

Nondestructive Testing

Table of Contents

- E94-04(2010) Standard Guide for Radiographic Examination
- E114-10 Standard Practice for Ultrasonic Pulse-Echo Straight-Beam Contact Testing
- E125-63(2013) Standard Reference Photographs for Magnetic Particle Indications on Ferrous Castings
- E127-10 Standard Practice for Fabricating and Checking Aluminum Alloy Ultrasonic Standard Reference Blocks
- E155-10 Standard Reference Radiographs for Inspection of Aluminum and Magnesium Castings
- E164-13 Standard Practice for Contact Ultrasonic Testing of Weldments
- E165/E165M-12 Standard Practice for Liquid Penetrant Examination for General Industry
- E186-10 Standard Reference Radiographs for Heavy-Walled (2 to 4½-in. (50.8 to 114-mm)) Steel Castings
- E192-13 Standard Reference Radiographs of Investment Steel Castings for Aerospace Applications
- E213-14 Standard Practice for Ultrasonic Testing of Metal Pipe and Tubing
- E215-11 Standard Practice for Standardizing Equipment for Electromagnetic Testing of Seamless Aluminum-Alloy Tube
- E242-01(2010) Standard Reference Radiographs for Appearance of Radiographic Images as Certain Parameters Are Changed
- E243-13 Standard Practice for Electromagnetic (Eddy Current) Examination of Copper and Copper-Alloy Tubes
- E272-10 Standard Reference Radiographs for High-Strength Copper-Base and Nickel-Copper Alloy Castings
- E273-10 Standard Practice for Ultrasonic Testing of the Weld Zone of Welded Pipe and Tubing
- E280-10 Standard Reference Radiographs for Heavy-Walled (4½ to 12-in. (114 to 305-mm)) Steel Castings
- E309-11 Standard Practice for Eddy Current Examination of Steel Tubular Products Using Magnetic Saturation
- E310-10 Standard Reference Radiographs for Tin Bronze Castings
- E317-11 Standard Practice for Evaluating Performance Characteristics of Ultrasonic Pulse-Echo Testing Instruments and Systems without the Use of Electronic Measurement Instruments
- E376-11 Standard Practice for Measuring Coating Thickness by Magnetic Field or Eddy-Current (Electromagnetic) Testing Methods
- E381-11 Standard Reference Radiographs for Steel Fusion Welds
- E426-12 Standard Practice for Electromagnetic (Eddy-Current) Examination of Seamless and Welded Tubular Products, Titanium, Austenitic Stainless Steel and Similar Alloys
- E428-08(2013) Standard Practice for Fabrication and Control of Metal,

Other than Aluminum, Reference Blocks Used in Ultrasonic Testing

E431-96(2011) Standard Guide to Interpretation of Radiographs of Semiconductors and Related Devices

E432-91(2011) Standard Guide for Selection of a Leak Testing Method

E433-71(2013) Standard Reference Photographs for Liquid Penetrant Inspection

E446-10 Standard Reference Radiographs for Steel Castings Up to 2 in. (50.8 mm) in Thickness

E493/E493M-11 Standard Practice for Leaks Using the Mass Spectrometer Leak Detector in the Inside-Out Testing Mode

E494-10 Standard Practice for Measuring Ultrasonic Velocity in Materials

E498/E498M-11 Standard Practice for Leaks Using the Mass Spectrometer Leak Detector or Residual Gas Analyzer in the Tracer Probe Mode

E499/E499M-11 Standard Practice for Leaks Using the Mass Spectrometer Leak Detector in the Detector Probe Mode

E505-01(2011) Standard Reference Radiographs for Inspection of Aluminum and Magnesium Die Castings

E515-11 Standard Practice for Leaks Using Bubble Emission Techniques

E543-13 Standard Specification for Agencies Performing Nondestructive Testing

E545-14 Standard Test Method for Determining Image Quality in Direct Thermal Neutron Radiographic Examination

