

SSPC: The Society for Protective Coatings

Qualification Procedure No. 8

Standard Procedure for Evaluating the Qualifications of Contracting Firms that Install Polymer Coatings, Surfacing, Linings or FRP Composites on Concrete and Other Cementitious Substrates

1. Scope

1.1 This standard procedure establishes core requirements for a program to evaluate the qualifications of a contractor who installs polymer coatings and surfacings on concrete and other cementitious surfaces. The standard also includes requirements for optional supplemental qualifications for contractors installing linings, FRP (fiber reinforced plastic) composites and bonded repair composites on concrete and other cementitious surfaces.

1.2 The purpose of this procedure is to determine whether a contractor:

- Has a corporate organization that clearly defines the authority and responsibilities;
- Employs qualified management and utilizes qualified craft personnel and other workers;
- Has established and implemented a quality management system meeting requirements of Section 4.8;
- Has established and implemented a written worker safety and health program, and a corporate environmental protection program meeting requirements of Section 4.9 and any project-specific requirements; and
- Demonstrates knowledge of industry technical standards and good practice required for qualification category sought.

Contractors certified to SSPC-QP 8 are qualified to perform installation of architectural coatings and structural FRP to concrete and other cementitious surfaces within the scope of SSPC-QP 9.

2. Description

2.1 DEFINITIONS

Auditor: 1) The person or persons performing audits on behalf of the Qualifying Agency 2) The person(s) possessing the necessary technical and quality system auditing skills to review contractor submittals, conduct on-site audits of applicants, and report findings to the Qualifying Agency's program administrator in compliance with the requirements of this procedure and the written requirements of the formal audit program.

Contractor: A firm whose business is providing surface preparation and installation of coatings or installation of surfacings or linings or FRP on concrete substrates in the governmental, industrial, institutional, and commercial markets.

Craft Worker: A person who performing repairs, surface preparation and installation.

Environmental, Health and Safety Manager: A qualified employee designated by executive management who is responsible for management, maintenance, and enforcement of the contracting company's plans for compliance with applicable safety, health and environmental regulations (see Sections 4.9.1, 4.9.2, 4.9.3, 4.9.4).

FRP Fabric: Carbon, glass, or aramid fibers saturated with resins and applied wet to primed surfaces or embedded into troweled or sprayed thixotropic resins.

FRP Pre-Cured Systems: Rigid plates, strips, grids and shells bonded with primer, putty, adhesives, thixotropic resins, or mechanical attachments.

FRP Laminate: Rigid strips or plates attached to primed surfaces with thixotropic resins or mechanical attachments.

FRP Pile Jackets: Rigid forms filled with resins for annular space and or saturated fabric placed over existing prepared piles.

Loss Control: Multidisciplinary approach in which human, engineering, and risk management practices are employed to reduce the frequency or severity of losses.

Owner: The owner (or owner's legal representative) of the building/structure/facility to be FRP repaired, coated, or lined.

Procedure: The written sequence of steps taken to carry out a particular course of action.

Qualification: The procedure by which written assurance is given that a contractor conforms to the prescribed set of conditions or requirements of this standard procedure.

Qualifying Agency: An organization responsible for sponsorship or operation of a program to ensure uniform compliance with the provisions of this standard.

Quality Control Inspectors: Persons designated to perform quality control inspections in the field in accordance with any contract requirements and the contractor's quality program (see Section 4.8.1.2).

Quality Control Supervisor: A qualified employee designated by executive management who is responsible for implementation and maintenance of the firm's quality management system (see Section 4.8.1.1).

Planarity: The general evenness of a substrate in an intended dimension. Planarity must not be confused with

levelness. For example, a sloped area may be “in plane,” without low or high spots, but it is not level.

Surfacing: A resinous floor coating with a film thickness greater than 500 micrometers [μm] (approximately 20 mils). Thick film systems, self-leveling systems, slurry systems, broadcast systems, mortar systems, fabric-reinforced systems, spray-applied systems.

