

**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 #: 04-0120F4Cty: 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-002160**Date Inspected:** 19-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**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.

**New Tower Shop**

ZPMC, welder operators Shen Mei welder ID # 041716 was observed by the QA Inspector performing welding operations at the joint SA-237-A/F-1B.

Mr. Shen Mei was observed welding the filler passes at the joint # 1B following the approved welding procedure specification WPS-B-T-2221-B-U3-C-S-1. Base metal was designated as A-709 Grade 50. ZPMC was using the automated submerged arc welding (SAW) process in the flat (1G) position with the 4.8 mm diameter electrode designated as designated as EM12K/AWS A5.17, brand name JW-3. The QA Inspector verified amperage, voltage, travel speed, preheat and heat interpass temperatures for the filler passes. The QA inspector found that the welding parameters recorded after ZPMC approved Certified Welder Inspector Jiang Jian Fen appeared to be in accordance with the contract documents.

The QA inspector witnessed ZPMC Quality Control inspector Li Li Ming and Xue Hai Rong performing Ultrasonic testing at the skin plate joint SSD1-SA-16 E/G weld joint 11A and B (also two trainee UT technician were scanning the welds Wu Yong Jun and Lin Jian). ZPMC found the weld joint acceptable. ZPMC UT verifications appeared to be in compliance with the contract documents.

**OBG U-ribs splices**

The QA inspector performed 10 % ultrasonic testing (UT) on the completed joint penetration (CJP) U-ribs splice after ZPMC representative verifications on the deck panel weld joints DP- 219-001-191, DP- 219-001-192, DP-

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219-001-193, DP- 219-001-194, DP-329-001-154, DP-329-001-155 and DP-491-001-120. The QA inspector found that the weld areas tested from side A appeared to be in general compliance with AWS D1.5 2002. See UT report TL\_6027 generated on this date.

### Tower Skin Plate South Shaft

The QA inspector performed 10 % ultrasonic testing (UT) on the completed joint penetration (CJP) after ZPMC representative verifications at the skin plate SSD1-SA-16 E/G weld joint 11A and 6 A from side B. The QA inspector found that the weld areas tested from side A appeared to be in general compliance with AWS D1.5 2002.

Note: The UT verifications is still in process, the QA inspector would verify the skin plate joints from side B.

### Heat Straightening

The QA observed ZPMC performing heat straightening operations on the skin plate P36W for the first lift west shaft following the heat straightening request HSR1(T)735/ P36W (correcting 2 mm deformation in accordance with straightening request). The QA inspector found that heat straightening operations appeared to be in accordance with the contract documents.

### Summary of Conversations:

The QA inspector did not have any relevant conversation 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, (818) 292-0659, 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>	Cuellar,Robert	QA Reviewer

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