

**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:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026664**Date Inspected:** 07-Nov-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Pat Swain**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 Sections**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

**Orthotropic Bridge Girder (OBG) Sections:**

13W/14W – weld joint D-2: According to the documents being used by QC personnel this weld joint is designated as having continuous preheat and a 3 hour post weld heat. This QA Inspector observed ABF welding personnel James Zhen (#6001) and Xiao Jian Wan (#9677) setting up the Submerged Arc Welding (SAW) equipment to start welding from approximately Y-7000 to Y-8000 (the Southern end of weld joint D-2). This QA Inspector observed the set up time appeared to be lengthy and the first SAW pass was started at approximately 1320 this date. This QA Inspector observed prior to welding the preheat temperature was greater than 200°F by using an electronic temperature gauge. This QA Inspector observed QC Inspector Pat Swain verify the following parameters for ABF welding personnel James Zhen (#6001); 550 amperes and 32 volts at a travel speed of 365 m per minute to produce a heat input value of 2.89 Kj per mm. The welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-4042B-1 being used by the QC Inspector. This QA Inspector observed ESAB – OK Flux 10.62 was being used with ESAB – Spoolarc 81 welding wire, which appeared to comply with the WPS. This QA Inspector observed the Northern end of weld joint D-2 approximately Y-430 to Y-1400 had been completed previously. This QA Inspector observed that welding was completed at this section of the weld joint this date which appeared to complete the areas the SAW process could be used to space restrictions. This QA

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Inspector confirmed with ABF welding personnel James Zhen (#6001) that the remaining section of the weld, approximately 400 mm at each end of the weld joint, would be completed using the Flux Cored Arc Welding (FCAW) process.

This QA Inspector verbally informed QA SPCM Lead Inspector, Daniel Reyes, of the issues noted in this report for compliance therefore for further details of issues of significance see QA SPCM Lead Inspector, Daniel Reyes, Daily Inspection Report (6031) for this date.

### Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above and noted above there were no notable conversations.

### 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 Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Hager,Craig	Quality Assurance Inspector
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<b>Reviewed By:</b>	Levell,Bill	QA Reviewer
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