

SECTION 11.6 Volume II

PRE-APPROVED REPAIR PROCEDURES FOR SHOP APPLIED COATINGS

11.6.1 PURPOSE

This section provides pre-approved paint repair procedures for structural steel produced by fabricators.

11.6.2 AUTHORITY

Sections 20.23(3)(a) and 334.048(3), Florida Statutes (F.S.)

11.6.3 REFERENCES

For all reference documents always use the most current approved version unless otherwise specified in the ***Contract Documents***.

Society of Protective Coatings Paint Application (SSPC-PA) Guide
13/AASHTO National Steel Bridge Alliance (NSBA) Steel Bridge
Collaboration S.8.1

Technical Data Sheet June 1982 82-08, Department of the Navy, Naval
Civil Engineering Lab (NCEL)

SSPC Painting Manual Vol. 1 Good Painting Practice

SSPC Monitoring and Controlling Ambient Conditions during Coating
Operations

11.6.4 SCOPE

This procedure affects fabrication facilities, the State Materials Office, and those consultants who are involved in the verification and quality assurance inspection/testing of shop applied coatings.

11.6.5 GENERAL INFORMATION

These preapproved procedures are not mandatory, so fabricators may elect to use alternative procedures. If a fabricator chooses to use one of the pre-approved procedures for repairs, the procedure does not have to be submitted to the Engineer for approval. If a fabricator elects to use an

alternative repair procedure, it must be submitted to the Engineer for approval before any repairs are started. In all cases the Verification Inspector must be notified of the procedure that will be used prior to starting repairs.

These preapproved procedures apply to the application of inorganic zinc (IOZ) only.

The fabricator may incorporate these preapproved procedures into their **Quality Control Plan**.

Repair Procedure 1			
Condition	Cause	Remedy	Standard/Method
Checking or Crazing	High Wet Film Thickness	Sand the surface down with sandpaper or a wire screen until a uniform surface is achieved.	Visual
	Rapid Change in Ambient Conditions	Confirm prescribed dry film thickness. Record ambient conditions and feather in coating system, according to product data sheet. If coating defects continue to be identified, remove the coating down to the substrate, verify the surface profile, record ambient condition and coat per product data sheet.	SSPC Good Painting Practice
	High Temperatures		ASTM D660
	Low Surface Profile		SSPC PA-1 SSPC PA-2

Repair Procedure 2			
Condition	Cause	Remedy	Standard/Method
Contaminants in Paint	Un-clean Equip. Applicator (Air/Pot)	Isolate and remove the contaminated coating system. Record the ambient conditions and reapply with a new kit per product sheet.	Visual
	Mixing Partial Kits Expired Systems		SSPC Good Painting Practice SSPC PA-1

Repair Procedure 3			
Condition	Cause	Remedy	Standard/Method
Delamination: (Adhesion or Cohesion) i.e. Coating does not adhere	Surface contamination	Isolate the non-conforming area using a dull putty knife. Remove the affected coating system and verify surface profile (if applicable). Record the ambient conditions, and feather in coating system per product data sheet. (Only acceptable if repair procedure is completed and recoated within one shift)	Visual
	Improper Surface Profile (Substrate)		SSPC Good Painting Practices
	Intercoat cleanliness		SSPC PA-1
	Induction time/ Pot Life		SSPC PA-2
	Condensation		

Repair Procedure 4			
Condition	Cause	Remedy	Standard/Method
Drip	Improper application	Isolate the non-conforming areas. Lightly sand or use a screen (see Repair Procedure 1) to remove the defect. Record the ambient conditions and apply a thin coating per product data sheet. Verify dry film thickness measurements meet specification.	Visual
Sag	Wind Conditions		SSPC Good Painting Practices
Run	Unsatisfactory Containment		SSPC PA-1
Dry Spray			SSPC PA-2
Excessive Film Build	Proximity to Work		

Repair Procedure 5			
Condition	Cause	Remedy	Standard/Method
Holidays (Voids)	Improper Application	Isolate the non-conforming areas. Small areas can be touched up with the manufacturer's recommended touch-up procedure. Record the ambient conditions and % solvent used. Repair areas more than 12 inches squared will require brush blasting per SSPC SP-7.	Visual
	Excess Solvents		ASTM D5162
	High Temperature		SSPC PA-1

