

**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-003838**Date Inspected:** 09-Sep-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**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.

## Ultrasonic testing with Phased Array (UTPA)

The QA inspector performed ultrasonic testing (UT) with the phased array (PA) technology after Caltrans representatives performed the preliminary scan with the conventional UT following ZPMC UT procedure for detecting lack of penetration at the junction of deck panel to U-ribs. The QA inspector performed 100 % UTPA at tack welds areas suspected to have crack like indications. The QA inspector confirmed crack like indications as follows: Deck Panel DP-039-001; 8 were suspected to be crack like indications with conventional UT; the QA inspector confirmed 5 indications with the phased array method.

Note 1: 2 deck panels were purchased by Caltrans for testing Initial procedural development and further procedure development & testing. At this time no writing procedure and no acceptance criteria has been issued. However, all the test samples identified as crack like indications were confirmed after macro-etching and magnetic particle testing

## Bay # 1 Ultrasonic Testing

The QA inspector performed ultrasonic testing (UT) at the completed joint penetration at the U-ribs splices weld joint # DP-443-001-190 thru 194, DP-605-001-300, DP-545-001-300, DP-595-001-300. The QA inspector performed 30 % UT at random location. The QA inspector found that welds areas tested appeared to be in compliance with the contract documents. See UT report TL\_6027 generated on this date.

The QA inspector performed ultrasonic testing (UT) at the completed joint penetration at the U-rib internal

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diaphragm for deck panel DP-615-001 (five diaphragms). The QA inspector performed 25 % UT at random location. The QA inspector found that welds areas tested appeared to be in compliance with the contract documents. See UT report TL\_6027 generated on this date.

**Summary of Conversations:**

The QA inspector did not any relavant 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 Ady Velasco, 858 344-8746, who represents the Office of Structural Materials for your project.

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