

**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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017360**Date Inspected:** 07-Oct-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 2E-pp13.5-E2-SW, 3E-pp23.5-E2-SE, 1E-pp11-E4-1, 2, 3, 4. Access Hole Restoration and the following observations were made:

**2E-pp13.5-E2-SW Access Hole Restoration**

The QA Inspector randomly observed the American Bridge/Fluor (ABF) welder Wai Kitlai setting up to continue performing the shielded metal arc welding SMAW fill passes. The QA Inspector previously performed random visual testing and dimensional verification of the bevel angle and root opening of the above identified fit up. The QA Inspector randomly observed the fit up appeared to be in general compliance with ABF-WPS-D1.5-1030. Upon the arrival of the QA inspector, it was noted the SMAW 4G back weld appeared to be complete. The QA Inspector randomly observed the SE QC Inspector Patrick Swain was on site monitoring the in process welding. The QA Inspector randomly observed the SMAW parameters were 134 Amps while utilizing 1/8" E7018 low hydrogen electrodes. The QA Inspector noted the SMAW parameters appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder continue to perform the SMAW fill passes at the above identified location.

**3E-pp23.5-E2-SE Access Hole Restoration**

The QA Inspector randomly observed the ABF welders identified as James Zhen and Jin Pei Wang setting up and preparing the man hole access insert for fit up and welding. The QA Inspector noted the ABF welder James Zhen was utilizing the nibbler machine while cutting the 30° bevel in the top deck plate where the insert plate will be

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installed. The QA Inspector randomly observed the bevel angle and noted it appeared to be approximately 35° prior to any grinding tasks being performed. The QA Inspector randomly observed the ABF welder Jin Pei Wang performing grinding tasks of the bevel previously cut with the nibbler machine. The QA Inspector noted the grinding was nearly completed and appeared to be in general compliance with the approved welding procedure identified as ABF-WPS-D1.5-1030. The QA Inspector performed a random visual inspection of the ground bevel and angle and noted it appeared to be in general compliance with the contract requirements. The QA Inspector noted later in the shift, the man access insert plate was fit up and tacked into place. The QA Inspector performed additional fit up inspections and noted the root gap, bevel angle and planar alignment appeared to be in general compliance with the contract requirements.

1E-pp11-E4-1, 3, 4

The QA Inspector randomly observed Darcel Jackson performing grinding tasks of ultrasonic testing rejects in the above identified lifting lug deck hole restoration. The QA Inspector randomly observed the ABF welder had previously excavated all four of the UT rejections located in the above identified hole. The QA Inspector randomly observed the ABF welder had not completed any of the SMAW repairs upon the arrival of the QA inspector in the am. The QA Inspector randomly observed the Smith Emery (SE) Quality Control (QC) Inspector Patrick Swain was on site to monitor and record the in process welding parameters. The QA Inspector noted the ABF welder was utilizing the shielded metal arc welding process with 1/8" E7018 low hydrogen electrodes. The QA Inspector randomly observed the ABF welder was utilizing 135 Amps while performing the SMAW repair. The QA Inspector performed a random visual inspection of the previously excavated areas and noted they had been ground and blended to a boat shaped weldable profile. The QA Inspector randomly observed and noted the ABF welder was preheating the material to approximately 100°F prior to making the SMAW repairs. The QA Inspector noted the SMAW repairs appeared to be in general compliance with ABF-WPS-1001 repair. The QA Inspector noted the repair welding was not completed on the QA Inspectors shift.



## Summary of Conversations:

As noted 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 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
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<b>Reviewed By:</b>	Levell,Bill	QA Reviewer
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