

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-026652**Date Inspected:** 05-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 observed QC Inspector Pat Swain verify the preheat temperature to be greater than 150°F prior to welding. This QA Inspector observed ABF welding personnel Todd Jackson (#4639) setting up to weld from A-4 thru A-5 and James Zhen (#6001) setting up to weld from A-2.2 to A-4. This QA Inspector observed the Submerged Arc Welding (SAW) process was going to be used. This QA Inspector observed fresh heated flux was placed in each of the SAW hoppers prior to the start of welding. This QA Inspector observed QC Inspector Pat Swain verify the following welding parameters; Todd Jackson (#4639) 550 amperes and 30 volts at a travel speed of 425 mm per minute to produce a heat input of 2.33 Kj per mm, James Zhen (#6001) 560 amperes and 32 volts at a travel speed of 422 mm per minute to produce a heat input of 2.54 Kj per mm. The welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-4042B-1 being used by the QC Inspector. This QA Inspector observed the SAW equipment being used by AFB welding personnel Todd Jackson (#4639) was stopping periodically due what was believed to be mechanical issues by the welding personnel. This QA Inspector observed ABF welding personnel Danny Ieraci (#3232) performing SAW at various times and ABF welding

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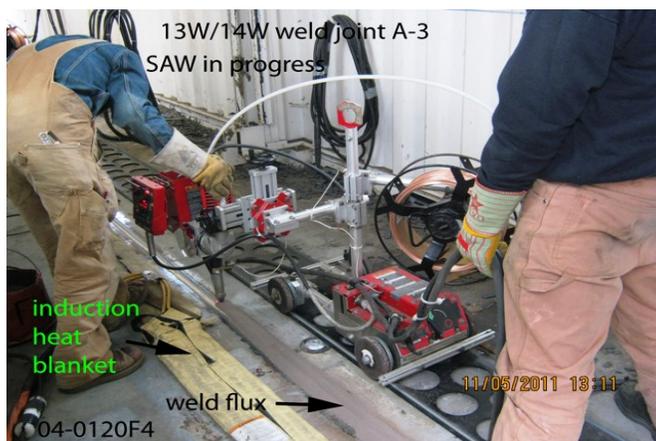
personnel Todd Jackson (#4639) assisting with the welding equipment. This QA Inspector observed QC Inspector Pat Swain verify the welding parameters did not change when personnel were switched. This QA Inspector observed the SAW was completed from approximately A-2.2 to A-5 by the end of the shift this date.

12E/13E Longitudinal Stiffener (LS) LS-4: This QA Inspector observed ABF welding personnel Xiao Jian Wan (#2966) was working at this location using the Shielded Metal Arc Welding (SMAW) process. This QA Inspector randomly observed QC Inspector John Pagliero perform and accept the back gouged weld joint on LS-4. This QA Inspector performed a visual verification on the back gouge and the work appeared to comply with the contract requirements. This QA Inspector also verified the minimum preheat temperature of 200°F was being maintained. This QA Inspector observed QC Inspector John Pagliero verify the following Shielded Metal Arc Welding parameters; 133 amperes. This QA Inspector observed an E9018H4R electrode was being used. This QA Inspector observed welding appeared to be completed this date, but it was questionable if enough weld had been deposited to meet the requirements of the Request For Informant (RFI) requiring a 4:1 transition due to excessive planar offset (10 mm). This QA Inspector informed QC Inspector John Pagliero of the observations regarding the transitions.

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.

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Inspected By: Hager, Craig

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer