

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4  
Cty: SF Rte: 80 PM: 13.2/13.9  
File #: 1x.28

**WELDING INSPECTION REPORT**

**Resident Engineer:** Pursell, Gary  
**Address:** 333 Burma Road  
**City:** Oakland, CA 94607

**Report No:** WIR-000986  
**Date Inspected:** 04-Dec-2007

**Project Name:** SAS Superstructure  
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV  
**Contractor:** American Bridge/Fluor Enterprises, a JV

**OSM Arrival Time:** 615  
**OSM Departure Time:** 1545  
**Location:** Benica, CA

<b>CWI Name:</b>	William Norris	<b>CWI Present:</b>	Yes	No
<b>Inspected CWI report:</b>	Yes No N/A	<b>Rod Oven in Use:</b>	Yes	No N/A
<b>Electrode to specification:</b>	Yes No N/A	<b>Weld Procedures Followed:</b>	Yes	No N/A
<b>Qualified Welders:</b>	Yes No N/A	<b>Verified Joint Fit-up:</b>	Yes	No N/A
<b>Approved Drawings:</b>	Yes No N/A	<b>Approved WPS:</b>	Yes	No N/A
		<b>Delayed / Cancelled:</b>	Yes	No N/A

**Bridge No:** 34-0006 **Component:** Procedure Qualification Record (PQR) test

**Summary of Items Observed:**

The Quality Assurance (QA) Inspector arrived at the Ironworkers Apprenticeship Training Facility and met with Smith-Emery Company Quality Control (QC) Inspector William Norris to observe QC functions during the welding of the Procedure Qualification Record (PQR) test plate listed below.

ABF-PQR-026-1-A.2

1. The QA Inspector periodically observed American Bridge Floor (ABF) welding personnel Rick Clayborn and Daniel Gordon perform base material preheating prior to starting welding per the Flux Cored Arc Welding Self Shielded (FCAW-S) process to continue making Complete Joint Penetration (CJP) groove weld of the PQR test plate identified as ABF-PQR-026-1-A.2 (Retest). The welding was being performed using Electrode Hobart Fabshield XLR-8, E71T-8, 1.8 millimeter diameter. The welding was being conducted using track guided "Bug-O-System self propel wire feeder" in the 3G (vertical) position.

b) Prior to the start of welding the QA Inspector observed QC Inspector William Norris verify base material preheating temperature, electrical welding parameters and the travel speed to be approximately 117 degrees Celsius, 274 amperes, 21.6 volts and 92.7 millimeters/minute travel speed. QC Inspector notified the QA Inspector the welding of the test plate will be done using welding variables to produce the maximum calculated heat input.

c) During welding QA Inspector observed ABF welding personnel Rick Clayborn performing air carbon arc cutting (gouging) to remove filler metal to open up groove to accommodate subsequent weld passes. Cutting was

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## WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

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performed prior to apply the weld pass number 2, 3, 4, 6, 7 and 8 at full length of test plate. QA Inspector observed ABF welding personnel had to stop welding several times due to welding difficulties. Rick Clayborn notified the QA Inspector it appears that the welding equipment and electrode were not working properly. QA Inspector observed welding personnel attempting to repair what appeared to be equipment problem and replaced the spool of wire electrode approximately 3 times. Later during the shift Hobart manufacture representative arrived to facility and was observed attempting to repair welding problem. QA Inspector observed that the welding difficulties were not resolved on this time and the welding personnel continued the welding operation.

d) During welding QA Inspector periodically observed the QC Inspector William Norris verifying and documenting base material temperature, amperage, voltage, travel speed the welding discrepancies as well as the cutting prior to subsequent welding pass. The welding operation was completed on test plate on this date. William Norris notified the QA Inspector that the visual inspection on completed weld will be done at later date.

The QA Inspector observed the welding performed at this location appeared to be in general compliance with the project plan and specifications.

### **Summary of Conversations:**

As noted in the body of the report above. QC Inspector William Norris informed the QA Inspector he intended to monitor and record the electrical welding parameters (amperage, voltage and travel speed) and document the placement of each welding pass in the groove joint.

### **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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Medina,Ricardo	Quality Assurance Inspector
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<b>Reviewed By:</b>	Mertz,Robert	QA Reviewer
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