E566-14 Standard Practice for Electromagnetic (Eddy Current) Sorting of Ferrous Metals

E569/E569M-13 Standard Practice for Acoustic Emission Monitoring of Structures During Controlled Stimulation

E570-09 Standard Practice for Flux Leakage Examination of Ferromagnetic Steel Tubular Products

E571-12 Standard Practice for Electromagnetic (Eddy-Current) Examination of Nickel and Nickel Alloy Tubular Products

E587-10 Standard Practice for Ultrasonic Angle-Beam Contact Testing

E592-99(2009)e1 Standard Guide on Obtainable ASTM Equivalent Penetrant Sensitivity for Radiography of Steel Plates 1/4 to 2 in. (6 to 51 mm) Thick with X Rays and 1/2 to 6 in. (25 to 152 mm) Thick with Cobalt-60

E650/E650M-12 Standard Guide for Mounting Piezoelectric Acoustic Emission Sensors

E664/E664M-11 Standard Practice for the Measurement of the Apparent Attenuation of Longitudinal Ultrasonic Waves by Immersion Method

E689-10 Standard Reference Radiographs for Ductile Iron Castings

E691-10 Standard Practice for In Situ Electromagnetic (Eddy-Current) Examination of Nonmagnetic Heat Exchanger Tubes

E703-14 Standard Practice for Electromagnetic (Eddy Current) Sorting of Nonferrous Metals

E709-14 Standard Guide for Magnetic Particle Testing

E746-07(2014) Standard Practice for Determining Relative Image Quality Response of Industrial Radiographic Imaging Systems

E747-04(2010) Standard Practice for Design, Manufacture and Material Grouping Classification of Wire Image Quality Indicators (IQI) Used for Radiology

E748-02(2008) Standard Practices for Thermal Neutron Radiography of Materials

E749/E749M-12 Standard Practice for Acoustic Emission Monitoring During Continuous Welding

E750-10 Standard Practice for Characterizing Acoustic Emission Instrumentation

E751/E751M-12 Standard Practice for Acoustic Emission Monitoring During Resistance Spot-Welding

E797/E797M-10 Standard Practice for Measuring Thickness by Manual Ultrasonic Pulse-Echo Contact Method

E801-06(2011) Standard Practice for Controlling Quality of Radiological Examination of Electronic Devices

E802-95(2010) Standard Reference Radiographs for Gray Iron Castings Up to 4 1/2 in. (114 mm) in Thickness

E803-91(2013) Standard Test Method for Determining the L/D Ratio of Neutron Radiography Beams

E908-98(2012) Standard Practice for Calibrating Gaseous Reference Leaks

E976-10 Standard Guide for Determining the Reproducibility of Acoustic Emission Sensor Response

E977-05(2014) Standard Practice for Thermoelectric Sorting of Electrically Conductive Materials

E999-10 Standard Guide for Controlling the Quality of Industrial Radiographic Film Processing

E1000-98(2009) Standard Guide for Radiography

E1001-11 Standard Practice for Detection and Evaluation of Discontinuities by the Immersed Pulse-Echo Ultrasonic Method Using Longitudinal Waves

E1002-11 Standard Practice for Leaks Using Ultrasonics

E1003-13 Standard Practice for Hydrostatic Leak Testing

E1004-09 Standard Test Method for Determining Electrical Conductivity Using the Electromagnetic (Eddy-Current) Method

E1025-11 Standard Practice for Design, Manufacture, and Material Grouping Classification of Hole-Type Image Quality Indicators (IQI) Used for Radiology

E1030-05(2011) Standard Test Method for Radiographic Examination of Metallic Castings

E1032-12 Standard Test Method for Radiographic Examination of Weldments

E1033-13 Standard Practice for Electromagnetic (Eddy Current)

Examination of Type F-Continuously Welded (CW) Ferromagnetic Pipe and Tubing Above the Curie Temperature

E1065/E1065M-14 Standard Guide for Evaluating Characteristics of Ultrasonic Search Units

E1066/E1066M-12 Standard Practice for Ammonia Colorimetric Leak Testing

E1067/E1067M-11 Standard Practice for Acoustic Emission Examination of Fiberglass Reinforced Plastic Resin (FRP) Tanks/Vessels

E1079-10 Standard Practice for Calibration of Transmission Densitometers

E1106-12 Standard Test Method for Primary Calibration of Acoustic Emission Sensors

E1114-09e1 Standard Test Method for Determining the Size of Iridium-192 Industrial Radiographic Sources

E1118/E1118M-11 Standard Practice for Acoustic Emission Examination of Reinforced Thermosetting Resin Pipe (RTRP)

E1135-12 Standard Test Method for Comparing the Brightness of Fluorescent Penetrants

E1139/E1139M-12 Standard Practice for Continuous Monitoring of Acoustic Emission from Metal Pressure Boundaries

E1158-14 Standard Guide for Material Selection and Fabrication of Reference Blocks for the Pulsed Longitudinal Wave Ultrasonic Testing of Metal and Metal Alloy Production Material

E1161-09(2014) Standard Practice for Radiologic Examination of Semiconductors and Electronic Components

E1165-12 Standard Test Method for Measurement of Focal Spots of Industrial X-Ray Tubes by Pinhole Imaging

E1208-10 Standard Practice for Fluorescent Liquid Penetrant Testing Using the Lipophilic Post-Emulsification Process

E1209-10 Standard Practice for Fluorescent Liquid Penetrant Testing Using the Water-Washable Process

E1210-10 Standard Practice for Fluorescent Liquid Penetrant Testing Using the Hydrophilic Post-Emulsification Process

E1211/E1211M-12 Standard Practice for Leak Detection and Location Using Surface-Mounted Acoustic Emission Sensors

E1212-12 Standard Practice for Quality Management Systems for Nondestructive Testing Agencies

E1213-97(2009) Standard Test Method for Minimum Resolvable Temperature Difference for Thermal Imaging Systems

E1219-10 Standard Practice for Fluorescent Liquid Penetrant Testing Using the Solvent-Removable Process

E1220-10 Standard Practice for Visible Penetrant Testing Using Solvent-Removable Process

E1254-13 Standard Guide for Storage of Radiographs and Unexposed Industrial Radiographic Films

E1255-09 Standard Practice for Radioscopy

E1311-89(2010) Standard Test Method for Minimum Detectable Temperature Difference for Thermal Imaging Systems

E1312-09(2013)e1 Standard Practice for Electromagnetic (Eddy-Current) Examination of Ferromagnetic Cylindrical Bar Product Above the Curie Temperature

E1316-14 Standard Terminology for Nondestructive Examinations

E1320-10 Standard Reference Radiographs for Titanium Castings

E1324-11 Standard Guide for Measuring Some Electronic Characteristics of Ultrasonic Testing Instruments

E1359-12 Standard Guide for Evaluating Capabilities of Nondestructive Testing Agencies

E1390-12 Standard Specification for Illuminators Used for Viewing Industrial Radiographs

E1411-09 Standard Practice for Qualification of Radioscopic Systems

E1416-09 Standard Test Method for Radioscopic Examination of Weldments

E1417/E1417M-13 Standard Practice for Liquid Penetrant Testing

E1418-10 Standard Practice for Visible Penetrant Testing Using the Water-Washable Process

E1419-09 Standard Practice for Examination of Seamless, Gas-Filled, Pressure Vessels Using Acoustic Emission

E1441-11 Standard Guide for Computed Tomography (CT) Imaging

E1444/E1444M-12 Standard Practice for Magnetic Particle Testing

E1453-09 Standard Guide for Storage of Magnetic Tape Media that Contains Analog or Digital Radioscopic Data

E1475-13 Standard Guide for Data Fields for Computerized Transfer of Digital Radiological Examination Data

