

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.15**SOURCE INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-001282**Date Inspected:** 26-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**Location:** Changxing Dao, Shanghai**Quality Control Contact:** William (Bill) Oak**Quality Control Present:** Yes No**Material transfer:** Yes No N/A**Sampled Items:** Yes No N/A**Stock Transfer:** Yes No N/A**OK to Cut:** Yes No N/A**Rebar Test Witness:** Yes No N/A**Delayed/Cancelled:** Yes No N/A**Other:** Coatings Inspection**Bridge No:** 34-0006**Component:** Tower Splice Plates, Lift 3 West, Office, Lift**Bid Item:** 77, 78, 79**Lot No:** B265**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials (OSM) Quality Assurance (QA) NACE III coating inspector, Mr. James Lumley arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island in Shanghai, China. The purpose of the coating inspections are to monitor the surface preparation and coating applications for the SAS Bay Bridge project. This QA NACE III coating inspector observed the following:

Office

Attend to report writing and project documentation.

Tower Splice Plates

Base metal surfaces of the following coded items were abrasive blasted to an SSPC SP-10 condition and Interzinc 22 applied. SA101-S, SA102-S, SA170-S, SA235-S, SA98-S were the items addressed.

Miscellaneous Metal

Base metal surfaces of 139+- splice plates X202C, X202J were abrasive blasted to an SSPC SP-10 condition and Interzinc 22 applied.

North Tower Lift #1

Internal and external surfaces were Inspected for de-greasing of base metal surfaces and were rejected due to visible grease and oil deposits on internal and external surfaces. Areas were marked up internally requiring re-work and external surfaces were inaccessible other than viewing from the ground.

Cross Beam #2

Cursory inspection was performed unannounced to ABF & ZPMC internal surfaces exhibited rust and dry-spray as well as dirt and other contaminants. Caltrans QA Lumley informed ABF QA Bill Oak, also burn damages evident in ceiling area.

Tower Splice Plates

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In process application of Interzinc 52 to internal surfaces of bolt holes, ZPMC personnel plunging a “sausage” roller through holes repeatedly. Inspection was performed with ABF QA Bill Oak.

Lift 4 West

Inspection requested for surface cleanliness for application of “mist” coat Interfine 979 on external surfaces repaired areas and bolted assemblies of bottom plate below FL-3 beams. Inspection was cancelled by ZPMC upon Caltrans QA arrival at work site.

Cross Beam #2

Repairs were performed on the bolted surfaces after trial assembly to faying surfaces. Previously coated areas were re-blasted to base metal and an SSPC SP-10 condition and Interzinc 22 applied. Inspection was performed by ABF QC and follow up inspection was performed by Caltrans QA Lumley with SMR Skyler Guest.

Lift 3 West

Repairs of the Cross Beam terminus areas and faying surfaces were performed of damaged areas via re-abrasive blasting to base metal and an SSPC SP-10 condition and re-application of Interzinc 22. Vertical surfaces of the internal areas and floor areas were accepted as well as the end plate, the top section was rejected by Caltrans QA Lumley as non compliant with SSPC SP-10. ZPMC re-abrasive blasted affected area and amended and applied Interzinc 22. Coating application was delayed on top plate due to excessively high surface temperature in excess of 40C.

Cross Beam #2

Damage repair work of the internal and the external surfaces which consisted of re-abrasive blasting to base metal and an SSPC SP-10 condition and re-application of Interzinc 22 to the affected areas. Internal areas were rejected due to non compliance with SSPC SP-10 requirement and were re-blasted to amend improperly prepared surfaces. Profile amplitude was 79-82um.

Lift 4 West

MEK testing and pencil hardness testing was performed on repaired damaged areas prior to “mist” coat application of Interfine 979. All testing areas of repaired Interzinc 22 was compliant with Specification and Interfine 979 was applied using air-spray method.

Miscellaneous Metal

Base metal surfaces of 112 splice plates were de-greased in accordance with SSPC SP-1 in preparation of abrasive blasting operations. During this inspection the edges were observed to not have been properly conditioned to remove hardened surface layer from thermal cutting process and were marked for re-work and repairs by ABF QA/QC after Caltrans QA pointed this out.

Note: All inspections were performed jointly with ABF & ZPMC QA/QC representatives and Caltrans QA Lumley when achievable. International Protective Coatings technical service representative were available for inspections and consultation.

Summary of Conversations:

Caltrans QA Lumley inquired with ABF QA Bill Oak as to why no Notice of Inspections were sent by ZPMC for any work/repairs associated with Lift 4 East since loaded upon the ship.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, (858) 699-9549, who represents the Office of Structural Materials for your project.

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Inspected By:	Lumley,James	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
