

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-000635**Date Inspected:** 27-May-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 0**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 12**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**Location:** Changxing Dao, Shanghai

<b>Quality Control Contact:</b>	ABF Paint Supervisor 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:** Surface Preparation and Coatings Application**Bridge No:** 34-0006**Component:** OBG Lift 2, 4, 1AAE, Tower L1E**Bid Item:** 77,78,79,80**Lot No:** B226**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials (OSM) Quality Assurance (QA) NACE III coating inspector, Mr. Donald Jordan 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: The following inspections were performed by Caltrans QA Coatings Inspector Jordan, American Bridge/Fluor Enterprises, a JV (ABF) Paint Supervisors William (Bill) Oak and Don Walton, ABF QC Zhou Qun Song (Joe), ABF QC David Duon, ABF QC Shi Zhaoyuan (Stone), ABF QC Zhou Wei, International Paint (IP) Onsite Technical Services Engineer (OTSE) Peng Zi Li, IP OTSE Alpha Chen, Zhenhua Port Machinery Company, LTD (ZPMC) QC Manager Xia Yong, ZPMC QC Zhang Diang, ZPMC QC Dong Yao Fei and ZPMC QC Guo Wan Li. Caltrans QA Coatings Inspectors received Notices of Inspection for to attend joint inspections with ABF and ZPMC QC for the following:

**OBG Trial Assembly Lift # 4**

Caltrans QA Coatings Inspectors received word that spray painting was being performed in the OBG Trial Assembly Area. Upon investigation by Caltrans QA Coatings Inspector Jordan the application was complete. It appears that Intercure 200HS was applied to the counterweight areas of the West OBG lift 4 and Interfine 979 was applied to other portions of lift 4. There was no ABF QC, IP representative or ZPMC QC in the area.

**OBG 1AAE**

Caltrans QA Coatings Inspectors received a Notice of Inspection for to attend a joint inspection with ABF and ZPMC QC to locate visual surface anomalies and weld defects on the floor area of OBG 2AW. ABF verbally

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requested that the Caltrans welding staff be notified to perform VT inspection after blast. Areas requiring grinding were identified and marked by QC and QA staff. Caltrans QA Weld Inspector's performed VT inspection to locate and mark any weld repairs required. The weld repair spots were identified by placing tape over the area so it can be located after primer application. After the inspection was complete, grinding was performed to remove base metal defects. Abrasive blasting resumed after grinding was completed. NO ZPMC or ABF steel inspectors were on site looking at the welds.

International Paint (IP) Onsite Technical Services Engineer (OTSE) Peng Zi Li identified mud-cracking on the external surface. He informed ZPMC that the external surface will have to be abrasive blasted to remove the defective coating.

### OBG Trial Assembly Lift # 2

Caltrans QA Coatings Inspectors received a Notice of Inspection for to attend a joint inspection with ABF and ZPMC QC to inspect the OBG 2BE and 2BW cross beam bottom plate that was abrasive blasted. ABF QC reported that the prepared surface met the contract requirements. Caltrans QA Coatings Inspector Jordan was not available to attend the inspection. Interzinc 22 zinc primer was applied.

### Tower Lift 1East

Caltrans QA Coatings Inspectors received a Notice of Inspection for to attend a joint inspection with ABF and ZPMC QC to witness the adhesion testing on the external surface of tower lift 1 East. Adhesion testing was performed in accordance with the requirements in ASTM Designation: D 4541. The pull test met the contract requirements of having a minimum adhesion to steel of 4 MPa.

Caltrans QA Coatings Inspectors received a Notice of Inspection for to attend a joint inspection with ABF and ZPMC QC to locate visual surface anomalies and weld defects on the floor area of Tower lift 1 East 18m diaphragm to the base. ABF verbally requested that the Caltrans welding staff be notified to perform VT inspection after blast. Areas requiring grinding were identified and marked by QC and QA staff. Caltrans QA Weld Inspector's performed VT inspection to locate and mark any weld repairs required. The weld repair spots were identified by placing tape over the area so it can be located after primer application. After the inspection was complete, grinding was performed to remove base metal defects. Abrasive blasting resumed after grinding was completed. ABF Tower Supervisor Don Walton was present to perform VT for ABF.

### Miscellaneous Metal

Caltrans QA Coatings Inspectors received Notices of Inspection for to attend joint inspections with ABF and ZPMC QC for surface preparation by abrasive blasting. 98 shim plates, 10 cable support components, 2 suspensor brackets, 18 crane rail supports and 271 splices were inspected. A few spots of grinding were required to remove arc strikes, sharp edges, dings in the substrate that left sharp edges sticking up, and edge conditioning required by the Project Special Provisions Section 10-1.69. After the grinding was completed the surfaces were re-blasted to meet the SSPC SP10 Contract requirements. Surface profile Testex Tape was used by ZPMC QC personnel to record the blast profile. The Testex tape was measured using a dial micrometer. The readings were within the contract requirements of 40 and 86 microns. Ambient conditions were within Contract required parameters. Abrasive blasting of the grind spots resumed.

Fabrication on assembled components of the OBG's and Towers are not complete. Outstanding weld repairs have not been performed. Coating damage requiring re-blast is expected.

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## Summary of Conversations:

There were 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 Mazen Wahbeh (China) +8613472477571, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Jordan,Don	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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