



Standard Guide for Metallic Abrasive Blasting to Descale the Interior of Pipe¹

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1. Scope

1.1 This guide covers metallic abrasive blasting to descale the interior of carbon steel pipe.

1.2 This guide is recommended for use in conjunction with an abrasive reclamation system.

1.3 The values stated in SI units are to be regarded as standard. The values given in parentheses are mathematical conversions to inch-pound units that are provided for information only and are not considered standard.

1.4 *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.*

1.5 *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

[D2200 Practice for Use of Pictorial Surface Preparation Standards and Guides for Painting Steel Surfaces](#)

[E18 Test Methods for Rockwell Hardness of Metallic Materials](#)

2.2 SAE Standards:³

[J444 Cast Shot and Grit Size Specifications for Peening Cleaning](#)

[J827 Cast Steel Shot](#)

¹ This guide is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.11 on Machinery and Piping 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.

³ Available from SAE International (SAE), 400 Commonwealth Dr., Warrendale, PA 15096, <http://www.sae.org>.

2.3 Other Documents:

[SSPC SP10 Surface Preparation Specifications](#)⁴

[SFSA 20-66 Standard Specification for Cast Steel Abrasives](#)⁵

3. Significance and Use

3.1 The maximum length and minimum diameter of the pipe shall be determined by the capacity of the blast equipment used.

3.2 This guide is recommended for removing mill scale, rust scale, paints, zincs, and oxides.

4. General Requirements

4.1 Before blasting, pipe shall be dry and free of slag and weld spatter which would not be removed by abrasive blasting. Pipe shall also be free of loose dust and debris which might hamper the effectiveness of abrasive blasting.

4.2 Abrasive blasting shall be accomplished in a dry area with the ambient air condition such that condensation does not occur.

4.3 Shot and blasting equipment shall be stored at a temperature not less than $-13\text{ }^{\circ}\text{C}$ ($10\text{ }^{\circ}\text{F}$) above the dew point of the surrounding area.

4.3.1 Abrasive reclamation system shall include a filtration system capable of removing oxides, debris, dust, shot/grit fragments, and fines.

4.4 Compressed air system shall be equipped with moisture removal devices capable of reducing the dew point of the air at the nozzle to $-18\text{ }^{\circ}\text{C}$ (approximately $0\text{ }^{\circ}\text{F}$) or less.

4.5 Hoses shall have the maximum practical diameter and shall be as short as possible.

4.6 Nozzles shall have the maximum possible aperture as determined by the capacity of the blast equipment and as limited by the pipe diameter.

4.7 Internal pipe cleaning nozzle assemblies are commercially available and shall be used where required.

⁴ Available from Society for Protective Coatings (SSPC), 800 Trumbull Dr., Pittsburgh, PA 15205, <http://www.sspc.org>.

⁵ Available from Steel Founders' Society of America (SFSA), 780 McArdle Dr., Unit G, Crystal Lake, IL 60014, <http://www.sfsa.org>.