

**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-003916**Date Inspected:** 17-Sep-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Chih-Ming**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:** Various (see below)**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG assembly bay 2

QA observed that ZPMC personnel has removed a 900mm section of the external deck panel diaphragm on DP-073-001 without engineering approval in order to repair two Partial Joint Penetration (PJP) u-rib to deck plate welds where crack like indications were previously discovered with Phased Array Ultrasonic Testing (PAUT) by Caltrans QA. The diaphragm was removed in the area of weld joints 001 thru 003. AWS D1.5 2002 paragraph 3.7.5 prohibits the removal of welded members without engineering approval. Paragraphs 3.1.4 and 3.1.5 prohibits the contractor from creating a weld joint that is not specified on the drawings without engineering approval. QA informed ZPMC QC Testino Wang and ABF representative Peter Shaw of an impending incident report concerning this issue. See attached photos.

QA Performed PAUT at tacked areas where crack like indications were previously discovered by Caltrans QA with PAUT on u-rib to deck plate PJP welds after repair on DP-073-001 welds 001 and 003. Both areas were 700mm from the "Y" end and appeared to comply with the contract documents.

QA performed PAUT at two tacked areas where crack like indications were previously discovered by Caltrans QA with PAUT on u-rib to deck plate PJP welds after repair on DP-040-001 weld 001. One area located 70mm from the "Y" end appeared to be in compliance. One area located 2435mm from the "Y" end did not appear to be

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in compliance. PAUT showed a crack like indication at a depth of 7.18mm.

NOTE: 2 Deck Panels were purchased by Caltrans for testing and initial UT and PAUT procedural development purposes. At this time no written PAUT procedure has been issued. However, all the test samples identified with the PAUT method as crack indications were confirmed after macro-etching and magnetic particle testing.



### Summary of Conversations:

As mentioned 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 Ryan Smith, (858) 232-6799, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Hall,Steven	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer

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