

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-020850**Date Inspected:** 15-Feb-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

**CWI Name:** Mike Johnson  
**Inspected CWI report:** Yes No N/A  
**Electrode to specification:** Yes No N/A  
**Qualified Welders:** Yes No N/A  
**Approved Drawings:** Yes No N/A

**CWI Present:** Yes No  
**Rod Oven in Use:** Yes No N/A  
**Weld Procedures Followed:** 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). Procedure Qualification Record Test

At the conclusion of the welding, the QAI observed the inspection of the Procedure Qualification Record (PQR) test plate identified as ABF-PQR-039-4, Rev. 0. The visual inspection was performed by the Quality Control (QC) inspector Mike Johnson utilizing suitable gages to perform the inspection. The inspection of the test plate was performed in the as welded position (4G), and at the conclusion of the QC inspection, Mr. Johnson requested the QAI to perform a VT verification. At the conclusion of the QAI verification, no issues were noted. At this time, Rick Clayborn removed the test plate from the fixture and commence the removal of the weld extension plates and the temporary attachments (strong backs). For tracking purposes, the QAI assigned the following lot number; B301-001-11A and a TL-6032 was generated on this date.

The QAI also observed the welding and inspection of the Procedure Qualification Record (PQR) test plate identified as ABF-PQR-FO26-4, Rev. 0. The welding was performed by Rick Clayborn, ID-2773, utilizing the Shielded Metal Arc Welding process and the 3.2 mm E9018 H4R electrode, as per the PQR which was also utilized by the Quality Control (QC) inspector Mike Johnson as a reference to monitor the welding, to verify the Direct Current (DC) welding parameters and the preheat/interpass temperatures. The welding was performed in the overhead (4F) position with the test plate assembly positioned so that each fillet weld was deposited on the underside of the horizontal surface and against the vertical surface. The maximum single pass fillet weld was

---

---

# WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

---

---

welded on one side of the test plate, and the minimum multiple pass fillet weld was welded on the other side of the test plate. The dimensions of the test coupon were verified as 25 mm thick, 150 mm wide and 300 mm in length. The material specification appeared to comply with the American Society of Testing Materials (ASTM) A709-485 HPS. The welding of the test plate was completed during this shift. For tracking purposes, QAI assigned a lot number identified as B301-002-11A and a TL-6032 was generated on this date.

The average welding parameters were recorded by the QC inspector, verified by the QAI and were observed as follows; 135 amps for the 8mm single pass fillet and the 6mm multi fillet weld. The amperage was verified utilizing a Fluke 289 True RMS Multimeter with a Fluke i1010AC/DC current clamp.

Later in the shift the QAI traveled to CMT to review the radiographs of the test plate identified as ABF-PQR-039-4, Rev. 0. At the conclusion of the review, the radiograph and weld quality appeared to comply with the contract documents. For tracking purposes, QAI assigned the following lot number; B301-003-11A and a TL-6029 was generated on this date.

The digital photographs below illustrate some of the work observed during this scheduled shift.



## Summary of Conversations:

There were general conversations with Quality Control Inspector Mike Johnson at the start of the shift regarding the location of American Bridge/Fluor welding, inspection and N.D.E. testing 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.

---

<b>Inspected By:</b>	Reyes,Danny	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

---