

**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-002560**Date Inspected:** 08-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Wu Ming Kai and See Below**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:** See Below**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector, M. Paul Stovall, was present at Zhenhua Port Machinery Company (ZPMC) on Changxing Island, Shanghai, China to monitor the Quality Control (QC) functions during the fabrication of the Self Anchored Suspension (SAS) and Orthotropic Box Girder (OBG) sections of the San Francisco/Oakland Bay Bridge.

**OBG Pre-Assembly Area, Bay 2**

The QA Inspector observed ZPMC personnel installing bolts in the exterior Connection Plates on the 114-meter Mock-up.

**Bay 3**

The QA Inspector observed ZPMC welding personnel Sun Tiyu, ID #054459 use the Flux Cored Arc Welding (FCAW) process to weld Complete Joint Penetration (CJP) welds on W21 x 57's. The work appeared to comply with the Welding Procedure Specification (WPS) and the contract documents.

The QA Inspector observed ZPMC personnel heat straightening various Side Plates after welding.

The QA Inspector observed ZPMC welding personnel Dai Lu, ID #048659, Wang Zhanghua, ID #053753 and Zhang Feng, ID #049769 using the Shielded Metal Arc Welding (SMAW) process to tack weld WT stiffeners to Side Plates (SP) SP021-001, SP509-001, SP561-001, and SP521-001. The work appeared to comply with

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## WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

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WPS-B-P-2112 and the contract documents. The ZPMC Certified Welding Inspector (CWI) monitoring the work was Xu Xian Ping.

The QA Inspector observed ZPMC personnel drilling boltholes in the flanges of WT stiffeners of SP747-001.

Bay 4

The QA Inspector observed ZPMC continued to struggle with maintaining fit up tolerances during the preheating of Tower Internal Diaphragm weld joint SSD1-SA27-A/B-1A prior to welding. The QA Inspector observed the root opening of the fit prior to preheating was approximately zero (0) millimeters, but after preheating and expansion of the plate material the root opening was approximately 5-6 millimeters. The QA Inspector observed that ZPMC has changed from using a two- piece run-off tab to a one-piece run-off tab.

### Summary of Conversations:

The QA Inspector had no significant conversations.

### 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, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Stovall,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Hager,Craig	QA Reviewer

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