

**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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019160**Date Inspected:** 04-Jan-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1100**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Fred Von Hoff**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 Section**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and to monitor American Bridge/Fluor (ABF) welding operations.

The following observations were made:

- 1) At weld joint 9E/10E-D-1 and D2, inside the OBG section: ABF welding James Zhen (#6001) was performing Submerged Arc Welding (SAW). QC Inspector Fred Von Hoff was monitoring the work.
- 2) At weld joint 7E/8E-B, inside the OBG section: ABF welding personnel Fred Kaddu (#2188) was excavating weld defects in preparation to start repair welding. QC Inspector Fred Von Hoff was monitoring the work.
- 3) At weld joint 9E/10E A-1 thru A-5, outside the OBG section: ABF welding personnel Xiao Jian Wan (#9677), Hua Qiang Hwang (#2930) and Wai Kitlai (#2953) were performing SMAW production welding. QC Inspector Tony Sherwood was monitoring the work.

At weld joint 9E/10E-D-1 and D2, inside the OBG section this QA Inspector observed ABF welding personnel James Zhen (#6001) was using the SAW process to perform production welding. This QA Inspector verified the following welding parameters; 550 amperes, 32.2 volts and 390 mm per minute travel speed to provide a 2.72 kJ heat input value. This QA Inspector observed the base material prior to the start of welding was greater than 150°F by using a temperature indicating marker. The welding observed appeared to comply with Welding

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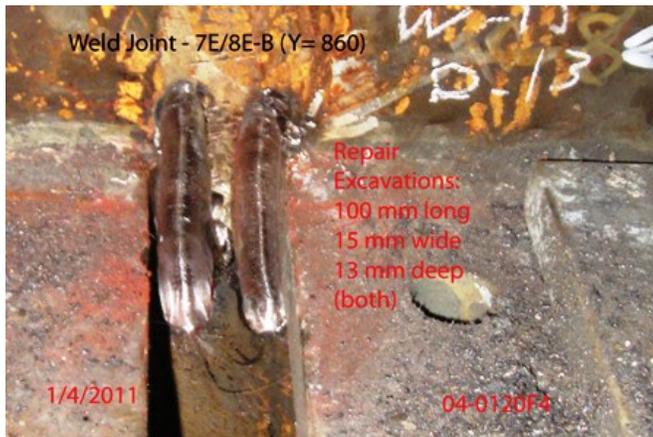
Procedure Specification (WPS) ABF-WPS-D15-4040-B1. This QA Inspector observed QC Inspector Fred Von Hoff periodically monitoring the work at this location. See photo below of SAW in progress.

At weld joint 7E/8E-B, inside the OBG section this QA Inspector observed ABF welding personnel Fred Kaddu (#2188) excavating the weld in preparation to perform repair welding. This QA Inspector periodically observed as ABF welding personnel Fred Kaddu (#2188) used a grinder to excavate two defects side by side to each other. This QA Inspector was present when QC Inspector Fred Von Hoff performed the visual and Magnetic Particle Testing (MT) of the excavations. This QA Inspector observed minor grinding and re-inspection was required prior to QC Inspector Fred Von Hoff informing this QA Inspector the inspections were accepted. This QA Inspector observed the excavations were located at Y-860 and that both excavations were side by side, each centered approximately 12 mm off the centerline of the weld. Each excavation was 100 mm in length, 13 mm wide and 15 mm deep. See photo of excavations below. This QA Inspector verified with QC Inspector Fred Von Hoff this was the first repair cycle (R-1) at this location. This QA Inspector did not observed welding being performed this date at this location.

At weld joint 9E/10E A-1 thru A-5, outside the OBG section this QA Inspector observed ABF welding personnel Xiao Jian Wan (#9677), Hua Qiang Hwang (#2930) and Wai Kitlai (#2953) performing SMAW production welding. The welding consisted of placing a continuous tack weld on each internal side of the weld joint. QC Inspector Tony Sherwood was monitoring the work and informed this QA Inspector of the following welding parameters; Xiao Jian Wan (#9677) at 168 amperes, Hua Qiang Hwang (#2930) at 168 amperes and Wai Kitlai (#2953) at 170 amperes. This QA Inspector observed all three welding personnel were using 3.2 mm diameter E7018H4R electrodes. The welding observed appeared to comply with ABF-WPS-D15-F1200A Rev-2.

## Summary of Conversations:

As noted above.



## 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.

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**Inspected By:** Hager,Craig

Quality Assurance Inspector

**Reviewed By:** Levell,Bill

QA Reviewer