

**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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016863**Date Inspected:** 17-Sep-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Listed below**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:** S.A.S. components**Summary of Items Observed:**

The Quality Assurance Inspector (QAI), Scott Croff, was present at the Self Anchored Span (SAS) job site to observe the scheduled fabrication and welding of components for the SFOBB project. The following observations were made:

- 1) OBG welding - Deck plate inserts and Access hole inserts
- 2) OBG field splice welding at 6E/7E-B
- 3) OBG field splice welding at 6E/7E-C
- 4) SAS deviation saddles and Hinge K
- 5) Contract document review at Pier 7

1) The QAI observed ABF personnel welding deck plate inserts and access hole inserts back into place. The QAI noted that this work is being performed on OBG segments 2E, at panel point 10.5-E2, panel point 10.5-E5 and 4E, from the top side of the deck plate. The QAI noted that the Quality Control (QC) Inspector Tom Pasqualone is monitoring this welding. The QAI observed ABF welders Yao Xin Liang, ID 7238, Wai Kitlai, ID 2953, and Darcel Jackson, ID 9967, making the flat (1G) complete joint penetration (CJP) weld with shielded metal arc welding (SMAW) with E7018-H4R electrodes. The QAI was informed that welding procedure specification (WPS) ABF-WPS-D15-1030 is being used for this welding. The QAI randomly measured the preheat temperature and welding parameters and noted that they appeared to be conforming to the WPS requirements. The QAI also noted that welding will be performed from under the deck, on the back-gouged deck insert welds. At the time of the QAI's observations, there was no welding taking place. The QAI noted that the back welding will be monitored by the QC Inspector William Sherwood. The QAI also witnessed the QC Inspector John Pagliero

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conducting ultrasonic testing (UT) on completed deck insert welds. The QAI noted that several repairs have been identified by the QC Inspector. See the attached photos.

2) The QAI observed ABF personnel welding plate B at OBG lifts 6E/7E field splice. The QAI noted that the QC Inspector Steve McConnell is monitoring this welding. The QAI observed ABF worker James Zhen, ID 6001, making the vertical (3G) CJP weld with SMAW using E7018-H4R electrodes. The QAI was informed that welding procedure specification ABF-WPS-D15-1040B is being used for this welding. The QAI randomly measured the preheat, interpass temperature and welding parameters and noted that they appeared to be conforming to the WPS requirements.

3) The QAI observed ABF personnel welding the inside of plate C at OBG lifts 6E/7E field splice. The QAI noted that this 3G CJP weld is being made in segment C1. The QAI noted that the QC Inspector William Sherwood is monitoring this welding. The QAI observed ABF workers Jin Quan Huang, ID 9340, and Song Tao Huang, ID 3794, making the welds with gas shielded flux cored arc welding (FCAW-G). The QAI was informed that ABF-WPS-D15-3040A-1 is being used for this welding. The QAI randomly measured the preheat, interpass temperature and welding parameters and noted that they appeared to be conforming to the WPS requirements. See the attached photo.

4) The QAI made other observations of work in progress and noted that the west deviation saddles are being set into place. See the attached photo. The QAI also observed the contractor's personnel preparing to apply zinc primer onto the machined edges of Hinge K pipe beam. The QAI made general observations and noted that the stainless overlay has been masked off to prevent zinc primer from adhering to the sliding section of the pipe beam. The QAI noted that the surface finish appeared to be within the contract requirements at this time.

5) The QAI reviewed contract related documents including the submitted and approved Welding Quality Control Plan (WQCP) and approved revisions to the WQCP. The QAI continued to review the contractor's submittals 1536 Rev. 22 thru Rev. 26. The QAI noted that these submittals contain previously rejected submittals and will be used to correct the applicable submittal. The QAI continued consolidating the information from previous welding report submittals to identify missing reports of inspections. The QAI continued generating a weld specific tracking list from the contractor's welding reports.



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## Summary of Conversations:

The QAI had general conversations with ABF and Caltrans personnel during this shift. The QAI relayed the observations of welding and the status of submittal reviews to the QAI Lead Bill Levell. Except as described above, there were no other notable conversations or observations.

## 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 Mohammad Fatemi, (916) 813-3677, who represents the Office of Structural Materials for your project.

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**Inspected By:** Croff, Scott

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer