

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017357**Date Inspected:** 06-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, 2E-pp17.5-E2-SE, 1E-pp11-E4-1, 2, 3, 4. Access Hole Restoration and the following observations were made:

7E/8E-B

The QA Inspector randomly observed the ABF welder Hua Qiang Huang had previously started utilized a rosebud torch and preheated the material to 100°F, the QA Inspector verified utilizing a temperature indicating marker and noted the minimum required preheat had been achieved. The QA Inspector observed the ABF welder to be utilizing shielded metal arc welding (SMAW) manually for the above identified weld joint. The QA Inspector randomly observed the Smith Emery (SE) QC Inspector identified as Tony Sherwood set the FCAW machine to the parameters of the approved WPS identified as ABF-WPS-D1.5-1040B R1. The QA Inspector randomly observed the SMAW parameters were 1/8" E7018 Low Hydrogen electrodes with 135 Amps. The QA Inspector randomly observed the ABF welder identified continue the SMAW fill pass in the am. The QA Inspector noted the ABF welder spent the remainder of the QA Inspectors shift performing the FCAW fill passes. The QA Inspector randomly and periodically observed the welding at the above identified location. It was noted by the QA Inspector the ABF welder did not complete the FCAW on the QA Inspectors shift.

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

The QA Inspector randomly observed the American Bridge/Fluor (ABF) welder Wai Kit Lai back grinding the above identified weld joint. The QA Inspector noted the SMAW 4G back weld was completed on the previous day

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shift. The QA Inspector noted no production welding was completed on this date. The QA Inspector observed the ABF welder utilize two different sized grinding discs as well as a burr bit grinder to back gouge the weld joint. The QA Inspector randomly observed the SE QC Inspector Patrick Swain perform magnetic particle testing (MT) of the back gouge to ensure all weld inclusions had been removed prior to performing the SMAW root/fill passes. The QA Inspector noted no production welding was performed on the QA Inspectors shift.

2E-pp17.5-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 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, 2, 3, 4

The QA Inspector randomly observed the ABF welder identified as Darcel Jackson utilizing a grinding disc and a burr bit grinder to excavate previously located and indicated ultrasonic testing rejections. The QA Inspector noted the hole identified as #1 had a total of 5 UT rejects, hole identified as #2 had a total of 2 UT rejects, hole identified as #3 had a total of 3 UT rejects and hole # 5 had a total of 4 UT rejects. The QA Inspector noted no welding was performed on the QA Inspectors shift, only excavations. The ABF welder Darcel Jackson informed the QA Inspector, no other ABF welders will be performing welding of the lifting lug hole restorations. Mr. Jackson informed the QA Inspector he was informed by the ABF Welding Superintendent Dan Ieraci the other welder that previously performed welding on the lifting lug hole had too high of a reject rate.



Summary of Conversations:

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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
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Reviewed By:	Levell,Bill	QA Reviewer
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