

**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 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-001024**Date Inspected:** 13-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1430**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Benicia, CA

<b>CWI Name:</b>	William Norris		
<b>Inspected CWI report:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A

<b>CWI Present:</b>	Yes	No	
<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Verified Joint Fit-up:</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-028-1.

1. The QA Inspector periodically observed American Bridge Floor (ABF) welding personnel Rick Clayborn and Daniel Gordon preparing welding equipment and performing welding on practice material prior to starting welding to make Complete Joint Penetration (CJP) groove weld of the Procedure Qualification Record (PQR) test plate identified as ABF-PQR-028-1. QA Inspector observed Lincoln Electric manufacture electrode representative assisting ABF welding personnel with the settings of the recommended electrical welding parameters of the use electrode for the welding of the test plate. QA Inspector was notified by ABF welding foreman Rick Clayborn that not enough penetration was being accomplished on the root weld during the welding using practice testing plates.

a) QA Inspector periodically observed ABF welding personnel Rick Clayborn and Daniel Gordon perform base material preheating prior to starting welding per the Flux Cored Arc Welding (FCAW-G) process to make Complete Joint Penetration (CJP) groove weld of the PQR test plate ABF-PQR-028-1. The welding was being performed using Electrode Lincoln Electric UltraCore 712C, E71T-12CJH8 and 1.6 millimeter diameter with 100 % Carbon Dioxide gas shielding. The welding was being conducted using track guided "Bug-O-System self propel wire feeder" in the 3G vertical position.

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b) Prior to the start of welding QA Inspector observed the QC Inspector William Norris verify base material preheating temperature, electrical welding parameters and the travel speed to be approximately 217 degrees Celsius, 261 amperes, 24.2 volts and 130.65 millimeters/minute travel speed for the root weld pass. QC Inspector William Norris notified the QA Inspector the welding of the test plate will be done using variables to produce the maximum welding 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 performed prior to apply the weld pass number 4 at full length of test plate.

d) During welding QA Inspector observed the QC Inspector William Norris verifying and documenting base material temperature, amperage, voltage and the travel speed of each welding pass as well as the cutting for subsequent weld pass. The welding operation was completed on test plate on this date. QC Inspector William Norris informed the QA Inspector that a visual inspection for the weld profile will be conducted on the test plate weld on a 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. Other basic communication was performed between QA Inspector and the QC Inspector William Norris during observations.

### 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
<b>Reviewed By:</b>	Mertz,Robert	QA Reviewer

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