

**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 #: 04-0120F4  
Cty: SF/ALA Rte: 80 PM: 13.2/13.9  
File #: 69.15

**SOURCE INSPECTION REPORT**

**Resident Engineer:** Pursell, Gary  
**Address:** 333 Burma Road  
**City:** Oakland, CA 94607

**Report No:** SIR-001291  
**Date Inspected:** 07-Sep-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

<b>Quality Control Contact:</b>	William (Bill) Oak	<b>Quality Control Present:</b>	Yes	No
<b>Material transfer:</b>	Yes No N/A	<b>Sampled Items:</b>	Yes No N/A	
<b>Stock Transfer:</b>	Yes No N/A	<b>OK to Cut:</b>	Yes No N/A	
<b>Rebar Test Witness:</b>	Yes No N/A	<b>Delayed/Cancelled:</b>	Yes No N/A	

**Other:** Coatings Inspection

**Bridge No:** 34-0006

**Component:** Office, Miscellaneous Metal, Cross Beam #2,

**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

Consult with SMR Skyler Guest regarding Incident reports and Non-Conforming items. Attend to project documentation sorting and organizing.

Miscellaneous Metal

Base metal surfaces of 28 Chevron Beam faying surfaces were abrasive blasted to an SSPC SP-10 condition and Interzinc 22 applied.

Cross Beam #1

Internal surface repairs consisting of re-abrasive blasting damaged areas to base metal. This piece is in Blast Shop #1 where ongoing abrasive blasting is taking place on another large component adjacent to the Cross Beam thus making inspection difficult due to limited visibility and impact of abrasive. Blast was rejected as it did not meet SSPC SP-10 requirement.

Cross Beam #2

ZPMC requested Final Acceptance inspection on this item. The inspection was performed jointly with Caltrans QA Lumley and ABF QA Bill Oak and SMR Skyler Guest. Inspection revealed that repairs were still ongoing and in process and the work was then rejected. ZPMC insisted on a Final inspection despite the work being incomplete, ZPMC then requested verbally a "piece" inspection of localized areas to which they were informed there would be no "Spot by Spot" inspections performed relative to Final Acceptance.

---

## SOURCE INSPECTION REPORT

( Continued Page 2 of 3 )

---

### OBG 6BE

Caltrans QA Lumley performed a non requested inspection of the external coated surfaces and internal “U” rib stiffeners. Areas were photo-documented which required additional re-work and repairs consisting of but not limited to, dry-spray removal, caulking of crevice areas in “U” rib terminations, mud-crack, repairs, visible holidays. Inspection was carried out with SMR Skyler Guest and ABF QA Bill Oak for a period of time then these 2 individuals left.

### ABF Office

Attend to backlog of ZPMC reports reviewing and signing.

### Lift 3 East

Joint observation of re-abrasive blasting upper “U” rib stiffeners at terminations with ABF Bill Oak and SMR Skyler Guest. Work was performed utilizing a man lift and without containment enclosure. This repair work was identified previously through a joint inspection with Caltrans QA Lumley and ABF QA Zhou Qusong.

### Cross Beam #2

Internal Final Acceptance inspection was requested by ZPMC. Inspection was performed jointly with ZPMC QC Don Yao Fei and Caltrans QA Lumley on the internal ceiling portion repaired areas. Caltrans QA Lumley identified and pointed out missed areas and exposed base metal, over-blast perforations in applied coating, low DFT areas and areas behind cope holes which required additional re-work. ZPMC QC Don Yao Fei cancelled remainder of inspection and stated ZPMC would re-submit another request pending completion of repairs. Also the top external interline 979 coated surface was checked and found that the DFT range was 207-293um from random spot checks.

### Miscellaneous Metal

Base metal surfaces of 86 pieces of splice plates were de-greased in accordance with SSPC SP-1 in preparation of abrasive blasting operations.

### Tower Sub Assemblies/Cross Braces

DFT check and MEK Rub and Chloride testing was requested by ZPMC prior to application of Interline 979 “mist” coat. DFT readings revealed insufficient undercoat thickness of inorganic zinc rich primer on surfaces and ZPMC cancelled remaining testing pending repairs and additional film build of Interzinc 22.

### North Tower Lift #1

External surfaces were coated with Interzinc 22 upon Caltrans QA Lumley arrival at workshop #2. ZPMC personnel completed abrasive blasting operations during nightshift and ABF performed final inspection and accepted surface preparation and permitted application of undercoat. Approximately 95% of the surface area was coated upon Caltrans arrival at work. Caltrans QA Lumley performed follow up inspection on remainder of Base Metal which was not coated and found it to meet the requirements of SSPC SP-10 this Tower shaft has not been completely fabricated and has not been trial assembled as of yet and extensive damages are anticipated.

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 3 East while observing blasting repair work in process in trial assembly area.

### 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

---

---

# SOURCE INSPECTION REPORT

( Continued Page 3 of 3 )

---

---

your project.

---

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

---

<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer
---------------------	----------------	-------------