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

Bay Area Branch
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Contract #: 04-0120F4
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-015563
Date Inspected: 09-Jul-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			**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: 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 W5/W6

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The QAI observed the welder Hua Qiang Hwang ID-2930 perform the continuous tack welding of the deck plate to the backing bar on the weld joint identified as WN: 5W-6W-A1. The welding was performed utilizing the Flux Cored Arc Welding (FCAW-G) process as per the Welding Procedure Specification (WPS) identified as ABF-WPS-D15-F3200-2 Rev. 0. The welding was performed in the horizontal (2F) with the welding deposited on the upper side of the horizontal surface and against the vertical surface. The WPS was also used by the QC inspector, Steve McConnell, to monitor the in process welding and verify the welding parameters. The welding parameters were verified and recorded by Mr. Daquinag as follows; 235 amps, 21.5 volts with a travel speed measured at 277 mm/minute. The minimum preheat temperature of 60 degrees Celsius and a maximum interpass temperature of 230 degrees Celsius was also verified by the QC inspector.

The QAI also observed the welder James Zhen ID-6001 perform the continuous tack welding of the deck plate to the backing bar connection of the weld joint identified as WN: 5W-6W-A5. The welding was performed utilizing the Flux Cored Arc Welding (FCAW-G) process as per the Welding Procedure Specification (WPS) identified as ABF-WPS-D15-F3200-2 Rev. 0. The WPS were also used by the QC inspector, Steve McConnell, to monitor the

in process welding and verify the welding parameters. The welding parameters were verified and recorded by the QC inspector as follows; 240 amps, 21.0 volts with a travel speed measured at 271 mm/minute. The QC inspector also verified the minimum preheat temperature of 60 degrees Celsius and a maximum interpass temperature of 230 degrees Celsius. The welding was performed in the horizontal (2F) position with the work positioned in an approximately horizontal plane and the weld metal deposited deposited on the upper side horizontal surface and against the vertical surface.

Later in the shift the Shielded Metal Arc Welding (SMAW) process was implemented in lieu of the FCAW-G process. The change of the welding processes was directed by the welding superintendent, Dan Ieraci. The WPS utilized was identified as ABF-WPS-D15-1200A, Rev. 1 and the welding was performed by James Zhen ID-6001. The welding parameters were verified by the QC inspector and the DCEP amperage was noted as 130 amps.

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 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 FCAW-G and SMAW processes appeared to comply with the AWS Specification and AWS Classification. The QC inspection, testing and welding performed on this shift 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 photograph below illustrates the work observed during this scheduled shift.

Summary of Conversations:
No pertinent conversations were discussed in regards to this project during the scheduled shift.
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