

**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 #: 1x.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007498**Date Inspected:** 01-Jul-2009**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:** Pier 7, Oakland, CA

**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:****Summary of Items Observed:**

This Quality Assurance (QA) Inspector arrived at the American Bridge/Fluor (ABF) warehouse at berth 7 and met with Quality Control (QC) Inspector Mike Johnson and ABF Site Superintendent Tommy Gibson and welding personnel Sal Sandoval. Mr. Gibson informed QC Mike Johnson and QA Inspector that Mr. Sal Sandoval would continue welding a Procedure Qualification Record (PQR) ABF-PQR-003-1 in accordance with AWS D1.5-02, paragraph 5.13.1 and the contract special provisions. ABF QC Mike Johnson informed QA Inspector that the PQR would be welded observing the limitation of variables described in Table 5.3. The QA Inspector performed dimensional verification of the test coupons to determine they were in compliance with AWS D1.5 figure 5.1. After the dimensional verification, QA noted the test coupons appeared to be in general compliance with the contract requirements.

Prior to the start of the PQR mentioned above, QC Inspector Mike Johnson informed QA that they were discarding the PQR test plate that they have been welding yesterday and that they will start with a fresh test plate using the same dimensions. The test plates were noted 1" thick X 10" wide X 30" long with 45 degree inclusive angle, a root gap of 3/8" and a backing bar of 1/2" thick X 3" wide. The test plates were positioned at overhead (4G) position. ABF QC Mike Johnson informed QA that they would weld the PQR in two zones and that the first zone would be the root and the second zone would be the fill up to the cover.

ABF welder Sal Sandoval welded the root pass using the Lincoln Electric Innershield NR-232 with 0.072" diameter with preheat temperature of 57 degree C and observed welding parameters of 21.7 volts, 241 amperes and 3.26 inch per minute travel speed. Calculated heat input at this stage was 96.22 Kjoules per inch. After welding the root pass, the welder performed a minor grinding into the root pass and cooled down the test plate

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prior welding the second pass. The measured welding parameters for the second pass were 20.3 volts, 231 amperes and a travel speed of 3.27 per minute. Calculated heat input at this stage was 85.8 Kjoules per inch. The welder welded more passes until the fifth pass and end of the day. The second and fourth passes were carbon arc gouged at the edge of the weld for better deposition of the succeeding passes while the third and fifth passes were ground. After grinding the fifth pass, QC Mike Johnson informed QA that they will continue to weld this PQR tomorrow.

### **Summary of Conversations:**

No significant conversation occurred today.

### **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 Anthony Mullen, (707-649-5495), who represents the Office of Structural Materials for your project.

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

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