

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-012376**Date Inspected:** 01-Mar-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:	Mike Johnson, Jesse Cayabayab, Jim Cunningham	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 1E/2E-D	

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 joint restoration and welding of the 1E/2E-D, 2E/3E-D. The following observations were made:

1E/2E-A

Upon the arrival of the QA Inspector at the above identified location it was observed the fit up appeared to be complete. The QA Inspector noted the Smith Emery (SE) Quality Control (QC) Inspectors Jim Cunningham and Tom Pasqualone were on site at the time of the QA Inspectors arrival. The QA Inspector was informed by the QC Inspectors the above identified weld joint was acceptable and ready for welding. The QA Inspector performed some random visual testing and dimensional verification and noted the weld joint appeared to be in general compliance with the contract requirements. The QA Inspector previously noted the joint had been partially tack welded on one side of the joint in the A1/A2 sections of the joint. The QA Inspector observed ABF welding personnel turn on the induction heating blankets to establish the minimum required preheat of 150°F. Once the minimum required preheat was established, the QA Inspector randomly observed the QC Inspectors Jesse Cayabayab and Jim Cunningham set the flux cored arc welding machines utilizing the given parameters of the established welding procedure specification (WPS) ABF-WPS-D1.5-F3200-2.

The QA Inspector randomly observed the ABF welder Mitch Sittinger preparing to continue to perform the FCAW tack weld started on the previous day shift. The QA Inspector randomly verified the FCAW parameters and they were 228 Amps, 23.4 Volts and a travel speed of 490mm/min. The QA Inspector observed the ABF welder Mitch Sittinger weld the FCAW tack weld on both sides of the joint between A1 and A3. It was observed the above

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identified weld joint was joined by welding when both sides of the joint were welded to the steel backing bar. The QA Inspector randomly observed the ABF welder experience approximately 200mm of porosity in section A2 (pictured below). The QA Inspector noted the porosity was not removed on the QA Inspectors shift. The QA Inspector informed the QC Inspector Jim Cunningham of the porosity. Mr. Cunningham informed the QA Inspector he would instruct the ABF welder to remove the porosity and magnetic particle testing would be performed to ensure the entire weld defect was removed.

1E/2E-5

The QA Inspector randomly observed the ABF welder Chun Foi Tsui preparing to perform the FCAW tack weld on the opposite end of the weld joint as the ABF welder Mitch Sittinger. The QA Inspector randomly verified the FCAW parameters and they were 230 Amps, 22 Volts and a travel speed of 310mm/min. The QA Inspector observed the ABF welder Chun Foi Tsui weld the FCAW tack weld on both sides of the joint between A4 and A5. It was observed the above identified weld joint was joined by welding when both sides of the joint were welded to the steel backing bar. The QA Inspector noted the above identified welder Chun Foi Tsui was a new welder to ABF on this date. The QA Inspector observed the above identified welder was not on the approved ABF welder list as of today's date. The QA Inspector informed the QC Inspector of the unapproved welder. The SE QC Inspector Jim Cunningham informed the QA Inspector he would call the Welding Quality Control Manager (WQCM) Jim Bowers and ask about the above named welder. The QA Inspector informed the QA Inspector Mike Foerder of the above issue and asked if the welder had been submitted and approved. Mr. Foerder informed the QA Inspector the above identified welder had not been submitted and approved. In a later conversation Mr. Foerder informed the QA Inspector the WQCM did submit the welders paperwork and he was qualified and approved to perform welding on the project.

2E/3E-D

The QA Inspector randomly observed the ABF welder Jin Quan Huang performing shielded metal arc welding (SMAW) of the temporary attachments. The QA Inspector randomly observed the ABF welder attaching the square nuts for the fit up gear in preparation of fitting up the two above OBG sections. The QA Inspector randomly observed the welder was utilizing 1/8" E7018 low hydrogen electrodes with 127 Amps. The QA Inspector observed the SE QC Inspector Tom Pasqualone was present at the time of the welding. The QA Inspector noted the SMAW parameters and preheat appeared to be in general compliance with ABF-WPS-D1. 5-F1200A. The QA Inspector noted significant offset in excess of 19mm near the center of the joint. The QA Inspector noted no fit tasks had yet been performed at the above identified location.



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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
