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.

Designation: D4417 – 21

Standard Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel[1]

This standard is issued under the fixed designation D4417; 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 standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 These test methods cover the description of techniques for measuring the profile of abrasive blast cleaned surfaces in the field, shop, and laboratory. There are other techniques suitable for laboratory use not covered by these test methods.

1.2 Method B may also be appropriate to the measurement of profile produced by using power tools.

NOTE 1—The Method B procedure in this standard was developed for use on flat surfaces. Depending on the radius of the surface, the results could have greater variability with lower values and averages.

1.3 SSPC standard SSPC-PA 17 provides additional guidance for determining conformance with surface profile requirements.

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *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]

D7127 Test Method for Measurement of Surface Roughness of Abrasive Blast Cleaned Metal Surfaces Using a Portable Stylus Instrument

E177 Practice for Use of the Terms Precision and Bias in ASTM Test Methods

E691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method

2.2 *SSPC Standard:*[3]

SSPC-PA 17 Procedure for Determining Conformance to Steel Profile/Surface Roughness/Peak Count Requirements

2.3 *ASME Standard:*[4]

ASME B46.1-2002 Surface Texture, Surface Roughness Waviness and Lay

2.4 *ISO Standards:*[5]

ISO 4287: 1997 Geometrical Product Specifications (GPS)—Surface Texture: Profile Method—Terms, Definitions, and Surface Parameters

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

[1] These test methods are under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and are the direct responsibility of Subcommittee D01.46 on Industrial Protective Coatings.

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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 Society for Protective Coatings (SSPC), 800 Trumbull Dr., Pittsburgh, PA 15205, http://www.sspc.org.

[4] Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Two Park Ave., New York, NY 10016-5990, http://www.asme.org.

[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.

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