

**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-022102**Date Inspected:** 22-Mar-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See Items Observed**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). Longitudinal "A" Deck Stiffeners
- B). Field Splice W8/W9

The QA Inspector observed the onsite inspection performed by the contractor's QC Inspection personnel. The inspection was performed on various Complete Joint Penetration (CJP) groove welds and repair welding of the west Orthotropic Box Girders. The welding was performed utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specification (WPS) and was also used by the QC Inspectors to monitor the welding operation and to verify the welding parameters.

## A). Longitudinal "A" Deck Stiffeners

The QA Inspector observed the CJP welding of the longitudinal stiffeners located at the field splices W4/W5 and W6/W7 and identified accordingly as WN: 4W-5W-A-LS6 and WN: 6W-7W-A-LS2. The welding was performed by the welders Xiao Jin Wan ID-9677 and Jin Pei Wang ID-7299. The CJP welding of the longitudinal stiffener plate identified as WN: 4W-5W-A-LS6 was completed during this shift. The work/CJP welding of the stiffener plate identified as WN: 6W-7W-A-LS2 was not completed during this shift.

---

---

# WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

---

---

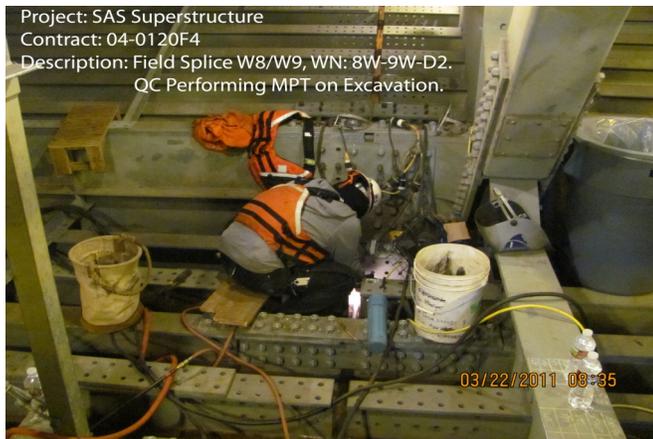
## B). Field Splice W8/W9

The QA Inspector observed the welder Fred Kaddu ID-2188 perform the repair welding of the bottom plate field splice identified as WN: 8W-9W-D2. The excavations were observed and verified by the QAI as follows; Y=3975 mm, L=1110 mm and d=17 mm. The excavation and welding was completed during this shift.

### QA Summary

The welding was performed in the flat (1G) and vertical (3G) position utilizing low hydrogen electrodes. The welding parameters were verified and recorded by the QC inspector and appeared to comply with the WPS's identified as ABF-WPS-D15-1012-3, Rev. 0 and ABF-WPS-D15-1001 Repair, Rev. 0. The welders utilized a slag hammer and a wire wheel attached to a 4" high cycle grinder to remove slag after the deposit of each weld pass. The 3.2 mm electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes identified as E7018-H4R and E9018-H4R appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The WPS's was also utilized by the QC inspector's, Gary Ehrsom and Jesse Cayabyab, as a reference to monitor the welding operation, verify the welding parameters and verify the minimum preheat and the interpass temperatures. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by the QAI.

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



### 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 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.

---

---

## WELDING INSPECTION REPORT

*( Continued Page 3 of 3 )*

---

---

---

**Inspected By:**      Reyes,Danny

Quality Assurance Inspector

---

**Reviewed By:**      Levell,Bill

QA Reviewer