

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-002958**Date Inspected:** 14-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**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:** 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.

The QA inspector observed ZPMC performing layout, cutting, beveling, milling, fitting and welding activities in bay # 1 and 2 on Tower Assembly shop.

**Skin E East lift # 1**

The QA inspector observed ZPMC performing welding operations with the submerged arc welding (SAW) process using the WPS-BT2221-U3 c-S in the flat (1G) position at the junction of the weld joint # SSD1-SA173 G/K -41A longitudinal Stiffener. The QA inspector performed random welding parameters verifications. The QA inspector found that the welding parameters appeared to be in compliance with the contract documents. Welding operator was Yun Chua Jin (0503060).

**Skin C East lift # 1**

The QA inspector observed ZPMC performing welding operations with the submerged arc welding (SAW) process using the WPS-BT2221-U3 c-S in the flat (1G) position at the junction of the weld joint # ESD1-SA-294-G/G-53 skin plate. The QA inspector performed random welding parameters verifications. The QA inspector found that the welding parameters appeared to be in compliance with the contract documents. Welding operator was Sun Ping (040741).

The QA inspector observed at the started of the shift that ZPMC cut longitudinal stiffeners at the weld splices at the joints ESD1-SA-237 A/F-23A and ESD1-SA-237-A/F-25B. The QA inspector had a conversation with ABF

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representative Mr. Chun Keung Chang. After asking the ZPMC representatives, Mr. Chung Keung Chan informed that one longitudinal stiffener was 21 mm longer than required by the contract documents. The QA inspector informed Mr. Chan that the QA inspector was going to recommend issuing an incident report because ZPMC improperly fit the member. Later, ZPMC and ABF relayed to the QA inspector that ZPMC did not improperly fit the members. Mr. Chung Keung Chan and ZPMC representatives said that two longitudinal stiffeners for skin A, East were cut because: 1. ZPMC could not mill as per approved shop drawings the anchorage bearing seats before assembling because the total length of the longitudinal stiffener and 2. The longitudinal stiffener did not shrink enough after welding leaving a 21 mm difference from the required dimension. The QA inspector had a conversation with Caltrans Lead Inspector Greg Bertlesman and Caltrans Task Leader Jimmy Cochran. The QA inspector still was searching for more information at the end of the shift. Statement formulated by ZPMC representative Zhang Jiadi Ken was not clear. ZPMC insisted that the members were not improperly fit.



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

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**Inspected By:** Acuna, Alfredo

Quality Assurance Inspector

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**Reviewed By:** Cochran, Jim

QA Reviewer