2.2 QP 8 CORE QUALIFICATION AND SUPPLEMENTARY REQUIREMENTS: This standard establishes core qualification requirements for contracting firms installing polymer coatings, surfacings, linings or FRP composites on concrete and other cementitious substrates. All applicants must meet all requirements for the Core Qualification as defined in Section 4. Contractors meeting requirements for the Core Qualification may also apply for additional supplementary qualifications described in Section 4.2 and its subsections.

2.3 CONTRACTOR FUNCTIONS TO BE EVALUATED: The procedure identifies four functional areas to be evaluated: Management Procedures; Technical Capabilities; Job Quality Monitoring; and Safety, Health, and Environmental Compliance. General requirements for each of these function areas are presented in Section 4.

2.4 EVALUATION PLANNING: The Qualifying Agency must develop criteria and/or rating plans to evaluate each contractor against this standard. The Qualifying Agency shall also determine which of the specific items deemed critical within the four functional areas are to be evaluated for subsequent follow-up evaluations, ensuring the items evaluated are the same for all contractors. The sequence of steps for conducting an evaluation within a certification program is outlined in Section 5. The initial evaluation, in each instance, will be performed by the auditor and shall include observation of the contractor's operational capability on one or more active jobsites.

3. Referenced Standards, Documents, and Training Courses

3.1 Standards and Other Documents: 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.

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

3.1.2 American Concrete Institute (ACI)¹

ACI 440.02-08 Report on Fiber-Reinforced Polymer (FRP) Reinforcement for Concrete Structures

3.1.3 ASTM International Standard²

ASTM D6237 Standard Guide for Painting Inspectors (Concrete and Masonry Substrates)

3.1.4 National Academy of Sciences Transportation Research Board, National Cooperative Highway Research Program (NCHRP)³

NCHRP Report 609 Recommended Construction Specification and Process Control Manual for Repair and Retrofit of Concrete Structures Using FRP Composites

3.1.5 SSPC: The Society for Protective Coatings Standards:

SSPC-Guide 12 Guide for Illumination of Industrial Painting Projects

SSPC-Guide 17 Guide to Developing a Corporate Safety Program for Industrial Painting and Coating Contractors

SSPC-QP 2 Standard Procedure for the Qualification of Painting Contractors (Field Removal of Hazardous Coatings from Industrial and Marine Steel Structures)

SSPC-QS 1 Standard Procedure for Evaluating a Contractor's Advanced Quality Management System

3.1.6 U.S. Code of Federal Regulations (CFR):⁴

CFR 1910.146 Permit-Required Confined Spaces

CFR 1910 Sub Part T Commercial Diving Operations

CFR 1915 Occupational Safety and Health Standards for Shipyard Employment

CFR 1926 Safety and Health Regulations for Construction

3.2 TRAINING COURSES

3.2.1 SSPC Training⁵

CCB Concrete Coating Basics

C10 Floor Coating Basics

CCI Concrete Coating Inspector

C3 (if applicable) Lead Paint Removal

C5 (if applicable) Lead Paint Removal Refresher (for competent persons)

QCS Quality Control Supervisor

3.2.2 U.S. Department of Labor: Occupational Safety and Health Administration (OSHA)⁶

OSHA-500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry

¹ American Concrete Institute, American Concrete Institute, 38800 Country Club Dr. Farmington Hills, MI 48331-34349 USA

² ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959. For referenced ASTM standards, visit the ASTM website, <<http://www.astm.org>>. For Annual Book of ASTM Standards volume information, refer to the standard's Document Summary page on the ASTM website.

