

**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-002430**Date Inspected:** 22-Mar-2010**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:** Don Walton**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:** Sub-Assemblies, Office, Lift 5 East, Lift 6 East**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:

**Sub-Assemblies**

Repairs of 32 various splice plates which were returned from Trial Assembly were re-abrasive blasted to remove damaged previously applied undercoat to base metal, surface profile was checked and the profile amplitude was in excess of the maximum specified in the special provisions for abrasive blasting, the amplitude was 88-92µm upon initial inspection and subsequently re-abrasive blasting was performed after ABF Don Walton directed the blast operator not to "bear down" when blasting but to change the angle of attack and sweep the entire surface area to knock down the profile amplitude, the profile was re-checked upon completion of abrasive blasting base metal surfaces once again and the profile amplitude was observed at 68-85µm and also met the conditions of SSPC SP10 for cleanliness and Interzinc 22 undercoat re-applied to effect repairs.

**Lift 5 East**

ZPMC was observed applying undercoat Interzinc 22 over non-compliant surfaces and the areas were rejected by ABF QA personnel, subsequent removal of applied undercoat was performed and surfaces are to be cleaned and verified prior to application.

**Lift 6 East**

ZPMC requested a Dry Film Thickness (DFT) verification and "Final" inspection of the external finish coated surfaces for areas which required repairs which were determined to be non-compliant by the Caltrans Engineer Bill Howe, repaired areas of the Cross Beam Termination/FL-3 beams were determined to be in general

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# SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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compliance. The Cross Beam Bottom Plate for the cross beam terminations bolted assemblies of the FL-3 connections were also finish coated at this time and ZPMC then lifted this component from Dock#5 and placed aboard Transport Ship #17 upon Sea Fasteners with the newly applied finish coat in intimate contact with the Sea Fastening wood block softeners prior to ample cure after application, less than one hour had elapsed since the Interfine 979 top-coat had been applied prior to relocation of the Lift to the ship.

## Lift 6 East

ZPMC requested an inspection of the internal undercoated surfaces in the Upper Corner Unit areas, ABF QA personnel rejected the work performed and directed ZPMC to re-abrasive blast the affected areas to amend repairs. Sub-Assemblies

ZPMC requested a "Final" inspection of 24 Traveler Rail Brackets within paint shop #2. Caltrans Engineer attended the inspection and after visual inspection and DFT verification the 24 components were determined to be in general compliance with the contract documents. Concurrent with this inspection Counterweight # CW28 and 3 additional Traveler Rail Brackets were visually inspected for cleanliness prior to application of finish coat Interfine 979 subsequently Interfine 979 application to these components was applied.

## Cross Beam #6

ZPMC requested a "Final" inspection of the finish coated external vertical surfaces after repairs had been performed, Caltrans Engineer Bill Howe performed visual inspection of accessible top-coated surfaces which were visible of only 50% of the repairs due to the Cross Beam having already been relocated to the ship and set in position of the sea fasteners, one vertical side plate was not accessible for visual and a conditional approval was given for general compliance based on the remaining visible surface area.

## Office

Deliver in process works relative to application of coatings and ZPMC activities for loading aboard Transport Ship#17 as requested by ASMR Skyler Guest.

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 informed Caltrans Engineer Bill Howe that the repaired areas on Cross Beam #6 appeared to be compliant with the contract documents despite the volume of insect damage that had occurred after the coating was applied. Small "trails" could be seen in the dried film from insects attempting to crawl through the applied wet film after application was performed upon Dock #5 on the previous day.

## 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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<b>Inspected By:</b>	Lumley,James	Quality Assurance Inspector
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<b>Reviewed By:</b>	Peterson,Art	QA Reviewer
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