



Designation: E1734 – 16a

Standard Practice for Radioscopic Examination of Castings¹

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1. Scope

1.1 This practice covers a uniform procedure for radioscopic examination of castings. Radioscopic examination of weldments can be found in [E1416](#).

1.2 This practice applies only to radioscopic examination in which an image is finally presented on a display screen (monitor) for evaluation. Test part acceptance may be based on a static or dynamic image. The examination results may be recorded for later review. This practice does not apply to fully automated systems in which evaluation is performed automatically by a computer.

1.3 Due to the many complex geometries and part configurations inherent with castings, it is necessary to recognize the potential limitations associated with obtaining complete radioscopic coverage. Consideration shall be given to areas where geometry or part configuration does not allow for complete radioscopic coverage.

1.4 The values stated in inch-pound units are to be regarded as the standard. The SI units given in parentheses are for information only.

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

[E543](#) Specification for Agencies Performing Nondestructive Testing

[E747](#) Practice for Design, Manufacture and Material Group-

ing Classification of Wire Image Quality Indicators (IQI) Used for Radiology

[E1000](#) Guide for Radioscopy

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

[E1165](#) Test Method for Measurement of Focal Spots of Industrial X-Ray Tubes by Pinhole Imaging

[E1255](#) Practice for Radioscopy

[E1316](#) Terminology for Nondestructive Examinations

[E1411](#) Practice for Qualification of Radioscopic Systems

[E1416](#) Practice for Radioscopic Examination of Weldments

[E1453](#) Guide for Storage of Magnetic Tape Media that Contains Analog or Digital Radioscopic Data

[E1475](#) Guide for Data Fields for Computerized Transfer of Digital Radiological Examination Data

[E1647](#) Practice for Determining Contrast Sensitivity in Radiology

[E1742](#) Practice for Radiographic Examination

[E2002](#) Practice for Determining Total Image Unsharpness and Basic Spatial Resolution in Radiography and Radioscopy

[E2339](#) Practice for Digital Imaging and Communication in Nondestructive Evaluation (DICONDE)

[E2903](#) Test Method for Measurement of the Effective Focal Spot Size of Mini and Micro Focus X-ray Tubes

2.2 ASNT Standards:³

[ASNT SNT-TC-1A](#) Personnel Qualification and Certification in Nondestructive Testing

[ANSI/ASNT CP-189](#) Personnel Qualification and Certification in Nondestructive Testing

2.3 National Aerospace Standard:

[NAS-410](#) NAS Certification and Qualification of Nondestructive Personnel (Quality Assurance Committee)⁴

2.4 Other Standards:

[ISO 9712](#) Non-Destructive Testing—Qualification and Certification of NDT Personnel⁵

¹ This practice is under the jurisdiction of ASTM Committee [E07](#) on Nondestructive Testing and is the direct responsibility of Subcommittee [E07.01](#) on Radiology (X and Gamma) Method.

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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 Available from The American Society for Nondestructive Testing (ASNT), P.O. Box 28518, 1711 Arlingate Ln., Columbus, OH 43228-0518.

⁴ Available from Aerospace Industries Association of America, Inc. 1250 Eye Street N.W., Washington, DC 20005.

⁵ Available from International Organization for Standardization (ISO), ISO Central Secretariat, BIBC II, Chemin de Blandonnet 8, CP 401, 1214 Vernier, Geneva, Switzerland, <http://www.iso.org>.