

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-016296**Date Inspected:** 17-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, 2E/3E, 4E/5E and the following observations were made:

4E/5E-C1/C2

The QA Inspector randomly observed the Smith Emery (SE) Quality Control (QC) Inspector Jesse Cayabyab begin performing ultrasonic testing on the above identified weld joint. The QA Inspector noted the QC Inspector located a rejectable Indication during the QA Inspectors shift. The QA Inspector randomly observed the QC Inspector performing the testing for the remainder of the shift.

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 SMAW fill 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 had been closed to within the maximum allowable root opening 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 welding. The QA Inspector randomly 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 one hour. The QA Inspector randomly observed the

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ABF welder continue the SMAW fill passes on the above identified weld joint. The QA Inspector noted the SMAW parameters were 125 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. The QA Inspector noted the weld joint appeared to be approximately 30% complete at the end of the QA Inspectors shift.

1E/2E-A-LS-2,3

The QA Inspector randomly observed and noted the above identified weld joint had been previously completed. The QA Inspector was informed by the QC Inspector John Pagliero, the preliminary UT had been completed and no rejectable indications were located at the time of the testing. The QC Inspector informed the QA Inspector no official testing had been completed.

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 had been closed significantly but still appeared to be 10mm-12mm in some areas. The QA Inspector randomly observed and noted additional welding or weld joint restoration would be required for the second day in a row. The QA Inspector noted slow progress was being made by the above identified welder. 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 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 132 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.

1E Drip Edge Installation

Upon the arrival of the QA Inspector, it was observed both of the drip plates had been installed to the directly under the "F" edge plate. The QA Inspector randomly observed the first plate had been installed with a complete joint penetration groove weld with a reinforcing fillet weld on the back side of the plate. The QA Inspector noted the second plate that was installed, was welded with a 6mm fillet weld on both sides of the plate. The ABF WQCM Jim Bowers informed the QA Inspector as per design drawing sheet 877 R1 the installation only requires a 6mm fillet weld on both sides of the plate with a seal weld at either end to the existing drip plate on the bridge. Mr. Bowers informed the QA Inspector ABF is utilizing a partial joint penetration groove weld in lieu of a seal weld to ensure no cracking would occur. The QA Inspector randomly observed the ABF welder Rick Clayborn performing the SMAW 6mm fillet weld attaching the second drip plate to the OBG. The QA Inspector randomly observed the welder to be utilizing E7018 low hydrogen electrodes with 135 Amps. The QA Inspector noted the SMAW parameters appeared to be in general compliance with ABF-WPS-D1.5-F1202.

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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.

Inspected By:	Bettencourt,Rick	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
