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: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-013980
Date Inspected: 14-May-2010

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

OSM Arrival Time: 1100
OSM Departure Time: 1930
Location: Job Site

CWI Name: See Below

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girders

Summary of Items Observed:

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the following work performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below:

A). Field Splice E5/E6
B). Field Splice W1/W2

A) Field Splice E5/E6

The QAI observed the continuous tack/seal welding of the backing bar to the deck plate identified as WN: 5E-6E-A. The welding was performed by James Zhen ID-6001 utilizing the Welding Procedure Specification (WPS) identified as ABF-WPS-D15-F1200A Rev. 1 which was also used by the QC inspector, Bernie Docena, to monitor the in process welding and verify the welding parameters. The welding was performed in the horizontal position (2F) with the work placed so that the fillet weld metal appeared to be deposited on the upper side of the horizontal surface and against the vertical surface. The welding parameters were verified and recorded by the QC inspector as 140 amps and the minimum/maximum surface temperatures were also verified and recorded by the QC inspector.

The QAI observed the continuous tack/seal welding of the backing bar to the deck plate identified as WN: 5E-6E-A. The welding was performed by Song Tao Huang ID- 3794 utilizing the Welding Procedure Specification (WPS) identified as ABF-WPS-D15-F1200A Rev. 1 with the welding performed in the horizontal position (2F) and the work placed so that the fillet weld metal appeared to be deposited on the upper side of the

horizontal surface and against the vertical surface. The WPS was also used by the QC inspector, Bonifacio Daquinag, Jr., to monitor the in process welding and verify the welding parameters. The welding parameters were verified and recorded by Mr. Daquinag as 143 amps and the minimum/maximum surface temperatures were also verified and recorded by the QC inspector.

Later in the shift, the QAI observed the block tack welding at corner deck plate to edge plate connection identified as WN: 5E-6E-A to 5E-6E-B. The welding was performed by Jin Quan Huang ID-9340 utilizing multiple Welding Procedure Specification's (WPS) identified as ABF-WPS-D15-1041C Rev. 0 for welding performed in the 1G position and ABF-WPS-D15-1040B Rev. 1 for the welding performed in the 3G position. The WPS's were also used by the QC inspector, Bernie Docena, to monitor the in process welding and verify the welding parameters. The welding parameters were verified and recorded by Mr. Docena as 127 amps. The minimum and maximum surface temperatures were also noted and recorded by the QC inspector and verified by the QAI.

The QAI also observed the block tack welding at corner deck plate to edge plate connection identified as WN: 5E-6E-A to 5E-6E-F. The welding was performed by Chun Fai Tsui ID-3426 utilizing multiple Welding Procedure Specification's (WPS) identified as ABF-WPS-D15-1041C Rev. 0 for the welding performed in the welding performed in the 1G position and ABF-WPS-D15-1040B Rev. 1 for the 3G position. The WPS's were also used by the QC inspector, Bonifacio Daquinag, Jr., to monitor the in process welding and verify the welding parameters. The welding parameters were verified and recorded by Mr. Daquinag, Jr. as 132 amps. The minimum and maximum surface temperatures were also noted and recorded by the QC inspector and verified by the QAI.

B) Field Splice W1/W2

The QAI observed the machining, utilizing a 4" grinder, the back gouged surface to a bright metal on the "B" face of the single-v-groove identified as Weld Number (WN): 1W-W2-C. The weld joint appeared to comply with the AWS designation B-U2a-GF. The machining of the u-groove was performed by Rory Hogan and Jeremy Dolman.

QA Observation and Verification Summary

The QA inspector observed the QC activities and the welding of the field splices utilizing the WPS as noted above, which appeared to be posted at the weld station. The welding parameters and surface temperatures were verified by the QC inspector's and utilizing a Fluke 337 clamp meter for the electrical welding parameters and a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. The ESAB consumables utilized for the SMAW process appeared to comply with the AWS Specification and AWS Classification. The QC inspection, testing and welding performed on this shift was not completed appeared to be in general compliance with the contract documents. At random intervals, the QAI verified the QC inspection, testing, welding parameters and the surface temperatures utilizing various inspection equipment and gages which included a Fluke 337 Clamp Meter and Tempilstik Temperature indicators.

The digital photographs, on page 3 of this report, illustrate the work observed during this scheduled shift.

WELDING INSPECTION REPORT

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Summary of Conversations:

There were no pertinent conversations discussed in regards to the project except 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:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer