

## EPOXY COATED REINFORCING REVIEW GUIDELINES

State: \_\_\_\_\_

Date: \_\_\_\_\_

Review Participants: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Project Information: \_\_\_\_\_

\_\_\_\_\_

Name/Address of applicator and fabricator:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Attach a copy of your State's current specifications.

### **I. COATING MATERIALS**

- A. What are the prequalification requirements (if any) for the coating material?
- B. Who approves the coating material and how is this documented? Is the material approved prior to its use?
- C. Has the patching material been tested and approved? Is it approved prior to use?
- D. Is a written certification required for each batch of coating material certifying that the material is the same as that prequalified? (Required by AASHTO M284)
- E. Does the State perform independent testing of the coating material to verify its composition?

## II. COATING APPLICATOR SHOP

- A. Comment on the cleanliness of the reinforcing steel prior to coating. (Cleanliness can be observed by wiping a hand or cloth across a few bars after the blasting operation.)
- B. What is the time period between blasting and coating?
- C. What is the required thermal cure time? Does the production line speed allow for the proper cure time prior to quenching?
- D. After curing are coated bars free from holes, voids, contamination, cracks, and damaged areas detectable with the unaided eye? If not, what happens to them?
- E. Shop Inspection / Testing:
  - 1. Describe the State's inspection practices at the shop.
  - 2. Are periodic random bar samples taken for testing and evaluation of chemical and physical properties? Are the samples checked for cleanliness?
  - 3. Describe the testing performed at the shop for each of the following. Include a discussion of equipment and methods used, specification limits, and frequency.  
  
Heat:  
  
Holidays: (less than 2/ft)  
  
Film Thickness: (ASTM D3963 requires 90% of film thickness measurements to be between 7 and 12 mils after curing. AASHTO M284 requires 90% between 8 and 12 mils after cure.)  
  
Adhesion:
  - 4. Describe the shop's quality control practices.
- F. Are padded bundling bars or nylon straps used during handling of the coated bars?
- G. Are bundled bars moved in such a way as to prevent bar-to-bar abrasion due to sagging?

- H. Are coated bars stored above the ground on wooden or padded supports? If coated bars are stored outside, are they covered?
- I. Do the specifications include time limitations on length of outdoor storage? If so, what are they? (a limit of 3 months total time is recommended)
- J. Describe how the bar identification is maintained throughout the coating process.
- K. Describe the criteria used to determine the need for repairs in the shop.
- L. Is there a minimum and/or maximum thickness of coating specified for repair areas? If yes, what is it?
- M. Is there a limit on the amount of bar surface area that can be covered by patching material and, if so, what is it?
- N. At the time of shipment, does the State require certification from the coater that the bars were cleaned, coated, and tested in accordance with the specifications?
- O. Do the specifications require that bending of bars be performed prior to coating?
- P. Is the plant certified under the CRSI Epoxy Coating Applicator Plant Certification Program? If so, check on how the plant is following their certification.

### **III. FABRICATION SHOP**

- A. Describe the shop's quality control practices.
- B. Describe the State's inspection practices.
- C. Are padded bundling bars or nylon straps used during handling of the coated bars?
- D. Are bundled bars moved in such a way as to prevent bar-to-bar abrasion due to sagging?
- E. Are drive rolls on shear beds and back-up barrels on benders protected with a suitable cover to minimize damage during fabrication?
- F. Are coated bars stored above the ground on wooden or padded supports? If coated bars are stored outside, are they covered?

- G. Describe how the bar identification is maintained throughout the fabrication process.
- H. Describe the criteria used to determine the need for repairs in the shop.
- I. Do the specifications prohibit welding of coated bars?
- J. How are the bars cut? (should not be burned unless fully repaired)
- K. How is the epoxy coating repaired after the bars are cut?

#### **IV. PROJECT SITE**

- A. Describe the State's inspection practices at the project site.
- B. Are padded bundling bars or nylon straps used during handling of the coated bars?
- C. Are bundled bars moved in such a way as to prevent bar-to-bar abrasion due to sagging?
- D. Are coated bars stored above the ground on wooden or padded supports? If coated bars are stored outside, are they covered?
- E. Do the specifications include time limitations on length of outdoor storage? If so, what are they?
- F. Describe the criteria used to determine the need for repairs in the field.
- G. Do the specifications require the use of coated tie wire and supports? If so, what is the minimum thickness of coating required?
- H. Is there a limit on the amount of bar surface area that can be covered by patching material and, if so, what is it?