

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:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026642**Date Inspected:** 04-Nov-2011**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:** Job Site**CWI Name:** Pat Swain**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 Sections**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 monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

Orthotropic Bridge Girder (OBG) Sections:

13W/14W – weld joint A-2.2 to A-5: According to the documents being used by QC personnel this weld joint is designated as being a Seismographic Performance Critical Member (SPCM). This QA Inspector randomly observed as QC Inspector Pat Swain verified the minimum preheat temperature was greater than 150°F. This QA Inspector randomly observed as the Submerged Arc Welding (SAW) parameters were verified for ABF welding personnel James Zhen (#6001) and Danny Ieraci (#3232). This QA Inspector observed ABF welding personnel James Zhen (#6001) was welding from A-2.2 thru A-3 using the following parameters; 550 amperes and 32 volts with a travel speed of 410 mm per minute to produce a heat input of 2.58 Kj per mm. This QA Inspector observed ABF welding personnel Danny Ieraci (#3232) was welding form A-4 thru A-5 using the following parameters; 555 amperes and 31 volts at a travel speed of 383 to produce a heat input value of 2.70 Kj per mm. This QA Inspector observed ABF welding personnel Danny Ieraci (#3232) and Todd Jackson (#4639) would switch off welding at different times during the shift; this QA Inspector observed QC Inspector Pat Swain periodically verify the welding parameters for each of the personnel. During the shift this QA Inspector checked the temperature of the flux being stored in the containers outside the welding enclosure and observed the following; the container on the left (outboard side) was approximately 2/3's full and the flux temperature was approximately 175°F (250°F is the

WELDING INSPECTION REPORT

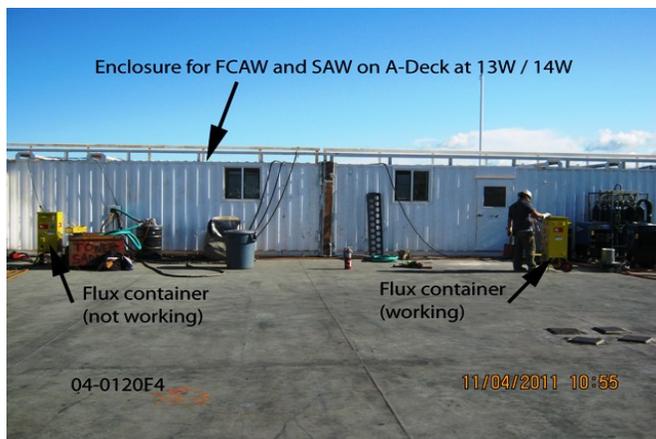
(Continued Page 2 of 3)

minimum temperature for SPCM welds) and the container on the right (inboard side) was greater than 250°F. This QA Inspector informed QC Inspector Pat Swain of the observation and was informed that he was aware of the issue and noted that the flux container on the left did not appear to be working. QC Inspector Pat Swain stated the container on the left had been filled with flux from the large flux oven which was at approximately 300°F and used until the temperature fell below 250°F. This QA Inspector stated the flux container on the left should not be used and marked as such. QC Inspector Pat Swain stated the welding personnel were aware of the issue. Later, this QA Inspector observed ABF welding personnel Danny Ieraci (#3232) taking flux from the flux oven and pour it into the flux container on the left. This QA Inspector informed QC Inspector Pat Swain of the observation and stated the flux in the container was cold and that adding hot flux would not make the flux acceptable for use. This QA Inspector was present when QC Inspector Pat Swain informed ABF welding personnel Danny Ieraci (#3232) of the flux issue, see photo below. The welding observed this using ESAB – OK Flux 10.62 with ESAB-Spoolarc 81 wire appeared to comply with Welding Procedure Specification (WPS) 4042B-1. Welding at this location was not completed this date.

This QA Inspector verbally informed QA SPCM Lead Inspector, Daniel Reyes, of the issues noted in this report for compliance therefore for further details of issues of significance see QA SPCM Lead Inspector, Daniel Reyes, Daily Inspection Report (6031) for this date.

Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above and noted above there were no notable conversations.



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.

Inspected By: Hager, Craig

Quality Assurance Inspector

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Reviewed By: Levell,Bill

QA Reviewer