracer Probe Mode

E499 Test Methods for Leaks Using the Mass Spectrometer

¹ This specification is under the jurisdiction of ASTM Committee E07 on Nondestructive Testing and is the direct responsibility of Subcommittee E07.09 on Nondestructive Testing Agencies.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.