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: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-027750
Date Inspected: 10-Jun-2012

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

OSM Arrival Time: 700
OSM Departure Time: 1530
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: OBG/Tower

Summary of Items Observed:

At the start of the shift this Quality Assurance Lead Inspector (QAI) traveled to the SAS project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) Quality Control (QC) personnel. The observations and inspections were performed as noted below:

OBG E13 Drop-In Panels (SPCM)

The QAI observed the Shielded Metal Arc Welding (SMAW) process of the structural steel floor beam field splice identified as Weld Number (WN): 13E-PP121.5-E2.5-BF1. The welding was performed by welding personnel, Eddie Brown ID-9331 utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-1100, Rev. 1. The WPS was also used by the Quality Control (QC) Inspector Salvador Merino to verify the welding parameters and to monitor the welding of the Complete Joint Penetration (CJP) groove weld. The QAI observed the QC inspector verifying the welding parameters and were noted as 209 amps. The minimum preheat temperature of 40 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply with contract documents. The welding was performed in the horizontal (2G) position with the work positioned in an approximately vertical plane with the groove approximately horizontal.

QC Ultrasonic Testing

The QAI also observed the Ultrasonic Testing (UT) of the Complete Joint Penetration (CJP) longitudinal panel splice identified as WN: 13E-E2.3. The testing was performed by the QC technician Scott Kortum utilizing a G.E. /Krautkramer USM 35X. Mr. Kortum also utilized the UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4

during the examination of the CJP. The QC technician performed the required longitudinal wave utilizing a 1" diameter transducer for base metal soundness. The testing was not completed during this shift and no indications were noted as rejectable and several indications were noted as recordable.
This QAI also observed QC technicians, Leonard Cross and Pat Swain, performing UT on the drop-in panel splices identified as 13E-E2.4 and 13E-E2.5 accordingly. The testing was not completed during this shift.
OBG W13 Drop-In Panels (SPCM)

Later in the shift, the QAI observed the Shielded Metal Arc Welding (SMAW) process of the panel field splice identified as Weld Number (WN): 13W-W2.8. The welding was performed by welding personnel, Mike Jimenez ID-4671 utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-1040C-CU, Rev. 0. The WPS was also used by the Quality Control (QC) Inspector William Sherwood to verify the welding parameters and to monitor the welding of the Complete Joint Penetration (CJP) groove weld. The QAI observed the QC inspector verifying the welding parameters and were noted as 127 amps. The minimum preheat temperature of 40 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply with contract documents. The welding was performed in the overhead (4G) position with the work positioned in an approximately horizontal plane and the weld metal deposited from the underside.

Later in the shift this QAI observed Mr. Jimenez profile grinding on the drop-in panel splice identified as Weld Number (WN) 13W-14W-A0, 13W-14W-A1 and 13W-14W-A2.2. This task was performed on the B-face of the weld joint to facilitate QC testing.

QA Observation and 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 stations. The welding parameters and surface temperatures were verified by the QC inspectors 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 welding consumables utilized for the SMAW welding process 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 two (2) of this report illustrate the some of the work observed by this QA inspector during this shift.

WELDING INSPECTION REPORT

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Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection personnel scheduled for this 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 Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer