

**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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016244**Date Inspected:** 13-Aug-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:** See 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:** SAS OBG**Summary of Items Observed:**

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified 1E/2E-A-S3/S5 and the following observations were made:

1E/2E-A-LS-2, 3, 4, 5, 6

Upon the arrival of the QA Inspector it was observed the above identified weld joints were completed. The QA Inspector noted the grinding of the weld reinforcement had been completed. The QA Inspector noted the UT rejection had been excavated and repaired. The QA Inspector noted there is a 48 hour NDT hold on the stiffeners and no UT would be performed until Monday 8-16-10.

1E/2E-A-LS-1

Upon the arrival of the QA Inspector at the above identified location, the QA Inspector randomly observed the ABF welder James Zhen preparing to begin the shielded metal arc welding (SMAW) butter pass. The QA Inspector randomly observed the ABF welder preheat the material to 200°F utilizing a rosebud torch. The QA Inspector noted the Smith Emery (SE) Quality Control (QC) Inspector John Pagliero was on site monitoring the in process preheats and welding parameters of approved welding procedure identified as ABF-WPS-D1.5-1012-3. The QA Inspector performed a random visual inspection of the fit up of the above identified stiffener plates and noted the root opening exceeded 15mm in some locations. The QA Inspector noted weld joint restoration by buttering would be required to restore the weld joint to the original joint configuration with a maximum allowable root gap of 7mm. The QA Inspector noted the ABF welder had previously placed a piece of ceramic bar stock held in place with tape opposite the side of the weld joint receiving the buttering. The QA Inspector randomly

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## WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

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observed the ABF welder remove the E9018 1/8" electrodes from the rod container at 0730. The QA Inspector noted the maximum exposure time for the above identified electrodes is on hour. The QA Inspector randomly observed the ABF welder continue the SMAW weld build up or butter pass on the above identified weld joint. The QA Inspector noted the SMAW parameters were 130 amps and appeared to be in general compliance with the above identified WPS. The QA Inspector noted the ABF welder spent the remainder of the shift performing the SMAW weld building or buttering of the above identified weld joint.

2E/3E-A-LS-3

Upon the arrival of the QA Inspector at the above identified location, the QA Inspector randomly observed the ABF welder Xiao Jian Wan preparing to begin the SMAW butter pass. The QA Inspector randomly observed the ABF welder preheat the material to 200°F utilizing a rosebud torch. The QA Inspector noted the SE QC Inspector John Pagliero was on site monitoring the in process preheats and welding parameters of approved welding procedure identified as ABF-WPS-D1.5-1012-3. The QA Inspector performed a random visual inspection of the fit up of the above identified stiffener plates and noted the root opening exceeded 18mm in some locations. The QA Inspector noted weld joint restoration by buttering would be required to restore the weld joint to the original joint configuration with a maximum allowable root of 7mm. The QA Inspector noted the ABF welder had previously placed a piece of ceramic bar stock held in place with tape opposite the side of the weld joint receiving the buttering. The QA Inspector randomly observed the ABF welder remove the E9018 1/8" electrodes from the rod container at 0830. The QA Inspector noted the maximum exposure time for the above identified electrodes is on hour. The QA Inspector randomly observed the ABF welder continue the SMAW weld build up or butter pass on the above identified weld joint. The QA Inspector noted the SMAW parameters were 130 amps and appeared to be in general compliance with the above identified WPS. The QA Inspector noted the ABF welder spent the remainder of the shift performing the SMAW weld building or buttering of the above identified weld joint.

### Summary of Conversations:

The SE QC Inspector John Pagliero pointed out the root opening at LS-2 was approximately 20mm wide in some areas. The QA Inspector informed the QC Inspector as per AWS D1.5-02, engineering approval would be required to butter or weld build any gap over 20mm. The QC Inspector informed the QA Inspector, he was not aware of that particular code requirement but he would look it up. Later in the shift the QC Inspector informed the QA Inspector he had read the code book and he was now aware of the code requirement for buttering.

### 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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<b>Inspected By:</b>	Bettencourt,Rick	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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