³ National Academy of Sciences Transportation Research Board, 500 Fifth St. NW, Washington, D.C. 20001. Report available online at <http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_609.pdf>

⁴ Copies of CFRs may be reviewed online at <<http://www.ecfr.gov>>
⁵ Information about SSPC Training Courses is available online at <<http://www.sspc.org/training/training-home>>

⁶ U.S. Department of Labor, Occupational Safety & Health Administration, 200 Constitution Ave., NW, Washington, DC 20210. <<http://www.osha.gov>>

OSHA 501	Trainer Course in Occupational Safety and Health Standards for General Industry
OSHA 5400	Trainer Course in OSHA Standards for the Maritime Industry

4. Core and Supplementary Qualification Requirements

4.1 The following sections describe the requirements for all applicants.

4.2 MANAGEMENT PROCEDURES: Procedures shall exist for disseminating company policy to all employees and for personnel, administrative and financial management as follows:

4.2.1 Contractor Policy: The contractor shall have:

- Written policies stating its commitment to quality work, worker safety and health and environmental compliance.
- Written procedures for disseminating company policies to employees and those personnel working under its direction. The contractor shall show that procedures are followed and proper records are kept.

4.2.2 Organization and Personnel: The contractor shall have:

- A company-approved organization chart (updated as changes occur, signed, and dated by the responsible company executive (RE) showing division of responsibility within the contracting firm by name of person and title. Documentation and observation must show that responsibilities are carried out in accordance with the organization chart. Key management personnel (e.g., production manager, quality control supervisor, and safety and environmental manager) shall be full-time employees of the contracting firm and report to the RE.
- A list of names, titles, duties, and job descriptions for key personnel (management, technical, quality control, safety, health and environmental compliance). The job descriptions shall state the experience, licenses, certifications and training and refresher training required for each position.

4.2.3 Administrative and Management Procedures: The contractor shall provide:

- A brief written description of the contractor's method of financial record keeping.
- Written confirmation by a certified public accounting (CPA) firm or equivalent accounting professional that the contractor's operating accounting systems and procedures follow established and accepted accounting practices and principles.
- Documentation of contract review.
- Procedures implemented by management to review and distribute specifications to all employees who manage projects, including production foremen.

- Written procedures that have been established and implemented for learning about and complying with federal, state and local administrative, environmental protection, worker health and safety regulations applicable to projects performed by the contractor. A person in the organization shall be assigned the task of keeping track of new, revised and withdrawn regulations and informing the chief executive officer (CEO) and/or other management personnel of the impact of regulatory changes on the company's operations.
- Information that it is a legally viable entity in the locations in which it operates. Examples include: filing of appropriate company ownership/incorporation papers; filing of federal tax returns in a timely manner; Federal Tax ID/EIN statement; holding current state and/or local business licenses and maintaining valid insurance coverage; and other evidence as required.
- Documentation that approved subcontractors are selected on the basis of their ability to assist the contractor in meeting project requirements and any specific inspection requirements.
- Keep records of citations or fines concerning any and all federal, state, and local worker safety and health, wage and hour, tax, and other applicable code or governing regulations, and document that actions are taken to avoid repeat violations.

4.3 TECHNICAL CAPABILITIES:

4.3.1 Work History Requirements

4.3.1.1 Core Qualification Requirements: The contractor shall provide a documented history of successfully installing polymer coatings to concrete structures, surfacings to concrete floors, or both, in mild and moderate non-immersion chemical exposure (pH above 2.0 and below 12.0) in industrial facilities.

4.3.1.2 Immersion Supplementary Requirements: Contractors seeking qualification to QP 8 with Immersion Supplement shall provide a documented history of successfully installing polymer coatings or linings on concrete structures in petrochemical storage, secondary containment, wastewater treatment, or other immersion service, or exposed to chemical environments where pH is below 2.0 or above 12.0. Projects may require application underwater.

4.3.1.3 FRP Atmospheric Service Supplementary Requirements: Contractors seeking qualification to QP 8 with FRP Atmospheric Supplement shall provide a documented history of successfully installing bonded FRP on concrete structures for reinforcement and repair of load-bearing structures exposed to atmospheric, chemical and controlled environments.

4.3.1.4 FRP Immersion Service Supplementary Requirements: Contractors seeking qualifications to QP 8 FRP Immersion shall provide documented history of successfully installing bonded FRP on concrete structures for reinforcement