

**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-002399**Date Inspected:** 14-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, Cross Beam #4, Lift 5 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**

Base metal surfaces of Suspender Bracket SB40E was washed and de-greased in accordance with SSPC SP-1 in preparation of abrasive blasting operations.

**Sub-Assemblies**

Base metal surfaces of 650 various Splice Plates, Shim Plates, Channel Iron were abrasive blasted to an SSPC SP-10 condition. Profile amplitude was 68-76µm and Chloride values were observed to be 20µs/cm. ZPMC did not employ heating nor dehumidification within blasting shop #2 and ambient conditions were not in compliance with the contract documents nor the published recommendations of the coating manufacturers product data sheets. ZPMC to amend and repair as well as re-submit notification.

**Cross Beam #4**

ZPMC requested a "Final" inspection on external finish coated repaired areas. Caltrans Engineer Bill Howe determined final visual was in general compliance and determined conditional approval pending Dry Film Thickness (DFT) verification. The repaired area was on the center vertical side plate where the utility pipe perforations are and the access perforation.

**Lift 5 East**

ZPMC requested a "Final" inspection of finish coating on external surfaces. The work upon arrival to the "Lift" was still in process and also incomplete as the bolted assemblies were not Top-coated of the Cross Beam/FL-3

---

---

## SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

---

---

bottom assemblies. Also observed wet applied top-coat on Bottom Plate stillage contact areas and ABF QA Dave Duon directed ZPMC to remove the applied finish coat as the ambient conditions were non-compliant to allow application to be permitted without employing dehumidification or containment. Caltrans QA Lumley also checked the areas described above and discussed with International Protective Coatings technical service representative Mr. Zili Peng relative to application of such and requested recommendations from Mr. Zili Peng. Mr. Peng stated “ send NCR” Caltrans QA Lumley then contacted ZPMC Mr. Jiang and informed of the situation, Mr. Jiang directed ZPMC personnel to remove subsequent “wet” coating from surfaces via solvent wiping with GTA-007 solvent rather than allowing the applied coating to harden and then require more aggressive means to remove non-compliant applied top-coat. ZPMC later employed containment and utilized dehumidification and subsequently applied the finish coating on the aforementioned areas.

### Lift 5 West

ZPMC requested an inspection of the Cross Beam termination/FL-3 Bottom Plate bolted assemblies, it was observed that the bolts were not thoroughly encapsulated and undercoat was grinning through as well and shadow through and holiday’s observed. ZPMC to repair and resubmit notification upon completion of subsequent repairs.

### Sub-Assemblies

Base metal surfaces of approximately 248 Splice Plates as well as Suspender Bracket 46E were washed and de-greased in accordance with SSPC SP-1 in preparation of abrasive blasting operations.

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:

No relevant conversations on this date.

### 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.

---

<b>Inspected By:</b>	Lumley,James	Quality Assurance Inspector
----------------------	--------------	-----------------------------

---

<b>Reviewed By:</b>	Peterson,Art	QA Reviewer
---------------------	--------------	-------------