

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012862**Date Inspected:** 02-Apr-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Listed below.		
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
Component:	Orthotropic Box Girders (OBG)		

Bridge No: 34-0006**Summary of Items Observed:**

The Quality Assurance Inspector (QAI), Scott Croff, was present at the Self Anchored Span (SAS) job site to observe the scheduled fabrication and welding of components for the SFOBB project. The following observations were made:

- 1) OBG L2E/L3E - plate C field splice welding
- 2) OBG L3E/L4E - plate D field splice welding

1) The QAI observed ABF personnel welding plate C at L2E/L3E field splice. The QAI noted that this complete joint penetration (CJP) weld is being made in segment C2 from 7500mm to 10000mm. See the attached photo. The QAI noted that the Quality Control (QC) Inspector Bernie Docena is monitoring this welding. The QAI observed ABF workers Mitch Sittinger, ID 0315, and Chun Fai Tsui, ID 3426, making the welds with gas shielded flux cored arc welding (FCAW-G). The QAI was informed that welding procedure specification (WPS) ABF-WPS-D15-3040A-1 is being used for this welding. The QAI randomly measured the welding parameters and noted that they appeared to be conforming to the WPS requirements. The QAI randomly measured the preheat and interpass temperature and noted that they did not appear to be conforming to the WPS and contract requirements. The QAI noted that twice during this shift, the temperature was measured to be below the minimum of 200°F. The lowest observed temperature was below 150°F in the 9000mm to 10000mm section of the weld segment. The QAI relayed these observations to the QC Inspector. The QAI also wrote a non-conforming incident report to document the observations. See the appropriate TL-15 for additional information. The QAI noted that upon identification of weld / base metal will low preheat / interpass temperature, ABF personnel used propane torches to restore the required temperature and welding operations continued.

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2) The QAI observed ABF personnel using grinders to remove the welds at L3E/L4E bottom plate D field splice. The QAI was informed that previously made welds were being removed because slag was present. The QAI observed that after the welds were ground down, shielded metal arc welding (SMAW) with 1/8" E7018 electrodes were used to make the root pass of weld segments D1 and D2. See the attached photo. The QAI noted that ABF workers Jordan Hazelaar, ID 2135, Song Tao Huang, ID 3794, and James Zhen, ID 6001, were performing the welding at this location. The QAI noted that the QC Inspector Tom Pasqualone is monitoring this welding. The QAI was informed that after an acceptable root pass is made with SMAW, submerged arc welding (SAW) will be used to finish the welding. The QAI Danny Reyes arrived and assumed the QA duties at this location.



Summary of Conversations:

As noted above, the QAI had conversations with the QC Inspector Bernie Docena regarding required minimum preheat temperature. The QC Inspector confirmed that based on the WPS and weld thickness, the temperature was not supposed to be below 200°F. The QAI had other general conversations with the QC Inspectors regarding the observed work in progress. The QAI relayed the observations of OBG splice welding to the QAI Danny Reyes. The QAI also relayed the non-conforming incident report to the QAI Lead Bill Levell. The QAI also generated a shift turn-over report with this information. There were no other notable observations or conversations during 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 Mohammad Fatemi, (916)813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Croff, Scott	Quality Assurance Inspector
Reviewed By:	Levell, Bill	QA Reviewer
