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-021722
Date Inspected: 09-Mar-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 10W/11W, 6W-pp44-W4-4, 6W-pp44-W3-2&4, 4W-pp25-W3-1, 2, 3, 4 and the following observations were made:

10W/11W

The QA Inspector randomly observed the ABF erection and welding personnel were performing fitting tasks at the top and bottom plates identified as A and D. The QA Inspector randomly observed the D plate was previously fit up and the ABF welding personnel were performing the FCAW full length tack weld. The QA Inspector noted the QA Inspector Jojo Lizardo was on site to randomly monitor the in process welding and or SE QC personnel at plate D. The QA Inspector randomly observed the ABF welder James Zhen and ABF helpers were performing fitting tasks of the top deck plate A. The QA Inspector previously noted the longitudinal welds had been ground to allow the steel backing bar to fit with intimate contact to the top deck plate. The QA Inspector noted the ABF welder was utilizing porta power hydraulic jacks and wedges to push the hold the steel backing in place, in preparation of production. The QA Inspector noted the fit was not completed at the end of the QA Inspectors shift.

6W-pp44-W4-4

The QA Inspector randomly observed the ABF welder identified as Mike Jimenez begin fitting up the lifting lug deck insert identified above. The QA Inspector noted the direction of rolling was stamped with a low stress stamp in the center of the insert plate, so no grinding or welding would mask or deface the identifying marking. The QA Inspector randomly observed the bevel angle to be 45°. The QA Inspector noted the surface of the bevel appeared

to be a machined surface with bright shinny metal. The QA Inspector noted the ABF welder was utilizing a prefabricated round copper backing plate held in place with magnets. The QA Inspector noted the fit up was completed on the QA Inspectors shift and appeared to be in general compliance with the contract documents. The QA Inspector randomly observed the ABF welder begin the SMAW root pass. The QA Inspector randomly observed the SMAW parameters were 5/32" E7018 low hydrogen electrodes with 195 Amps for the root pass. The QA Inspector noted the parameters appeared to be in general compliance with ABF-WPS-1070A R1. After the SMAW root pass was completed the QA Inspector randomly observed the welder switch to 3/16" E7018 low hydrogen electrodes with 275Amps and used through the completion of the weld. The QA Inspector randomly observed the ABF welder did complete the above identified lifting lug hole on the QA Inspectors shift. It was noted the ABF welder did not remove the weld reinforcement of the QA Inspectors shift.

6W-pp44-W3-2&4
The QA Inspector randomly observed the ABF welder identified as Darcel Jackson begin fitting up the lifting lug deck insert identified #2. The QA Inspector noted the direction of rolling was stamped with a low stress stamp in the center of the insert plate, so no grinding or welding would mask or deface the identifying marking. The QA Inspector randomly observed the bevel angle to be 45°. The QA Inspector noted the surface of the bevel appeared to be a machined surface with bright shinny metal. The QA Inspector noted the ABF welder was utilizing a prefabricated round copper backing plate held in place with magnets. The QA Inspector noted the fit up was completed on the QA Inspectors shift and appeared to be in general compliance with the contract documents. The QA Inspector randomly observed the ABF welder begin the SMAW root pass. The QA Inspector randomly observed the SMAW parameters were 5/32" E7018 low hydrogen electrodes with 224 Amps for the root pass. The QA Inspector noted the parameters appeared to be in general compliance with ABF-WPS-1070A R1. After the SMAW root pass was completed the QA Inspector randomly observed the welder switch to 3/16" E7018 low hydrogen electrodes with 280Amps and used through the completion of the weld. The QA Inspector randomly observed the ABF welder did complete the above identified lifting lug hole on the QA Inspectors shift. After the #2 was completed the QA Inspector noted the ABF welder moved over to hole #4 and performed the same process identified above. The QA Inspector noted the fit up appeared to be in general compliance with #4 as well as #2. Both weld joints identified above were completed on this date. It was noted the ABF welder did not remove the weld reinforcement of the QA Inspectors shift.

4W-pp25-W3-1,2,3,4
The Lead QA Inspector Rick Bettencourt performed QA ultrasonic testing (UT) verification of the lifting lug hole weld joints identified above that were previously turned over by the SE QC Inspector Bonifacio Daquinag. The QA Inspector performed approximately 10% UT and VT verification of the weld joints and noted no rejectable indications were located at the time of the testing (see TL-6027 for 3.09.11):

The QA Inspector spent the remainder of the shift walking the top deck inside and out of the East and West bridge decks. The QA Inspector took field notes of the status of the production welding, and or NDT of the lifting lug deck hole restorations. The QA Inspector later transferred the data collected in the field to on site excel spread sheets or tracking logs for future references.

Summary of Conversations:
The QA Inspector randomly observed and noted the last several sets of lifting lug holes on the west bound bridge deck that were inspected did not appear to have QC NDT sign off charts. The QA Inspector asked the SE QC

Inspector Gary Ersham why the charts were not written on the steel. (The QA Inspector noted Mr. Ersham was the QC Inspector overseeing the fit up and NDT of the lifting lug holes as of late). When the QA Inspector asked Mr. Ersham why the charts were not present he did not respond. The QA Inspector reiterated the importance of the charts for tracking purposes and informed Mr. Ersham it was agreed upon early on in the construction of the bridge decks the charts would be utilized by QC and QA personnel. Mr. Ersham shook his head in disagreement and threw his hands in the air as if to shrug off the comments made by the Caltrans Lead QA Inspector. The Lead QA Inspector informed Mr. Ersham that he would discuss the issue with the SE Supervisor Leonard Cross.

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 Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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