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-015155
Date Inspected: 23-Jun-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 W1/W2
B). Field Splice W3/W4
C). Field Splice W4/W5

A). Field Splice W1/W2

The QAI observed the welding of the Complete Joint Penetration (CJP) identified as WN: 1W-2W-F. The welding was performed by the welder, James Zhen ID-6001, utilizing the Flux Cored Arc Welding (FCAW-G) process as per the Welding Procedure Specification (WPS) identified as ABF-WPS-D15-3110-3 Rev. 0. The WPS was also used by the QC inspector, Tom Pasqualone, as a reference to monitor the welding and verify the DCEP welding parameters and were noted as follows; 240 amps, 21.2 volts and a travel speed measured at 175mm/minute. The QC inspector also verified the the preheat and interpass temperatures which appeared to comply with the contract documents.

B). Field Splice W3/W4

The QAI also observed the CJP welding on the weld joint identified as WN: 3W-4W-B. The CJP welding was performed by Xiao Jian Wan ID-9677 utilizing the FCAW-G process as per the WPS identified

ABF-WPS-D15-3040B-3. The WPS was also used by the QC inspector Bonifacio Daquinag, Jr. to monitor the in process welding and verify the DCEP welding parameters. The welding parameters were verified by the QC inspector and were noted as follows; 244 amps, 21.8 volts and a travel speed measured at 210mm/minute. The QC inspector also verified the minimum preheat temperature of 100 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius. The welding parameters and the surface temperatures appeared to comply with the contract documents. The CJP welding on the "A" Face side of the weld joint was completed during this shift.

C). Field Splice W4/W5

The QAI observed the welder Xiao Jian Wan ID-9677 perform the repair welding of the areas marked as UT rejects on the Complete Joint Penetration (CJP) groove welds identified as WN: 4W-5W-A . At the conclusion of the excavations the QC technician Bonifacio Daquinag performed a Magnetic Particle Test (MPT) of the excavated areas and no rejectable indications were noted. The application and evaluation of the MPT appeared to comply with the MPT procedure identified as SE-MT-CT-D1.5-101 Rev. 4. The repair welding was performed utilizing the Flux Cored Arc Welding (FCAW-G) process as per the Welding Procedure Specification (WPS) identified as ABF-WPS-3000-1-Repair Rev. 0. The WPS was also used by the QC inspector, Mr. Daquinag as a reference to monitor and verify the Direct Current welding parameters and were noted as follows; 250 amps, 23.0 volts and a travel speed measured at 250mm/minute. The welding was performed in the flat position (1G) with the work positioned approximately in the horizontal plane with the weld metal deposited from the upper side. The excavations of the UT rejects were performed by Kenneth Chappell.

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 FCAW-G 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 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 were discussed in regards to the project.

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