

**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-026117**Date Inspected:** 17-Aug-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**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:** SAS Tower & OBG**Summary of Items Observed:**

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed on the various field fit-up of weld joints and the Complete Joint Penetration (CJP). The welding was performed utilizing the Shielded Metal Arc Welding (SMAW) process.

## A). Tower Shear Plates

The QAI observed the repair welding of the ESW identified as WN: W-042 located at joint "M". The welding was performed by Richard Garcia ID-5892 utilizing the SMAW as per the WPS identified as ABF-WPS-D15-1000-Repair, Rev. 2. The welding was performed in the vertical (3G) position with the work placed in an approximate vertical plane with the groove approximately vertical. The minimum preheat of 140 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius was achieved, maintained and appeared to comply with the contract specifications. The QAI also observed the QC inspector, John Pagliero, monitor the welding and verify the welding parameters utilizing the WPS as a reference to perform this task. The welding parameters of 115 amps were noted by the QC inspector and verified by the QAI. The welding was completed during this shift.

Later in the shift the QAI observed Mr. Garcia removing the temporary attachments to the skin plate of the east tower shaft and the shear plate located at joint "R". The welder utilized the Air Carbon Arc (ACA) method to remove the attachments. This work was not completed during this shift.

---

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

---

---

The QAI also observed the repair welding of the shear plate ESW identified as WN: N-041, located at joint "N". The welding was performed by Jeremy Dolman ID-5042 utilizing the SMAW as per the WPS identified as ABF-WPS-D15-1000-Repair, Rev. 2. The welding was performed in the vertical (3G) position with the work placed in an approximate vertical plane with the groove approximately vertical. The minimum preheat of 140 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply with the contract specifications. The QAI also observed the QC inspector, John Pagliero, monitor the welding and verify the welding parameters utilizing the WPS as a reference to perform this task. The welding parameters of 119 amps were noted by the QC inspector and verified by the QAI. The welding was not completed during this shift.

### B). Lifting Lug Holes

The QA inspector observed the CJP welding of the Lifting Lug Hole identified as WN: 11E-PP100-E3-W1 and W3. The welding was performed by the welder Jorge Lopez ID-6149 utilizing the SMAW as per the WPS identified as ABF-WPS-D15-1050A-CU Rev. 0 which was also used by the QC inspector as a reference to monitor the welding and verify the welding parameters. The QC inspection and the work associated with the welding operation was performed by Fred Von Hoff. The welding was performed in the flat (1G) position with the work placed in an approximate horizontal plane and the weld metal shall be deposited from the upper side. The welding was not completed during this shift.

This QA Inspector also performed a daily review of field inspection reports and update of the field document control tracking records regarding the Orthotropic Box Girders, Longitudinal and Transverse "A" Deck Stiffeners and Deck Access Holes.

### QA Summary

The welding was performed in the vertical position utilizing the E7018-H4R. The 3.2 mm H4R electrodes were stored in an electrically heated, thermostatically controlled oven after the removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure 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 photograph on page 3 of this report illustrates some of the work observed during this scheduled work date.

---

---

# WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

---

---



## 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 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

---