

**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-017895**Date Inspected:** 04-Nov-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 as hole restoration 4E-pp27-E4-3, 1E-pp8.5-E4-2, 2E-pp15-E4-1 & 3 and the following observations were made:

**4E-pp27-E4-3**

The QA Inspector randomly observed the ABF welder identified as Melvin Ivy and ABF helper begin fitting up the lifting lug deck insert identified above. The QA Inspector noted the deck insert is the first insert to be installed and welded with the new machined insert plates that were fabricated by XKT Engineering. The QA Inspector noted the direction of rolling was stamped with a low stress stamp in the center of the insert plate, so no grinding or welding would mask or deface the identifying marking. The QA Inspector randomly observed the bevel angle to be 45°. The QA Inspector noted the surface of the bevel appeared to be a machined surface with bright shiny metal. The QA Inspector noted the ABF welder was utilizing a prefabricated round copper backing plate with a channel machined in root opening where the welding will take place. The QA Inspector noted the fit up was completed on the QA Inspectors shift and appeared to be in general compliance with the contract requirements. The QA Inspector noted the base metal and the weld joint were preheated to approximately 100°F and back welding was commenced. The QA Inspector randomly observed the ABF welder to be utilizing 5/32" E7018 low hydrogen electrodes with 180Amps. The QA Inspector noted the weld joint was noted completed on the QA Inspectors shift.

**1E-pp8.5-E4-2**

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The QA Inspector randomly observed the ABF welder Eric Sharp begin excavating the above identified weld joint for the third time. The QA Inspector noted the R3 or third time repair was approved by the Structures Material Representative Patrick Lowry at 1400 on this date. The QA Inspector randomly noted no welding was performed while the QA Inspector was observing the repair.

2E-pp15-E4-1 & 3

The QA Inspector randomly observed the ABF welder identified as Eric Sharp back gouge the above weld joint identified as 2E-pp15-E4-1. The QA Inspector noted the SE QC Inspector John Pagliero performed magnetic particle testing (MT) several times with the ABF welder performing additional grinding between MT inspections. The QA Inspector noted a linear indication was located by the QC Inspector and the ABF welder made several attempts to remove the indication by grinding. After several attempts the indication was removed and the back gouged weld joint was cleared by the SE QC Inspector.

The QA Inspector then observed the ABF welder begin performing SMAW backing welding in the 4G position on the next insert plate identified as 2E-pp15-E4-3. The QA Inspector noted the weld joint had been previously back gouged and cleared with MT. The QA Inspector randomly observed the ABF welder back several fill/cover passes utilizing the SMAW process with 1/8" E7018 low hydrogen electrodes. The QA Inspector noted the ABF welder did complete the SMAW back weld and begin grinding the weld reinforcement flush with the base material.

### Summary of Conversations:

No pertinent conversation noted.

### 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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