

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-012728**Date Inspected:** 18-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:	Bernard Docena, Jesse Cayabayab	CWI Presentation:	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	

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 1E/2E-A, D,E the following observations were made:

1E/2E-A

Upon the arrival of the QA Inspector it was observed the ABF welding personnel was ready to perform the weld repair of a crack that was previously discovered. The QA Inspector spoke with the Task Lead Inspector Bill Levell in regards to the repair. Mr. Levell informed the QA Inspector; at 0640 the contractor had a verbal approval to begin the weld repair procedure identified as 201003-007 of the cracked weld upon commencement of the day shift. The QA Inspector noted the QA Inspector Mike Foerder was on site to randomly observe the in process excavation and welding of the repair.

1E/2E -D

Upon the arrival of the QA Inspector randomly observed the American Bridge/Fluor (ABF) welder Salvador Sandoval assisting the ABF Assistant Welding Superintendent Dan Ieraci set up the plasma arc gouging machine. The QA Inspector randomly observed the ABF representatives set up the bug-o track system with the plasma arc gouging machine attached to it, to allow a semi-automated back gouging system to be utilized. The QA Inspector noted the opposite side of the above identified weld joint was previously completed. The QA Inspector noted the plasma arc gouging machine was being set up to remove the steel backing bar from the external surface of the orthotropic box girder (OBG), and perform the back gouge of the weld joint. The QA Inspector randomly observed and noted the back gouging appeared to be a slow process. The QA Inspector randomly observed the machine or

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operator malfunctioned and sat in one place for too long. The QA Inspector noted a gouge was observed approximately 6mm in depth. The QA Inspector was unable to determine if the gouge was to be removed during the back gouging process, or if it was in the base material (pictured below). The QA Inspector will determine the extent of the gouge when the back gouge is completed. It was observed the back gouging process started on the previous day shift and was still in process at 1100 on today's date. The QA Inspector noted the ABF personnel identified above spent the remainder of the QA Inspectors shift attempting to remove the steel backing bar.

1E/2E-E-1

The QA Inspector randomly observed the ABF welders had previously started the induction heating blankets to ensure the minimum required preheat of 150°F was achieved prior to 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 a semi automated FCAW track system for welding the above identified weld joint. The QA Inspector randomly observed the Smith Emery (SE) QC Inspector identified as Bernard Docena set the FCAW machine to the parameters of the approved WPS identified as ABF-WPS-D1.5-3042A-1. The QA Inspector randomly observed the FCAW parameters were 274 Amps, 21.7 Volts and a travel speed of 266mm/min. The QA Inspector randomly observed the ABF welder Jeremy Doleman continued the FCAW fill pass, once the semi automated track system reached a certain point the ABF welder Rory Hogan would observe the welding arc for the remainder of the weld. The QA Inspector noted the ABF welders did complete the section of weld in E1 on the QA Inspectors shift. The QA Inspector randomly observed QC Inspector perform visual testing of the completed cover pass at E1. The QC Inspector informed the QA Inspector the weld was acceptable. The QA Inspector randomly observed the weld to be in general compliance with the contract requirements.



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.

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