

**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-007356**Date Inspected:** 01-Jun-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 645**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Wu Zhi Cheng**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:**

Summary of Items Observed: On this date Caltrans OSM Quality Assurance (QA) Inspector, Larry Viars was present during the times noted above for observations relative to the work being performed.

**OBG Trial Assembly Area-**

During random visual inspection of OBG segment 1AE to 1BE Bottom Plate complete joint penetration weld root pass (OBE1A-008), four linear indications were observed. The four indications ranged in length from 5 mm to 20 mm. The linear indications were shown to ZPMC QC. The welders removed the visible indications and proceeded to weld over the excavated areas using FCAW before QC confirmed that the indications were fully removed by NDT on two of the locations. This violates AWS D1.5, Section 3.7.2.4 which states "The extent of the crack shall be ascertained by the use of MT, PT or other equally positive means; the metal shall be removed for the full length of the crack plus 50 mm beyond each end of the crack, and rewelded". An incident report was issued for the above mentioned defects.

This QA inspector designated locations for Radiographic Testing of OBG segment 2AW to 2BW Splice welds. Caltrans QA inspector witnessed ZPMC Radiographic set up on OBG segment 2AW to 2BW Deck Panel splice weld OBW2-002. Locations for radiography were selected by Caltrans QA. Testing was performed with a Radioflex-300E x-ray tube s/n CR0017-10. ZPMC RT level II Zhao Yi stated the source to film distance was 600 mm and the focal spot size was 2.5mm x 2.5mm, Kilovolts 170, and 5 milliamps. Caltrans QA observed that a ASTM 15 hole type penetrometer was on the source side of the weld. Testing appeared to be in conformance with AWS D1.5.

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# WELDING INSPECTION REPORT

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Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



## 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 Eric Tsang, 150 0042 2372, 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>  | Carreon,Albert | QA Reviewer                 |

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