DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-019473
Date Inspected: 24-Jan-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 630
OSM Departure Time: 1500
Location: Job Site

CWI Name: See below

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

CWI Present: ☑ Yes ☐ No

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 4W-pp25-W3-1,2,3,4, 3W-pp22-W4-1, Jacking Frame to Saddle (EAST) and the following observations were made:

4W-pp25-W3-1,2,3,4

1&3

Upon the arrival of the Inspector, it was observed the ABF welder Darcel was completing the grinding of the weld reinforcement from the previous week. The QA Inspector noted the SMAW 4G back weld was previously completed and ground flush on today's date. The QA Inspector noted the grinding profile appeared to be in general compliance with the contract requirements.

The QA Inspector randomly observed the ABF welder Darcel Jackson performing carbon arc gouging and back grinding of the above identified weld joints. The QA inspector randomly observed the ABF welder grind the back gouged weld joints to bright metal. The QA Inspector randomly observed the back gouged weld joints and noted they appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder continue welding the in process lift lug hole restoration. The QA Inspector noted the weld joint was approximately 50% complete at the time of the SMAW 4G back weld. The QA Inspector randomly observed the ABF welder continue the SMAW fill pass. The QA Inspector randomly observed the SMAW parameters were 1/8" E7018 low hydrogen electrodes with 122 Amps. The QA Inspector noted the parameters appeared to be in

general compliance with ABF-WPS-1070A R1. The QA Inspector randomly observed the ABF welder did complete the above identified lifting lug hole on this date. The QA Inspector noted the weld reinforcement was ground flush on the QA Inspectors shift. The QA Inspector observed the grinding did appear to comply with the contract requirements.

3W-pp22-W4-1
The QA Inspector randomly observed the ABF welder Mike Jimenez performing carbon arc gouging and back grinding of the above identified weld joints. The QA inspector randomly observed the ABF welder grind the back gouged weld joints to bright metal. The QA Inspector randomly observed the back gouged weld joints and noted they appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder continue welding the in process lift lug hole restoration. The QA Inspector noted the weld joint was approximately 70% complete at the time of the SMAW 4G back weld. The QA Inspector randomly observed the ABF welder continue the SMAW fill pass. The QA Inspector randomly observed the SMAW parameters were 1/8” E7018 low hydrogen electrodes with 119 Amps. The QA Inspector noted the parameters appeared to be in general compliance with ABF-WPS-1070A R1. The QA Inspector randomly observed the ABF welder did complete the above identified lifting lug hole on this date. The QA Inspector noted the weld reinforcement was ground flush on the QA Inspectors shift. The QA Inspector observed the grinding did appear to comply with the contract requirements.

Jacking Frame to Saddle (EAST)
Upon the arrival of the QA Inspector at 0715 the QA Inspector noted no ABF or SE QC was present at the above identified location. The QA Inspector traveled to the top deck of the bridge and spoke with the SE QC Inspector Mike Johnson (see summary of conversation). At 0900 the QA Inspector and the SE QC Inspector Mike Johnson arrived at the Jacking Frame to Saddle area and noted the entire East fillet weld had been removed. The QA Inspector noted the weld appeared to had been removed without a SE QC representative present. The QA Inspector noted the weld was removed and the ABF apprentice Ian Murphy was performing grinding tasks of the arc gouged weld joint. The QA Inspector noted ABF did not have approval to remove the entire weld rather a verbal approval given on 1-21-11 by the Structures Material Representative Patrick Lowry.

It was previously discovered the East fillet weld had cracked approximately 550mm near the toe of the weld. The QA Inspector noted the cracked area of the weld joint was excavated on Friday 1-21-11 in an attempt to keep the cracked area of weld from propagating. The QA Inspector observed some base material gouges were observed and appeared to be a result of the carbon arc gouging during the removal of the weld joint (see below). The QA Inspector noted the base material gouged were in the weld zone and would essentially be repaired when the weld joint is re-welded. After the ABF apprentice completed the grinding the QA Inspector observed ABF personnel begin installing the thermo couplers in preparation of production welding. The QA Inspector noted no additional work was performed at the above identified location on this date. The QA Inspector wrote and submitted an Incident Report due to the fact, ABF proceeded with removing the entire fillet weld without receiving prior engineering approval from the department.

(WEST)
The QA Inspector randomly observed the SE QC Inspector perform magnetic particle testing (MT) for informational purposes only. The QA Inspector noted no relevant indications were located at the time of the testing.

Summary of Conversations:

The QA Inspector asked the QC Inspector Mike Johnson if the ABF welder Rick Clayborn was getting ready to start the repair excavation of the East fillet weld at the Jacking Frame to Saddle. Mr. Johnson informed the QA Inspector that no ABF was ready to perform any repairs. The QA Inspector asked Mr. Johnson when the excavation would start and Mr. Johnson replied, he did not know.

ABF WQCM Jim Bowers informed the QA Inspector the final MT will not be performed until the East fillet weld is completed; today's MT is for informational purposes only.

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 Sang Le 916-764-5650, who represents the Office of Structural Materials for your project.

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