

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-021740**Date Inspected:** 14-Mar-2011**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 as 7W-pp55-W3-1&3, 9W/10W-E2, 10W/11W-D1 and the following observations were made:

7W-pp55-W3-1&3

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 SE QC Inspector Gary Ersham perform magnetic particle testing of the back gouged weld joint and noted no relevant indications were present at the time of the testing. The QA Inspector randomly observed the ABF welder continue welding the in process lift lug hole restoration of the lifting lug hole identified as #3. 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 cover pass. The QA Inspector noted the ABF welder completed #3 and moved over to #1. The QA Inspector noted the ABF welder was pulled off of the above identified lifting lug holes to perform welding on the temporary structure which did not require inspection or monitoring.

9W/10W-E2

The QA Inspector randomly observed the ABF welder Song Tao Hunag had previously started the induction heating blankets on the inside of OBG to ensure the minimum required preheat of 150°F was achieved prior to

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welding. The QA Inspector randomly verified utilizing a 150°F temperature indicating marker and noted the minimum required preheat had been achieved. The QA Inspector observed the ABF welder to be utilizing the semi automated flux cored arc welding (FCAW) for the above identified weld joint. The QA Inspector randomly observed the Smith Emery (SE) QC Inspector identified as John Pagliero set the FCAW machine to the parameters of the approved WPS identified as ABF-WPS-D1.5-3042-B-1 The QA Inspector randomly observed the FCAW parameters were 270 Amps, 23 Volts and a travel speed of 300mm/min. The QA Inspector noted the ABF welder continued welding the FCAW cover passes for the remainder of the shift. The QA Inspector noted the fit up in the areas being welded were in compliance with the contract requirements. The QA Inspector noted the welding continued through out the duration of the QA Inspectors shift and was completed at the end of the ABF day shift. The QA Inspector noted the ABF welder began moving the FCAW machine and equipment over to 9W/10W-C to begin welding the FCAW root pass on the next shift.

10W/11W-D1

The QA Inspector randomly observed the ABF welder identified as Jin Pei Wang removing water with a pump and rags. After the majority of the water was removed the QA inspector observed the ABF welder preheat and dry up the wet steel with a rose bud torch. Once the water was gone and the minimum required preheat had been achieved, the QA Inspector observed the ABF welder begin performing FCAW manually. The QA Inspector noted the first 1000mm of the weld segment D1 was not completed during the submerged arc welding. The QA Inspector noted the SAW track welding system did not reach the area identified above. The QA Inspector noted the welders parameters were approximately 265 Amps, 23.3 volts and a travel speed of 275mm/min. The QA Inspector noted the FCAW parameters did appear to be in general compliance with the contract requirements. The QA Inspector noted the ABF welder performed the FCAW root/fill/cover pass for the 1000mm identified above. The QA Inspector noted the weld segment D1 was completed on this date.

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:

No pertinent conversation was noted on this date.

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
