



SSPC-ACS-1



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## NACE/SSPC Standard Practice

# Industrial Coating and Lining Application Specialist Qualification and Certification

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## Foreword

This standard sets forth the requirements for qualification and certification of an industrial coating and lining application specialist, referred to hereafter as an *Application Specialist*. The qualification and certification process is a stepwise achievement process that includes all aspects of surface preparation and coating application for steel and concrete surfaces of complex industrial structures. The intended audience includes persons involved in developing education and certification programs for the training and assessment of the skills and knowledge of an Application Specialist or assessing the training and certification programs available either on the open market or from an in-house source.

The body of the standard provides the requirements for qualification and certification of an Application Specialist.

Appendix A (mandatory) defines the competency requirements or the minimum "Body of Knowledge" for each qualification level that provides a basis to allow applicants to achieve qualification in a Certified Application Specialist Program. Appendix A provides requirements for Section 5.

Appendix B (mandatory) describes the level of cognition required for each qualification level. Appendix B provides required information for use with Appendix A for development of a learning skills program associated with the Body of Knowledge in Appendix A.

Appendix C (nonmandatory) provides information on desirable workplace skills (reading text, document use, and numeracy) that should be considered by those attempting to both nurture and assess a candidate's overall skills level.

This standard could be used to validate or assess a candidate's (e.g., an employee or potential employee) knowledge and skills level based on qualification in a certification program operated under this standard. One of the goals of this standard is to recognize and record in an outline format the minimum overarching elements in the Body of Knowledge as these elements relate to a candidate's cognitive levels of learning and skills.

Government and industry are striving for long-term reliability of equipment and operations. Corrosion mitigation of steel and concrete structures by coatings and linings is germane to achieving that goal. Coating application also combines corrosion mitigation with aesthetic appeal in both the public and private sectors. The success of coatings and linings is heavily dependent on the qualifications of the Application Specialist. The study "Corrosion Costs and Preventive Strategies in the United States"<sup>1</sup> identified an annual expenditure of \$108.6 billion US on protective coatings and linings. As much as 71% of that annual expenditure may be affected by work performed by an Application Specialist.

This standard is designed to qualify the Application Specialist through a broad range of classroom instruction and associated work experiences.

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This standard was developed by the joint Task Group (TG) 320 on Coating and Lining Applicator Qualification. TG 320 is administered by Specific Technology Group (STG) 04 on Coatings and Linings, Protective: Surface Preparation, and is composed of representatives from NACE International, The Society for Protective Coatings (SSPC), and the International Union of Paint and Allied Trades (IUPAT).<sup>(1)</sup> This standard is published under the auspices of NACE STG 04 and SSPC Coating Applicator Qualification Committee.

In NACE/SSPC standards, the terms *shall*, *must*, *should*, and *may* are used in accordance with Paragraph 2.2.1.8 of the Agreement Between NACE International and SSPC: The Society for Protective Coatings. The terms *shall* and *must* are used to state mandatory requirements. The term *should* is used to state something considered good and is recommended but is not mandatory. The term *may* is used to state something considered optional.

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<sup>(1)</sup> International Union of Painters and Allied Trades (IUPAT), 1750 New York Avenue NW, Washington, DC 20006.

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**NACE/SSPC**

**Joint Standard Practice**

**Industrial Coating and Lining Application Specialist Qualification  
and Certification**

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## Section 1: General

### 1.1 Scope

1.1.1 This standard provides criteria for the education, training, experience, knowledge, and skills required by an Application Specialist to prepare and apply protective coatings to steel and concrete surfaces of complex industrial structures. This standard may be

used for certification of Application Specialists for other substrates or conditions, as considered appropriate by facility owners, contractors, or certifying agencies.

1.1.2 This standard applies to qualification of an Application Specialist for work on new construction and maintenance of complex industrial structures.

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## Section 2: Definitions

**Application Specialist:** An individual who engages in surface preparation and application of protective coatings

and linings to steel and concrete surfaces of complex industrial structures.

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## Section 3: Body of Knowledge

3.1 The basis for the qualification of an Application Specialist shall consist of:

3.1.1 Body of Knowledge; and

3.1.2 Test requirements.

3.2 The Body of Knowledge shall consist of:

3.2.1 A list of required areas of knowledge and skills; and

3.2.2 Required level of cognition for each area of knowledge and skill.

3.3 The core areas of the Body of Knowledge include:

3.3.1 Environmental, safety, and health;

3.3.2 Process control: specifications, codes and standards, quality assurance, and quality control;

3.3.3 Materials: consumables; surface preparation materials; coating materials; material properties, characteristics, and use; material safety data sheets (MSDSs);

3.3.4 Surface preparation: the purpose of surface preparation, chemical cleaning, hand and power tools,

waterjetting (WJ), abrasive blasting, surface preparation standards, environmental controls, substrate repairs, and surface contaminants; and

3.3.5 Application: storage, mixing, environmental conditions and controls, conventional spray, airless spray, thermal spray, trowel, brush, roller, tapes, heat-shrinkable coatings, powder coatings, plural component spray, curing, recoat and overcoat, defects and repairs.

3.4 The specialty areas of the Body of Knowledge include:

3.4.1 Installation of polymer coatings and linings on concrete floors and secondary containment;

3.4.2 High-pressure water cleaning (HPWC) and ultrahigh-pressure waterjetting (UHPWJ);

3.4.3 Electrostatic spray;

3.4.4 Plural component spray;

3.4.5 Powder coatings;

3.4.6 Specialty pipeline coatings; and

3.4.7 Thermal spray coatings.