

**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-000878**Date Inspected:** 12-Nov-2007**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:** Changxing Island**CWI Name:** Arthur Peterson**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 Deck Plate Trial**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Larry Viars was present to observe the Welding and perform dimensional testing of the Caltrans Orthotropic Box Girder (OBG First Deck Plate Mock-up Weld Trial, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Caltrans QA Inspector witnessed American Bridge Flour (ABF) QC Mr. Arthur Peterson performing visual inspection of tack welds and root gap measurements of 13 meter and 1.7 meter closed rib to deck plate root gap. Inspection had been previously performed by ZPMC QC technicians. Measurements of the root gap were marked adjacent to the area on the rib.

Caltrans QA Inspector Viars performed verified measurements taken by ZPMC QC as well and took random measurements throughout. The 13 meter rib numbers were designated as U01, U02, U03, U04 and U05. The 1.7 meter rib numbers were designated as U06, U07, U08, U09 and U10.

The recorded maximum noted root gap measurements for the deck plate mock-up weld trial were as follows, U01 weld # 1- 0.45 mm, weld # 2 – 0.55 mm, U02 – weld # 3 – 1.0 mm with a width of 145 mm, weld # 4 – 0.65 mm, U03 weld # 5 – 1.1 mm, weld # 6- 0.75 mm, U04 weld # 7 – 0.75 mm, weld # 8 – 0.65 mm, U05 weld # 9 – 0.45 mm

Random root gap measurements of the 1.7 meter closed rib weld trial were noted U07 weld # 3 - 0.45 mm, U08 weld # 6 – 0.25 mm, U09 weld # 7 – 0.45.

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Caltrans QA Inspector Viars observed highest concentration of root gap readings that exceeded the limit of 0.5 mm were located 2.77 meters from the left end of the U ribs. The largest recorded reading root gap was located on rib U03 between tack welds 17 and 18 and measured 1.1 mm. The picture below shows the filler gauge inserted in the deck plate to U rib gap



### Summary of Conversations:

As identified within the contents of this report.

### 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>	Viars,Larry	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer

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