E1476-04(2014) Standard Guide for Metals Identification, Grade Verification, and Sorting

E1495/E1495M-12 Standard Guide for Acousto-Ultrasonic Assessment of Composites, Laminates, and Bonded Joints

E1543-00(2011) Standard Test Method for Noise Equivalent Temperature Difference of Thermal Imaging Systems

E1570-11 Standard Practice for Computed Tomographic (CT) Examination

E1571-11 Standard Practice for Electromagnetic Examination of Ferromagnetic Steel Wire Rope

E1603/E1603M-11 Standard Practice for Leakage Measurement Using the Mass Spectrometer Leak Detector or Residual Gas Analyzer in the Hood Mode

E1606-09 Standard Practice for Electromagnetic (Eddy-Current) Examination of Copper Redraw Rod for Electrical Purposes

E1629-12 Standard Practice for Determining the Impedance of Absolute Eddy-Current Probes

E1647-09 Standard Practice for Determining Contrast Sensitivity in

Radioscopy

E1648-95(2011) Standard Reference Radiographs for Examination of Aluminum Fusion Welds

E1672-12 Standard Guide for Computed Tomography (CT) System Selection

E1695-95(2013) Standard Test Method for Measurement of Computed Tomography (CT) System Performance

E1734-09 Standard Practice for Radioscopic Examination of Castings

E1735-07(2014) Standard Test Method for Determining Relative Image Quality of Industrial Radiographic Film Exposed to X-Radiation from 4 to 25 MeV

E1736-10 Standard Practice for Acousto-Ultrasonic Assessment of Filament-Wound Pressure Vessels

E1742/E1742M-12 Standard Practice for Radiographic Examination

E1774-12 Standard Guide for Electromagnetic Acoustic Transducers (EMATs)

E1781/E1781M-13 Standard Practice for Secondary Calibration of Acoustic Emission Sensors

E1814-14 Standard Practice for Computed Tomographic (CT) Examination of Castings

E1815-08(2013)e1 Standard Test Method for Classification of Film Systems for Industrial Radiography

E1816-12 Standard Practice for Ultrasonic Testing Using Electromagnetic Acoustic Transducer (EMAT) Techniques

E1817-08(2014) Standard Practice for Controlling Quality of Radiological Examination by Using Representative Quality Indicators (RQIs)

E1862-97(2010) Standard Test Methods for Measuring and Compensating for Reflected Temperature Using Infrared Imaging Radiometers

E1888/E1888M-12 Standard Practice for Acoustic Emission Examination of Pressurized Containers Made of Fiberglass Reinforced Plastic with Balsa Wood Cores

E1897-97(2010) Standard Test Methods for Measuring and Compensating for Transmittance of an Attenuating Medium Using Infrared Imaging Radiometers

E1901-13 Standard Guide for Detection and Evaluation of Discontinuities by Contact Pulse-Echo Straight-Beam Ultrasonic Methods

E1930/E1930M-12 Standard Practice for Examination of Liquid-Filled Atmospheric and Low-Pressure Metal Storage Tanks Using Acoustic Emission

E1931-09 Standard Guide for X-Ray Compton Scatter Tomography

E1932-12 Standard Guide for Acoustic Emission Examination of Small Parts

E1933-99a(2010) Standard Test Methods for Measuring and Compensating for Emissivity Using Infrared Imaging Radiometers

E1934-99a(2014) Standard Guide for Examining Electrical and Mechanical Equipment with Infrared Thermography

E1935-97(2013) Standard Test Method for Calibrating and Measuring CT Density

E1936-03(2011) Standard Reference Radiograph for Evaluating the Performance of Radiographic Digitization Systems

E1955-04(2009) Standard Radiographic Examination for Soundness of Welds in Steel by Comparison to Graded ASTM E 390 Reference Radiographs

E1961-11 Standard Practice for Mechanized Ultrasonic Testing of Girth Welds Using Zonal Discrimination with Focused Search Units

