



~~Designation: D5498-01~~ Designation: D 5498 – 09

Standard Guide for Developing a Training Program for Personnel Performing Coating Work Inspectors in Inspection for Nuclear Facilities¹

This standard is issued under the fixed designation D 5498; 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 guide is intended to assist those responsible for developing a program for the indoctrination and training of ~~inspection~~ personnel performing coating inspection work ~~in~~for nuclear facilities.

1.2 It is recognized that organizations and job responsibilities vary widely among utilities and also among various support and service companies. ~~Portions of it is the program may not be applicable in all cases. Therefore, it is responsibility of the~~ responsibility user of each company ~~this guide~~ to identify the appropriate subject matter for its organization program and its-site specific needs.

1.3 Users of this guide must ensure that coatings work complies not only with this guide, but also with the licensee's plant-specific quality assurance program and licensing commitments.

2. Referenced Documents

2.1 ~~ASTM Standards:~~

~~D16~~ ASTM Standards:²

D 16 Terminology for Paint, Related Coatings, Materials, and Applications ~~D1005~~

D 610 Practice for Evaluating Degree of Rusting on Painted Steel Surfaces

D 714 Test Method for Evaluating Degree of Blistering of Paints

D 1005 Test Method for Measurement of Dry-Film Thickness of Organic Coatings Using Micrometers ~~D1186~~ Test Methods for

Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to a Ferrous Base

~~D1400 Test Method for Nondestructive Measurement of Dry Film Thickness of Nonconductive Coatings Applied to a Nonferrous Metal Base~~

~~D2092 Guide for Preparation of Zinc-Coated (Galvanized) Steel Surfaces for Painting~~

~~D2240~~

D 2240 Test Method for Rubber Property Durometer Hardness ~~D2583~~

D 2583 Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor ~~D3276~~

D 3276 Guide for Painting Inspectors (Metal Substrates) ~~D3359~~

D 3359 Test Methods for Measuring Adhesion by Tape Test ~~D3363~~

D 3363 Test Method for Film Hardness by Pencil Test ~~D3925~~

D 3843 Practice for Quality Assurance for Protective Coatings Applied to Nuclear Facilities

D 3925 Practice for Sampling Liquid Paints and Related Pigmented Coatings ~~D4138~~

D 4138 Practices for Measurement of Dry Film Thickness of Protective Coating Systems by Destructive, Cross-Sectioning Means ~~D4212~~

D 4212 Test Method for Viscosity by Dip-Type Viscosity Cups ~~D4214~~

¹ This guide 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 D33.02 on Service and Material Parameters.

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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.

- [D 4214 Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films](#) ~~D4258~~
- [D 4258 Practice for Surface Cleaning Concrete for Coating](#) ~~D4259~~
- [D 4259 Practice for Abrading Concrete](#) ~~D4260~~
- [D 4260 Practice for Liquid and Gelled Acid Etching of Concrete](#) ~~D4261~~
- [D 4261 Practice for Surface Cleaning Concrete Masonry Units for Coating](#) ~~D4262~~
- [D 4262 Test Method for pH of Chemically Cleaned or Etched Concrete Surfaces](#) ~~D4263~~
- [D 4263 Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method](#) ~~D4285~~
- [D 4285 Test Method for Indicating Oil or Water in Compressed Air](#) ~~D4414~~
- [D 4414 Practice for Measurement of Wet Film Thickness by Notch Gages](#) ~~D4417~~
- [D 4417 Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel](#)
- [D 4537 Guide for Establishing Procedures to Qualify and Certify Personnel Performing Coating Work Inspection in Nuclear Facilities](#) ~~D4538~~
- [D 4538 Terminology Relating to Protective Coating and Lining Work for Power Generation Facilities](#) ~~D4541~~
- [D 4541 Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers](#) ~~D4610~~
- [D 4610 Guide for Determining the Presence of and Removing Microbial \(Fungal or Algal\) Growth on Paint and Related Coatings](#) ~~D4752~~
- [D 4752 Test Method for Measuring MEK Resistance of Ethyl Silicate \(Inorganic\) Zinc-Rich Primers by Solvent Rub](#) ~~D4787~~
- [D 4787 Practice for Continuity Verification of Liquid or Sheet Linings Applied to Concrete Substrates](#) ~~D4940~~
- [D 4940 Test Method for Conductimetric Analysis of Water Soluble Ionic Contamination of Blasting Abrasives](#) ~~D5162~~
- [D 5162 Practice for Discontinuity \(Holiday\) Testing of Nonconductive Protective Coating on Metallic Substrates](#) ~~E337~~

Test Method for Measuring Humidity with a Psychrometer (the Measurement of Wet- and Dry-Bulb Temperatures)

iTeh Standards
(<https://standards.itih.ai>)
Document Preview

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- [D 5163 Guide for Establishing a Program for Condition Assessment of Coating Service Level I Coating Systems in Nuclear Power Plants](#)
 - [D 6132 Test Method for Nondestructive Measurement of Dry Film Thickness of Applied Organic Coatings Using an Ultrasonic Gage](#)
 - [D 6237 Guide for Painting Inspectors \(Concrete and Masonry Substrates\)](#)
 - [D 6386 Practice for Preparation of Zinc \(Hot-Dip Galvanized\) Coated Iron and Steel Product and Hardware Surfaces for Painting](#)
 - [D 6677 Test Method for Evaluating Adhesion by Knife](#)
 - [D 7091 Practice for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to Ferrous Metals and Nonmagnetic, Nonconductive Coatings Applied to Non-Ferrous Metals](#)
 - [D 7167 Guide for Establishing Procedures to Monitor the Performance of Safety-Related Coating Service Level III Lining Systems in an Operating Nuclear Power Plant](#)
 - [D 7234 Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers](#)
 - [E 337 Test Method for Measuring Humidity with a Psychrometer \(the Measurement of Wet- and Dry-Bulb Temperatures\)](#)
 - [F 1869 Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride](#)
- 2.2 ~~SSPS: The Society for Protective Coatings Standards - ASME Codes and Standards:~~ ³ ~~SSPC-PA1 Shop, Field and Maintenance Painting~~
- ~~SSPC-PA2 Measurement of Dry Paint Thickness with Magnetic Gage~~
 - ~~SSPC-SP1 Solvent Cleaning~~
 - ~~SSPC-SP2 Hand Tool Cleaning~~

² Available from SSPC: The Society of Protective Coatings, 40 24th St., 6th Floor, Pittsburgh, PA 15222-4656.

³ Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Three Park Ave., New York, NY 10016-5990, <http://www.asme.org>.

SSPC-SP3 Power Tool Cleaning
SSPC-SP5 White Metal Blast Cleaning
SSPC-SP6 Commercial Blast Cleaning
SSPC-SP7 Brush-Off Blast Cleaning
SSPC-SP8 Pickling
SSPC-SP10 Near-White Blast Cleaning
SSPC-SP11 Power Tool Cleaning to Bare Metal
SSPC-VIS1 Visual Standard for Abrasive Blast Cleaned Steel
SSPC-VIS3 Visual Standard for Power and Hand Tool Cleaned Steel
ASME Boiler and Pressure Vessel Code, Section XI Rules for Inservice Inspection of Nuclear Power Plant Components
2.3 *SSPC: The Society for Protective Coatings Standards:*⁴
SSPC-PA1 Shop, Field and Maintenance Painting of Steel
SSPC-PA2 Measurement of Dry Paint Thickness with Magnetic Gage
SSPC-PA3 A Guide to Safety in Paint Application
SSPC-SP1 Solvent Cleaning
SSPC-SP2 Hand Tool Cleaning
SSPC-SP3 Power Tool Cleaning
SSPC-SP5/NACE No. 1 White Metal Blast Cleaning
SSPC-SP6/NACE No. 3 Commercial Blast Cleaning
SSPC-SP7/NACE No. 4 Brush-Off Blast Cleaning
SSPC-SP8 Pickling
SSPC-SP10/NACE No. 2 Near-White Blast Cleaning
SSPC-SP11 Power Tool Cleaning to Bare Metal
SSPC-SP12/NACE No. 5 Surface Preparation and Cleaning of Metals by Waterjetting Prior to Recoating
SSPC-SP13/NACE No. 6 Surface Preparation of Concrete
SSPC-SP14/NACE No. 8 Industrial Blast Cleaning
SSPC-SP15 Commercial Grade Power Tool Cleaning
SSPC-VIS 1 Guide and Reference Photographs for Steel Surfaces Prepared by Dry Abrasive Blast Cleaning
SSPC-VIS 3 Guide and Reference Photographs for Steel Surfaces Prepared by Hand and Power Tool Cleaning
SSPC-VIS 4/NACE VIS 7 Guide and Reference Photographs for Steel Surfaces Prepared by Waterjetting
SSPC-VIS 5/NACE VIS 9 Guide and Reference Photographs for Steel Surfaces Prepared by Wet Abrasive Blast Cleaning
2.4 *Federal Standards:*⁵
10 CFR 50 Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants
10 CFR 21-Reporting of Defects and Noncompliance⁴ Reporting of Defects and Noncompliance
2.5 *ICRI Standards:*⁶
No. 03732P Guideline for Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays
2.6 *NACE Standards:*⁷
NACE SP0178 Design, Fabrication, and Surface Finish Practices for Tanks and Vessels to be Lined for Immersion Service
NACE SP0188 Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Substrates

3. Significance and Use

3.1 Inspection personnel trained for coating work are required to perform examination/inspection tasks to verify conformance of coating work to written instructions/specifications.

3.2 With the use of this guide, those responsible for indoctrination and training, should be able to develop an appropriate program for training inspection personnel involved in coating work.

3.3 It should be understood that mastery of the subject matter addressed in this guide will not by itself result in the certification of inspectors. Certification of inspection personnel for coating work can be obtained as outlined in Guide D4537

3.1 Personnel trained for coating work inspection are required to perform examination/inspection tasks to verify conformance of coating work to written requirements.

3.2 This guide provides guidance for development of an indoctrination and training program for training of personnel performing coating work inspection.

3.3 Certification/qualification of personnel performing coating work inspection is addressed in Guide D 4537.

⁴ Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401.

⁴ Available from Society for Protective Coatings (SSPC), 40 24th St., 6th Floor, Pittsburgh, PA 15222-4656, <http://www.sspc.org>.

⁵ Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401, <http://www.access.gpo.gov>.

⁶ Available from International Concrete Repair Institute (ICRI), 3166 South River Road, Suite 132, Des Plaines, IL 60018, www.icri.org.

⁷ Available from NACE International (NACE), 1440 South Creek Dr., Houston, TX 77084-4906, <http://www.nace.org>.