

**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 #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003831**Date Inspected:** 24-Aug-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Fu Yu Hong**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG and Tower**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the fabrication scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Bay # 7

ZPMC was performing drilling flanges and fitting operations on stiffeners to several floor beams FL-1.

OBG Assembly:

The QA inspector observed that ZPMC had excavated with the purpose of repair an excess of lack of penetration (LOP) at the junction of the U-rib to deck panel DP-038-002 tack weld # 3 that it was found by ultrasonic examination. The same location Caltrans representative Joe Lanz found with the conventional ultrasonic examination a potential crack like indication. The QA inspector had a conversation with ZPMC representatives; ZPMC representatives informed that ZPMC had a weld repair procedure approved and that ZPMC issued a weld repair report to fix the LOP. The QA inspector had a conversation with Caltrans Task Leader Jimmy Cochran; The QA inspector informed that ZPMC was repairing LOP in locations where a crack like indication was found by Caltrans representative conventional UT. The QA inspector questioned if ZPMC had an approved repair procedure to repair excess of lack of penetration welds. Mr. Cochran informed that ZPMC had an approved repair procedure to correct excess LOP and since the crack like indication found by Caltrans was not confirmed with phase array method, ZPMC may proceed repairing.

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## WELDING INSPECTION REPORT

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The QA inspector observed ZPMC performing welding operations at the junction of the deck panel DP-002-001 and deck panel DP-004-001 with the submerged arc welding (SAW) process for the segment 4AW. The QA inspector performed random verifications of the welding process. The QA inspector found that the welding process appeared to be in compliance with the contract documents.

Bay # 8

The QA inspector observed ZPMC performing weld pick-up (repairs) with the shielded metal arc welding (SMAW) at the doubler diaphragm for the 36 Meters, SA-348 subassembly and the 47.6 Meters SA-169 subassembly. The QA inspector observed also ZPMC performing fit-up operations at the 18 Meters, SA-248 Subassembly tack welding the webs to the diaphragms.

ZPMC was welding diaphragm rings on the vertical position with the flux cored arc welding (FCAW).

### Summary of Conversations:

As noted above.

### 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 Joshua T. Ishibashi, 086-13764710411., who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Acuna,Alfredo	Quality Assurance Inspector
<b>Reviewed By:</b>	Lanz,Joe	QA Reviewer

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