E1962-09 Standard Practice for Ultrasonic Surface Testing Using Electromagnetic Acoustic Transducer (EMAT) Techniques

E2001-13 Standard Guide for Resonant Ultrasound Spectroscopy for Defect Detection in Both Metallic and Non-metallic Parts

E2002-98(2009) Standard Practice for Determining Total Image Unsharpness in Radiology

E2003-10 Standard Practice for Fabrication of the Neutron Radiographic Beam Purity Indicators

E2007-10 Standard Guide for Computed Radiography

E2023-10 Standard Practice for Fabrication of Neutron Radiographic Sensitivity Indicators

E2024/E2024M-11 Standard Practice for Atmospheric Leaks Using a Thermal Conductivity Leak Detector

E2033-99(2013) Standard Practice for Computed Radiology (Photostimulable Luminescence Method)

E2075/E2075M-10 Standard Practice for Verifying the Consistency of AE-Sensor Response Using an Acrylic Rod

E2076/E2076M-10 Standard Practice for Examination of Fiberglass Reinforced Plastic Fan Blades Using Acoustic Emission

E2096/E2096M-10 Standard Practice for In Situ Examination of Ferromagnetic Heat-Exchanger Tubes Using Remote Field Testing

E2104-09 Standard Practice for Radiographic Examination of Advanced Aero and Turbine Materials and Components

E2191/E2191M-10 Standard Practice for Examination of Gas-Filled Filament-Wound Composite Pressure Vessels Using Acoustic Emission

E2192-13 Standard Guide for Planar Flaw Height Sizing by Ultrasonics

E2223-13 Standard Practice for Examination of Seamless, Gas-Filled, Steel Pressure Vessels Using Angle Beam Ultrasonics

E2261/E2261M-10 Standard Practice for Examination of Welds Using the Alternating Current Field Measurement Technique

E2297-04(2010) Standard Guide for Use of UV-A and Visible Light Sources and Meters used in the Liquid Penetrant and Magnetic Particle Methods

E2337/E2337M-10 Standard Guide for Mutual Inductance Bridge Applications for Wall Thickness Determinations in Boiler Tubing

E2338-11 Standard Practice for Characterization of Coatings Using Conformable Eddy-Current Sensors without Coating Reference

Standards

- E2339-11 Standard Practice for Digital Imaging and Communication in Nondestructive Evaluation (DICONDE)
- E2373/E2373M-14 Standard Practice for Use of the Ultrasonic Time of Flight Diffraction (TOFD) Technique
- E2374-10 Standard Guide for Acoustic Emission System Performance Verification
- E2375-08(2013) Standard Practice for Ultrasonic Testing of Wrought Products
- E2422-11 Standard Digital Reference Images for Inspection of Aluminum Castings
- E2445-05(2010) Standard Practice for Qualification and Long-Term Stability of Computed Radiology Systems
- E2446-05(2010) Standard Practice for Classification of Computed Radiology Systems
- E2478-11 Standard Practice for Determining Damage-Based Design Stress for Glass Fiber Reinforced Plastic (GFRP) Materials Using Acoustic Emission
- E2479-11 Standard Practice for Measuring the Ultrasonic Velocity in Polyethylene Tank Walls Using Lateral Longitudinal (L_{CR}) Waves
- E2491-13 Standard Guide for Evaluating Performance Characteristics of Phased-Array Ultrasonic Testing Instruments and Systems
- E2533-09 Standard Guide for Nondestructive Testing of Polymer Matrix Composites Used in Aerospace Applications
- E2534-10 Standard Practice for Process Compensated Resonance Testing Via Swept Sine Input for Metallic and Non-Metallic Parts
- E2580-12 Standard Practice for Ultrasonic Testing of Flat Panel Composites and Sandwich Core Materials Used in Aerospace Applications
- E2581-07 Standard Practice for Shearography of Polymer Matrix Composites, Sandwich Core Materials and Filament-Wound Pressure Vessels in Aerospace Applications
- E2582-07 Standard Practice for Infrared Flash Thermography of Composite Panels and Repair Patches Used in Aerospace Applications
- E2597/E2597M-14 Standard Practice for Manufacturing Characterization of Digital Detector Arrays
- E2598/E2598M-13 Standard Practice for Acoustic Emission Examination of Cast Iron Yankee and Steam Heated Paper Dryers
- E2660-11 Standard Digital Reference Images for Investment Steel Castings for Aerospace Applications
- E2661/E2661M-10 Standard Practice for Acoustic Emission Examination of Plate Like and Flat Panel Composite Structures Used in Aerospace Applications
- E2662-09 Standard Practice for Radiologic Examination of Flat Panel Composites and Sandwich Core Materials Used in Aerospace Applications
- E2663-11 Standard Practice for Digital Imaging and Communication in

Nondestructive Evaluation (DICONDE) for Ultrasonic Test Methods

E2669-11 Standard Digital Reference Images for Titanium Castings

E2698-10 Standard Practice for Radiological Examination Using Digital Detector Arrays

E2699-13 Standard Practice for Digital Imaging and Communication in Nondestructive Evaluation (DICONDE) for Digital Radiographic (DR) Test Methods

E2700-09 Standard Practice for Contact Ultrasonic Testing of Welds Using Phased Arrays

E2736-10 Standard Guide for Digital Detector Array Radiology

E2737-10 Standard Practice for Digital Detector Array Performance Evaluation and Long-Term Stability

E2738-13e1 Standard Practice for Digital Imaging and Communication Nondestructive Evaluation (DICONDE) for Computed Radiography (CR) Test Methods

E2767-13 Standard Practice for Digital Imaging and Communication in Nondestructive Evaluation (DICONDE) for X-ray Computed Tomography (CT) Test Methods

E2775-11 Standard Practice for Guided Wave Testing of Above Ground Steel Pipework Using Piezoelectric Effect Transduction

E2861-11 Standard Test Method for Measurement of Beam Divergence and Alignment in Neutron Radiologic Beams

E2862-12 Standard Practice for Probability of Detection Analysis for Hit/Miss Data

E2863-12 Standard Practice for Acoustic Emission Examination of Welded Steel Sphere Pressure Vessels Using Thermal Pressurization

E2868-13 Standard Digital Reference Images for Steel Castings up to 2 in. (50.8 mm) in Thickness

E2869-13 Standard Digital Reference Images for Magnesium Castings

E2884-13e1 Standard Guide for Eddy Current Testing of Electrically Conducting Materials Using Conformable Sensor Arrays

E2903-13 Standard Test Method for Measurement of the Effective Focal Spot Size of Mini and Micro Focus X-ray Tubes

E2904-12 Standard Practice for Characterization and Verification of Phased Array Probes

E2905/E2905M-13 Standard Practice for Examination of Mill and Kiln Girth Gear Teeth—Electromagnetic Methods

E2906/E2906M-13 Standard Practice for Acoustic Pulse Reflectometry Examination of Tube Bundles

E2907/E2907M-13 Standard Practice for Examination of Paper Machine Rolls Using Acoustic Emission from Crack Face Rubbing

E2908/E2908M-13 Standard Practice for Examination of Drillstring Threads Using the Alternating Current Field Measurement Technique

E2929-13 Standard Practice for Guided Wave Testing of Above Ground Steel Piping with Magnetostrictive Transduction

E2930-13 Standard Practice for Pressure Decay Leak Test Method

E2934-13 Standard Practice for Digital Imaging and Communication in
Nondestructive Evaluation (DICONDE) for Eddy Current (EC) Test
Methods

E2971-14 Standard Test Method for Determination of Effective Boron-10
Areal Density in Aluminum Neutron Absorbers using Neutron Attenuation
Measurements

Currently in preview, click buy full version