SSPC: The Society for Protective Coatings

SURFACE PREPARATION SPECIFICATION NO. 3

Power Tool Cleaning

1. Scope

1.1 This standard covers the requirements for power tool cleaning of steel surfaces.

2. Definition

2.1 Power tool cleaning is a method of preparing steel surfaces by the use of power assisted hand tools.

2.2 Power tool cleaning removes all loose mill scale, loose rust, loose paint, and other loose detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Mill scale, rust, and paint are considered adherent if they cannot be removed by lifting with a dull putty knife.

2.3 SSPC-VIS 3 or other visual standard of surface preparation agreed upon by the contracting parties may be used to further define the surface (see Note 8.1).

3. Referenced Standards

3.1 The latest issue, revision, or amendment of the referenced standards in effect on the date of invitation to bid shall govern, unless otherwise specified. Standards marked with an asterisk (*) are referenced only in the Notes, which are not requirements of this standard.

3.2 If there is a conflict between the requirements of any of the cited reference standards and this standard, the requirements of this standard shall prevail.

3.3 SSPC STANDARDS:

SP 1	Solvent Cleaning
***SP 2**	Hand Tool Cleaning
***SP 11**	Power Tool Cleaning to Bare Metal
***SP 15**	Commercial Grade Power Tool Cleaning
VIS 3	Guide and Reference Photographs for Steel Surfaces Prepared by Hand and Power Tool Cleaning

3.4 INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO):

***8501-1**	Preparation of steel substrates before application of paints and related products: visual assessment of surface cleanliness, Part I

4. Surface Preparation Before and After Power Tool Cleaning

4.1 Before power tool cleaning, visible deposits of oil, grease, or other materials that may interfere with coating adhesion shall be removed in accordance with SSPC-SP 1 or other agreed-upon methods. Nonvisible surface contaminants such as soluble salts shall be treated to the extent specified by the procurement documents [project specifications] (see Note 8.2).

4.2 After power tool cleaning and prior to painting, reclean the surface if it does not conform to this standard.

4.3 After power tool cleaning and prior to painting, remove dirt, dust, or similar contaminants from the surface. Acceptable methods include brushing, blow off with clean, dry air, or vacuum cleaning.

5. Methods of Power Tool Cleaning

5.1 Use rotary or impact power tools to remove stratified rust (rust scale).

5.2 Use rotary or impact power tools to remove all weld slag.

5.3 Use power wire brushing, power abrading, power impact, or other power rotary tools to remove all loose mill scale, all loose or non-adherent rust, and all loose paint. Do not burnish the surface.

5.4 Operate power tools in a manner that prevents the formation of burrs, sharp ridges, and sharp cuts.

5.5 Regardless of the method used for cleaning, if specified in the procurement documents, feather the edges of remaining old paint so that the repainted surface can have a reasonably smooth appearance.

5.6 If approved by the owner, use blast cleaning as a substitute cleaning method for this standard.

6. Inspection

6.1 Unless otherwise specified in the procurement documents, the contractor or material supplier is responsible for timely quality control to assure that the requirements of this document are met. Work and materials supplied under this standard are also subject to inspection by the purchaser or an authorized representative. Materials and work areas shall be accessible to the inspector.

6.2 Conditions not complying with this standard shall be corrected. In the case of a dispute, an arbitration or settlement procedure established in the procurement documents (project specification) shall be followed. If no arbitration or settlement procedure is established, then a procedure mutually agreeable to purchaser and material supplier (or contractor) shall be used.

7. Disclaimer

7.1 While every precaution is taken to ensure that all information furnished in SSPC standards and specifications is as accurate, complete, and useful as possible, SSPC cannot assume responsibility nor incur any obligation resulting from the use of any materials, coatings, or methods specified herein, or of the specification or standard itself.

7.2 This standard does not attempt to address problems concerning safety associated with its use. The user of this standard, as well as the user of all products or practices described herein, is responsible for instituting appropriate health and safety practices and for ensuring compliance with all governmental regulations.

8. Notes

Notes are not requirements of this standard.

8.1 Note that the use of visual standards in conjunction with this standard is required only when they are specified in the procurement documents (project specification) covering the work. It is recommended, however, that the use of visual standards be made mandatory in the procurement documents.

SSPC-VIS 3 provides a suitable comparative visual standard for SSPC-SP 2, SSPC-SP 3, SSPC-SP 11, and SSPC-SP 15. ISO 8501-1 may also serve as a visual standard.

8.2 The Surface Preparation Commentary, SSPC-SP COM, contains additional information and data relevant to this specification. The Commentary is non-mandatory and is not a part of this specification. The table below lists the subjects discussed relevant to power tool cleaning and the appropriate Commentary Section.

Subject	Commentary Section
Film Thickness	10
Rust Back	4.5
Rust, Stratified Rust, Pack Rust, and Rust Scale	4.3.1
Visual Standards	11
Weld Spatter	4.4.1