



Standard Practice for Quality Management of Mechanical Coal Sampling Systems¹

This standard is issued under the fixed designation D 4702; 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.

1. Scope

1.1 This practice is applicable to cross-belt, falling stream, and auger sampling systems.

1.2 Spacing of increments pertains to the kind of interval between increments. Intervals can be defined in quantitative terms, such as units of time or mass, or in terms of position over the lot.

1.2.1 *Spacing of Increments for Cross-Belt and Falling Stream Samplers*—Cross-belt and falling stream type mechanical sampling systems take increments based on time, either at fixed time intervals or at random times during a fixed time strata. Some falling stream samplers can take increments based on equal mass of coal sampled as determined by scales. The sections of this practice that pertain to cross-belt and falling stream samplers describe procedures for only time-based sampling systems. This time-based inspection guideline will satisfy most criteria for mass-based or combination mass-based and time-based sampling systems. If there are items that are not covered, the inspector should refer to the manufacturer's literature.

1.2.2 *Spacing of Increments for Auger Sampling*—The spacing of increments collected by auger sampling systems is defined in terms of position over the lot.

1.3 It is essential that the inspector have the documentation listed in Section 2 of this practice when conducting an inspection.

1.4 The values stated in SI units are to be regarded as the standard. The values 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 applica-*

bility of regulatory limitations prior to use. For a specific hazard statement, see Section 5.

2. Referenced Documents

2.1 *ASTM Standards:*²

D 121 Terminology of Coal and Coke

D 2013 Practice for Preparing Coal Samples for Analysis

D 2234/D 2234M Practice for Collection of a Gross Sample of Coal

D 4749 Test Method for Performing the Sieve Analysis of Coal and Designating Coal Size

D 4916 Practice for Mechanical Auger Sampling

3. Terminology

3.1 *Definitions*—Definitions applicable to this practice are listed in Terminology D 121 and Practices D 2013, D 2234/D 2234M and D 4916.

4. Significance and Use

4.1 This practice addresses quality assurance criteria for operation of a mechanical coal-sampling system in accordance with Practice D 2234/D 2234M, Practice D 2013, and Practice D 4916. It provides recommendations for performance monitoring, inspection, and maintenance, which are necessary in maintaining a sampling system's capability to consistently obtain a representative sample.

5. Hazards

5.1 *Precautions*—In addition to other precautions, personnel visiting facilities for observation of mechanical sampling system performance should immediately upon arrival report to the facility management to inform them of their presence and the purpose of their visit. The inspector should ask for

¹ This practice is under the jurisdiction of ASTM Committee D05 on Coal and Coke and is the direct responsibility of Subcommittee D05.23 on Sampling.

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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.