

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016243**Date Inspected:** 12-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-S2**

Upon the arrival of the QA Inspector at the above identified location, the QA Inspector randomly observed the ABF welder James Zhen preparing to continue the shielded metal arc welding (SMAW) back weld for the above identified weld joint. The QA Inspector noted the weld was not maintained at 200°F as per the Caltrans Special Provisions "Field Welding" note "C" through out the duration of the welding. The QA Inspector noted the weld was at ambient temperature upon the arrival of the QA Inspector in the am. The QA Inspector noted the weld joint appeared to be approximately 50% complete upon the arrival of the QA Inspector. 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 randomly observed the SE QC Inspector Steve McConnell perform magnetic particle testing (MT) of the completed back gouged joint. The QA Inspector noted no relevant indications were located at the time of the testing. The QA Inspector performed a random visual inspection of the in process weld joint and noted it appeared to visually be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder remove the E9018 1/8" electrodes from the rod container at 0800. The QA Inspector noted the maximum exposure time for the above identified electrodes is one hour. The QA Inspector randomly observed the ABF welder continue the SMAW root pass on the above identified weld joint. The QA Inspector noted the SMAW

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parameters were 128 amps and appeared to be in general compliance with the above identified WPS. The QA Inspector noted the weld joint was not completed at the end of the QA Inspectors shift.

1E/2E-A-S3

Upon the arrival of the QA Inspector it was observed the above identified weld joint was completed. The QA Inspector noted the grinding of the weld reinforcement had been completed.

1E/2E-A-S5

Upon the arrival of the QA Inspector at the above identified location, it was observed the weld joint was previously completed. The QA Inspector observed the SE QC Inspector had previously performed ultrasonic testing and located a rejectable indication. The QA Inspector observed the ABF welder Xiao Jian Wan had excavated the rejectable indication utilizing a burr bit grinder. The QA Inspector performed dimensional measurements of excavation and noted they were 70mm x 15mm x 14mm deep. QA Inspector randomly observed no welding was performed on excavated weld joint on the QA Inspectors shift. The QA Inspector spoke with the SE QC Inspector Steve McConnell regarding the UT (see summary of conversations).



### Summary of Conversations:

The QA Inspector asked the QC Inspector Steve McConnell if he increased the frequency of the UT after a UT rejection was located in the 1E/2E-A-LS-5 weld joint. The QC Inspector informed the QA Inspector he would increase the UT to 50mm on either side of the excavation as well as an additional 20% tested on either side of the reject. In addition the QC Inspector informed the QA Inspector that due to the short weld length of approximately 235mm, after a UT reject is located approximately 100% of the weld length will be tested.

The QA Inspector contacted the Lead QC Inspector Leonard Cross to determine if any weld joint was ready for QA verification. The QA Inspector noted no answer and no returned phone call by Mr. Cross was made. The QA Inspector was unable to determine if any QA NDT verification was ready on this date.

### 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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