



Designation: D4619 – 12 (Reapproved 2018)

Standard Practice for Inspection of Linings in Operating Flue Gas Desulfurization Systems¹

This standard is issued under the fixed designation D4619; 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 describes procedures for conducting inspections of the conditions of various linings in operating Flue Gas Desulfurization (FGD) system components.

1.2 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.* For specific hazard statements, see Section 8.

1.3 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

C805 Test Method for Rebound Number of Hardened Concrete

C856 Practice for Petrographic Examination of Hardened Concrete

D610 Practice for Evaluating Degree of Rusting on Painted Steel Surfaces

D714 Test Method for Evaluating Degree of Blistering of Paints

D2240 Test Method for Rubber Property—Durometer Hardness

D4541 Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers

D6677 Test Method for Evaluating Adhesion by Knife

¹ This practice is under the jurisdiction of ASTM Committee D33 on Protective Coating and Lining Work for Power Generation Facilities and is the direct responsibility of Subcommittee D33.09 on Protective Lining for Air Quality Control Systems.

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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.

D7091 Practice for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to Ferrous Metals and Nonmagnetic, Nonconductive Coatings Applied to Non-Ferrous Metals

2.2 *SSPC Standards:*³

SSPC-PA 2 Measurement of Dry Paint Thickness with Magnetic Gages

SSPC-VIS 2 Standard Method of Evaluating Degree of Rusting on Painted Steel Surfaces

3. Significance and Use

3.1 Periodic inspections are essential to evaluate lining performance, to detect existing damage potential problems, and to plan scheduled maintenance. The frequency of these inspections may diminish or increase with time depending upon lining performance.

4. Recordkeeping

4.1 Lining condition will depend on the operating conditions experienced by the lining systems. Records of these conditions that are maintained by the owner/operator should be evaluated for potential effects upon the linings. These may include:

- 4.1.1 Dates of lining installation and initial operation,
- 4.1.2 Solution/gas temperatures in lined components,
- 4.1.3 Solution/gas chemistry (pH, composition),
- 4.1.4 Start up/shut down dates,
- 4.1.5 Gas velocities and particulate loading, and
- 4.1.6 Ambient conditions.

4.2 Any known change in the process criteria or modifications of the physical design shall be identified and dated.

4.3 All past history pertaining to the lining systems should be available during the inspection process. They may include:

- 4.3.1 Copies of existing lining specifications and installation procedures.
- 4.3.2 Quality control documents of the existing lining installation.
- 4.3.3 Copies of previous inspection reports.

³ Available from Society for Protective Coatings (SSPC), 40 24th St., 6th Floor, Pittsburgh, PA 15222-4656, <http://www.sspc.org>.