

**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 #: 19.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012244**Date Inspected:** 23-Feb-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2130**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See Report 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 (AB/F) personnel at the E1/E2 field splice:

- A). Welding of E1 to E2 field splice.
- B). QC performing Magnetic Particle Inspection

The QAI observed the Complete Joint Penetration (CJP) groove welding of the bottom plate splice identified as Weld "D", segments D9-D10 and D13-D14. The welding was performed by AB/F personnel Jordan Hazelaar, 2135 and Al McDaniel, ID-2690. The QAI also observed Quality Control (QC) inspector Mike Johnson verify the Direct Current (DC) welding parameters, minimum preheat and the maximum interpass temperatures during the welding process. The QAI also observed the QC inspector Mr. Johnson perform Magnetic Particle Testing (MPT) on the weld segments identified as D16 and D17. At the conclusion of the MPT Mr. Johnson noted a linear indication of 70 cm which commenced midway segment D16 which traveled north to south and terminated at the end of segment D17. The indication appeared to be parallel with the longitudinal axis of the weld. Later in the shift AB/F Assistant Welding Supervisor, Daniel Iseraci, was observed by the QAI monitoring the minimum preheat temperature at the conclusion of the shifts welding. The monitoring of the surface temperature terminated at approximately three (3) hours.

The QAI also generated an Incident Report, TL-15.

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# WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

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## QA Observation Summary

The QA inspector observed the CJP welding of the E1 to E2 bottom plate splice utilizing the Welding Procedure Specification's (WPS's) ABF-WPS-D15-4030A-1 which was also used by the AB/F QC inspector Mike Johnson during the monitoring of the welding parameters and were noted as follows; 233 amps, 22 volts and with a travel speed measured at 419 mm. The welding parameters, minimum preheat and maximum interpass temperatures were verified utilizing a Fluke 337 clamp meter for the electrical welding parameters and a Fluke 63 IR Thermometer for preheat and interpass temperatures. The 1.4 mm ESAB Dual Shield 70 Ultra Plus was utilized during the FCAW-G process was also verified by the QC inspector and appeared to comply with the AWS Electrode Specification A5.20 the AWS Classification E71T-1M. The QC inspector's appeared to perform the visual examinations and monitoring of the welding as per the contract documents. The welding and inspection on this shift was not completed and appeared to be in general compliance with the contract documents.

See digital photographs below in regards to the work observed during this shift.



## 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.

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**Inspected By:** Reyes,Danny

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer