

SSPC: The Society for Protective Coatings

PAINT APPLICATION SPECIFICATIONS AND GUIDES

Commentary on Paint Application

1. Introduction

This commentary is for information only and is not part of SSPC-PA 1, PA 2, PA Guide 3, PA Guide 4 or PA Guide 5. Its purpose is to present a general description of the sections which comprise this chapter: (1) SSPC PA 1, "Shop, Field, and Maintenance Painting of Steel"; (2) SSPC-PA 2, "Measurement of Dry Coating Thickness with Magnetic Gages"; (3) SSPC-PA Guide 3, "A Guide to Safety in Paint Application"; (4) SSPC-PA Guide 4, "Guide to Maintenance Repainting with Oil Base or Alkyd Painting Systems"; and (5) SSPC-PA Guide 5, "Guide to Maintenance Painting Programs."

2. SSPC-PA 1, "Shop, Field, and Maintenance Painting of Steel"

This specification should be used when paint service is severe or when rigid requirements for appearance are established. When painting is necessary for protection from corrosive environments or for good appearance, then it is in the best interests of the purchaser to see that paint is applied in strict conformance with good practice. While surface preparation is probably the most critical factor which governs the performance of paints, improper paint application may result in paint failure, even over blast cleaned surfaces.

Pre-application procedures are covered that are necessary before actual application of paint can begin. They include handling and use of materials, surface preparation, and proper mixing and thinning of paints. Also, general conditions for good application are covered in detail in this specification and include proper air temperature, moisture, humidity, cover, and surface temperature.

This specification permits application by brush, air spray, airless spray, hot spray, plural component spray, high volume low pressure spray, or a combination of these methods. Roller coat applications may be used over flat or slightly curved steel surfaces.

Inspection procedures for paint applications are discussed in detail in Volume 1 of the SSPC Painting Manual and in publication SSPC 97-07, "The Inspection of Coatings and Linings, A Handbook of Basic Practice for Inspectors, Owners, and Specifiers."

This specification is a revision of SSPC-PA 1-91. New to this revision are sections on induction time and pot life, air-assisted airless spray, and plural component spray. What used to be called conventional spray is now defined as air atomizing spray.

3. SSPC-PA 2, "Measurement of Dry Coating Thickness With Magnetic Gages"

This method describes the types of available magnetic gages, how to verify the calibration of the gages, and procedures for measuring the dry film thickness of paint.

The gages are classified as either Type 1 — pull-off gages or Type 2 — constant pressure probe gages, formerly called fixed probe gages. Type 1 is further divided into Type 1A, which is a "dial" type, and Type 1B which is a "pencil" type. All these types are magnetic gages and measure the thickness of dry film of a non-magnetic coating applied on a magnetic substrate.

This standard specifies the number of measurements to be made to determine compliance with the specified minimum and maximum dry film thicknesses.

This method is the latest revision of SSPC-PA 2-82. Some changes and additions have been made to update and refine this method based upon actual usage of the previous revision. These include the following modifications:

- Changes in gage terminology
- Restrictions on calibration with magnetic shims
- Procedure for specifying maximum thickness
- Spot measurement definition
- Base Metal Reading
- Number of measurements on very large structures
- Appendix with a numerical example of computing thickness
- Appendix with example of calibration calculations

4. SSPC-PA Guide 3, "A Guide to Safety in Paint Application"

This guide has been prepared so that the user will have a source of information available when preparing a section on safety for a procurement document. The guide covers in considerable detail the necessary precautions to be taken in order to protect personnel and property from accidents due to falls, toxic fumes, fires, explosion, or other harm in the application of coatings to steel structures. Also covered is protective equipment to be used by the workers. Safety precautions are given for the equipment for applying paint and also for the equipment for providing access to the work area.

5. SSPC-PA Guide 4, "Guide to Maintenance Repainting with Oil Base or Alkyd Painting Systems"

This guide has been prepared specifically for use as a guide for repainting with oil base, alkyd, and other solvent-thinned paint systems. It is concerned with procedures necessary to maintain previously painted steel structures so that they continue to provide the corrosion protection as originally intended. Items covered are a guide for determining when maintenance painting is required and preparing the existing surface for painting.

6. SSPC-PA Guide 5, "Guide to Maintenance Painting Programs"

This guide, intended for use primarily by the owner's representative, covers procedures for planning and carry-

ing out a maintenance painting program for steel and other structures. It may be used for one time repaint programs or long range repaint programs.

Planning and implementation of maintenance painting programs are presented in a logical sequence of eight specific tasks. These tasks range from defining the program objectives to follow-up activities required to implement an on-going maintenance program. Each task is designed in such a way that it may be utilized as stand-alone for those with interest in only one or a few aspects of the program.