Repair Procedure 6			
Condition	Cause	Remedy	Standard/Method
Insufficient Film Build	Improper Application	Record the ambient conditions and apply the coating per product data sheet. Verify dry film thickness measurements meets specifications. If the manufacturer does not provide written endorsement, contact the State Materials Office.	SSPC PA-1 SSPC PA-2

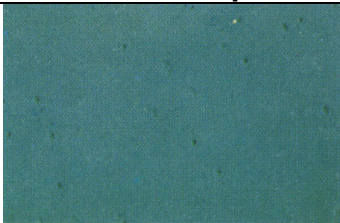
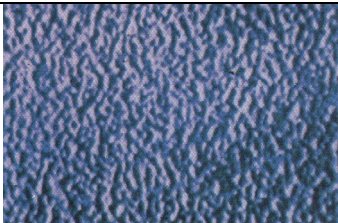




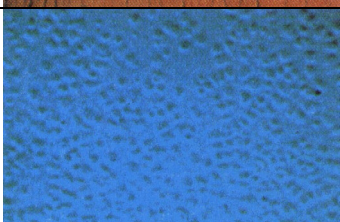
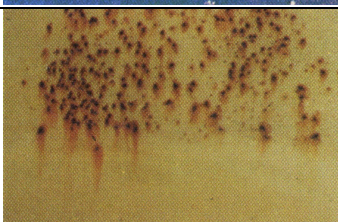
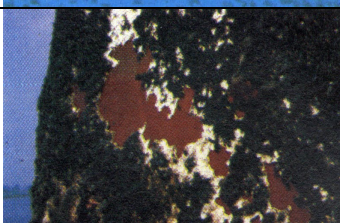



Repair Procedure 7			
Condition	Cause	Remedy	Standard/Method
Improper Cure	Improper Mixing Low Temperature Low Humidity Poor Ventilation	Isolate the non-conforming area using a dull putty knife. Remove the affected coating system. Record the ambient conditions, and feather in coating system per product data sheet. Verify with manufacturer reported pencil hardness* or solvent rub test. Perform three pull tests to ensure the area meets 800 PSI (to limit damage, abort test when values reach > 800).	ASTM D3363 ASTM D4752 SSPC-PS 12.01 SSPC Good Painting Practice ASTM D4541

Repair Procedure 8			
Condition	Cause	Remedy	Standard/Method
Mudcracking	Rigid Coatings High Film Build Improper Application Poor Wetting Properties	Isolate the non-conforming area. Remove the affected coating system. Evaluate the application procedure. Verify that the solvent usage, and mixing procedure meet the product data sheet. Record the ambient conditions, and apply per product data sheet. (Microcracking is not considered a non-conformance.)	Visual SSPC PA-1 SSPC PA-2 SSPC Good Painting Practice

Repair Procedure 9			
Condition	Cause	Remedy	Standard/Method
Orange Peel	High Temperature Rapid Change in Environment Poor Wetting Properties Expired Pot Life	Isolate the non-conforming area. Correct the ambient conditions until they meet those listed in the product data sheet. If the recoat window allows, lightly sand and apply a light mist coat over the non-conforming area and re-evaluate. If it continues to orange peel, remove the coating system. Record the ambient conditions and apply the coating system per product data sheet.	Visual SSPC PA-1 SSPC Good Painting Practice

Repair Procedure 10			
Condition	Cause	Remedy	Standard/Method
Physically Damaged or Rusted Areas	Various	Use appropriate hand or power tools to prepare these areas to the degree of cleanliness specified in the contract documents while providing or maintaining the proper surface profile. Protect adjacent areas of sound material from being damaged by the removal operation by masking or other practical means and reapply coating	Visual

Alternative Repair Procedure			
Condition	Cause	Remedy	Standard/Method
Physically Damaged Area, Rusted Area, or Mudcracking	Various	In lieu of using IOZ, prepare the surface and apply an epoxy mastic coating per manufacturer's recommendations. This repair is limited to small areas or hard to access areas, such as pick points or behind stiffeners, and not to exceed more than 5% of the total square footage of the piece.	Visual

Table 1 Examples Of Paint Non-Conformances			
Blistering		Orange Peel	
Checking		Overspray	
Cracking		Pinholing	
Cratering		Pinpoint Rusting	
Delamination		Sags	
Mudcracking		Wrinkling	

11.6.6 TRAINING

None Required

11.6.7 FORMS

None required