

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-002295**Date Inspected:** 05-Dec-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:** Coating Inspection**Bridge No:** 34-0006**Component:** Tower Lift 1 East & South, Lift 3 East, Lift 4**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 project documentation and report filing.

Lift 3 East

Internal Bottom Plate weld seam repair area after NDT base metal surfaces were undercoated a second time here with Interzinc 52 and also concurrent two other locations were coated in the Upper "U" rib stiffener area.

West Tower Lift #1

ZPMC personnel de-greasing external stiffener installation area from 0-2M on Skins A, B, C, D, E.

Lift 2 East

Finish coat application of Interfine 979 was applied to the Bottom Plate surfaces and also the East Side Plate surfaces, Surfaces coated on the Side Plate looked questionable relative to gloss and uniform reflectance and appeared mottled as if flashing had occurred as was previously noted. ZPMC QC Dong Yaofei informed Caltrans QA Lumley that they utilized a different applicator for the spraying of this surface. Also ZPMC failed to protect the Top Plate Faying surface for the Steel Barrier installation from overspray damages and contamination.

Additional work required to restore previous undercoated condition.

Lift 1 East

Internal and external surfaces of undercoated damaged areas were re-abrasive blasted to base metal and an SSPC SP-10 condition and Interzinc 22 applied. Surfaces which will be embedded in concrete were coated with Intercure

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200 HS. Undercoated surface of Interzinc 22 on the “F” Plate/Top Plate edge weld seam had the newly applied undercoat ground off and NDT verification performed. Intercure 200HS applied where concrete embedment to occur and areas of re-work were not feathered properly and edges of existing coating exhibit disbonding at periphery.

Lift 4 East

Internal inspection of the NDT repair areas in the Upper Corner Unit areas were found to be repaired in general compliance with the agreed upon repair procedure.

Lift 4 West

Internal damaged NDT areas were repaired in accordance with the agreed upon repair procedure and Interzinc 52 undercoat applied.

Sub-Assemblies

These Bridge components were previously found to be in general compliance with the contract documents and have since sustained damages resultant from ZPMC operations aboard the transport ship #17. Bikeway Brackets, Counterweights and Suspender Brackets all have some coatings damages which require repairs prior to re-wrapping for transport. ZPMC QC Dong Yaofei was informed to amend repairs expeditiously by ABF QA Superintendent Bill Oak and to get the items re-covered to protect from additional damages.

Tower Lift 1 East

External surfaces from 0-2 M stiffener installation areas were re-abrasive blasted to remove existing damaged undercoat to base metal and an SSPC SP-10 condition and Interzinc 22 undercoat re-applied prior to welding the stiffeners into position. Skins A, B, C, D, E were re-coated.

Lift 4 East & West

Top Plate to “F” Side Plate weld seam NDT area was Top-coated with Interfine 979 Finish coating along the weld seam only. ABF QA Bill Oak directed ZPMC QC Personnel to apply 2 applications of Interfine 979 on the repaired areas and to apply a full coat the entire width of the “F” Side Plate to blend in and have a more uniform appearance all the way to the Drip Edge located at the bottom of the “F” Side plate.

Sub-Assemblies

Stiffeners Plates to be installed on the internal of Towers Lifts 1 East and South were abrasive blasted to an SSPC SP-10 condition and Interzinc 22 undercoat applied. These components were removed from the internal of the tower to expedite the coating process.

OBG 7DE

Adhesion testing was performed on the internal Interzinc 22 undercoated surfaces and all testing was in excess of minimum values specified by the contract documents of 4Mpa.

Cross Beam #2

Damaged previously applied coatings from NDT operations and weld repairs were prepared and re-primed in accordance to the agreed upon methods and Interzinc 52 was applied. SSPC SP-3/11/1 was observed on the prepared substrate.

Lift 1 East

Internal repairs and “Rust Stain “ removal via abrasive blasting to affected areas and damaged previously applied Interzinc 22 was performed by ZPMC personnel and Interzinc 22 re-applied to the Bottom Plate floor area and stiffeners within blasting workshop #4.

Lift 1 West

Repairs to previously applied undercoated surfaces and “Rust Stain” removal was performed via abrasive blasting to Base Metal and an SSPC SP-10 condition of damaged areas and Internal Side Plate weld seam and Interzinc 22 undercoat re-applied at the 1AW/1AAW weld seam.

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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 ZPMC created additional repairs to components already in general compliance with the contract documents which were previously loaded and aboard 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.

Inspected By:	Lumley,James	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer
