DMS-7330
Qualification Procedure for Reinforcing Steel Epoxy Coating Applicators

Effective Date: August 2016

1. DESCRIPTION

This Specification governs the qualification procedures for applicators to epoxy-coat reinforcing steel for Department projects. The Materials and Pavements Section of the Construction Division (CST/M&P) qualifies epoxy applicators. Each applicator must meet the requirements of this Specification and the minimum applicable requirements of Item 440, “Reinforcement for Concrete.”

2. MATERIAL PRODUCER LIST

CST/M&P maintains the Material Producer List (MPL) of qualified reinforcing steel epoxy coating applicators. Only producers listed on the MPL, entitled “Epoxy Applicators for Reinforcing Steel,” can be used on Department projects.

3. DEFINITIONS

3.1. Epoxy Coated Reinforcing Steel. Steel reinforcement (bar, welded wire reinforcement, wire) coated with a fusion bonded epoxy powder.

3.2. Applicator. A facility that performs the epoxy coating of reinforcing steel bar, welded wire reinforcement, or wire.

4. QUALIFICATION PROCEDURE

4.1. Qualification Request. Submit a request for evaluation under DMS-7330 to DMS_Prequal@txdot.gov.

Include the following information in the request:

- applicator name;
- physical and mailing addresses;
- contact person, title, phone number, and email address;
- types of reinforcing steel to be coated; and
- types of epoxy powder to be used.

CST/M&P will schedule a meeting with the applicator to review the qualification process.

4.2. Inspection. A Department representative will:

- check the reinforcing steel source (producing mill) identification, method of cleaning of uncoated steel, and cleaning media for compliance with the applicable specifications;
- for coatings:
  - review the coating application process and type of qualified epoxy powder;
  - observe the methods used to heat steel;
  - check the temperature for compliance with powder manufacturer’s recommendations;
  - observe the quantity of material simultaneously coated; and
- verify operation of an in-line holiday detector;
- check curing and cooling times for compliance with powder manufacturer’s requirements;
- for repairs and handling:
  - review the process for repairing uncoated and damaged areas, and the type of repair material used; and
  - observe the type of strapping material and methods used for bundling and handling epoxy-coated reinforcing steel;
- check traceability of epoxy-coated reinforcing steel throughout each coating phase;
- verify that the applicator has a quality control staff that monitors all application process phases and performs the required material sampling and testing for compliance with the applicable specifications;
- observe whether storage areas for uncoated and coated steel and handling procedures meet specification requirements;
- review shipping records and associated documentation for completeness, accuracy, and proper distribution; and
- observe applicator’s procedure to determine if all epoxy coated reinforcing steel furnished for Department use is accompanied by the following documentation:
  - reinforcing steel mill test report;
  - applicator’s certification listing the application site, types and lots of powder used, heat/lot numbers and weights of reinforcing steel, and pertinent specifications for the coating process; and
  - copy of the applicator’s QC test worksheets and the powder manufacturer’s certifications.

4.3. Sampling and Testing.

4.3.1. Sampling. A Department representative will obtain an epoxy powder sample representative of the applicator’s coating process. CST/M&P will test the powder sample to verify material compliance.

4.3.2. Testing. The applicator must test the epoxy-coated reinforcing steel samples in accordance with Item 440, Table 3. Maintain records of all test results.

If epoxy-coated steel samples tested at the applicator fail to meet specifications, the Department will select two additional samples from the same lot for testing by the applicator. Both additional samples must pass the required tests.

Failure of either additional sample will temporarily stop the qualification process. Sampling and testing will continue only after the applicator makes satisfactory adjustments to production or QC.

The Department will use the epoxy-coated reinforcing steel sample test results as information to determine the acceptability of the application.

4.4. Evaluation. CST/M&P will notify prospective applicators after completion of the evaluation.

4.4.1. Qualification. If the applicator qualifies, the Department will issue an official letter of approval and will list the epoxy applicator on the MPL. An approved epoxy applicator must re-qualify on an annual basis.

4.4.2. Failure. Applicators that fail to qualify under this Specification may not furnish epoxy coated reinforcing steel for Department projects and must show evidence of correction of all deficiencies before reconsideration for qualification. The applicator must bear all Departmental travel expenses associated with a plant requalification that follows a previous qualification failure.

4.5. Documentation. If approved, epoxy applicators must complete and maintain on file a signed and notarized Form D-9-USA-2, “Certification of Domestic Origin for Steel and Iron Materials or Coating Application.”
4.6. **Random Inspection.** The Department reserves the right to conduct random audits of applicator facilities, to sample qualified materials for testing, and to perform random audits of test reports. Department representatives may sample material from the applicator facility, the project site, and the warehouse throughout the qualification period to ensure compliance with the applicable specifications. The Department reserves the right to test samples to verify compliance with Item 440.

Failure to comply with the requirements of this Specification as a result of random inspection may be cause for removal of the epoxy applicator from the MPL. In case of variance, the Department’s tests will govern.

4.7. **Disqualification.** Any approved applicator found to be in violation of this Specification is subject to removal from the MPL and is prohibited from furnishing material to Department projects.

Causes for disqualification and removal from the MPL may include, but are not limited to:
- failure to comply with the conditions, procedures, and requirements of this Specification;
- falsifying information on an applicator's certification or control test worksheet; or
- failure to consistently coat reinforcing steel meeting the requirements of the applicable specifications.

CST/M&P will remove disqualified applicators from the MPL and will not allow plant re-qualification for 1 year from the date of removal, at the discretion of the Department.

4.8. **Re-Qualification.** Once the disqualification period established by CST/M&P has elapsed, applicators disqualified and removed from the MPL may begin the re-qualification process by submitting a request in accordance with Section 4.1, including additional documentation identifying the cause of the problem and corrective action taken. The re-qualification process will then follow all subsequent Sections of Article 4.

The applicator must bear all Department expenses associated with re-qualification.

4.9. **Failure to Furnish Material.** If an applicator fails to furnish any epoxy-coated reinforcing steel to Department projects during the one-year qualified period, CST/M&P will remove the applicator from the MPL due to inactivity.

CST/M&P will consider future qualification after the applicator has proven it will furnish epoxy coated reinforcing steel to Department projects.

5. **ARCHIVED VERSIONS**

Archived versions are available.