

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-026533**Date Inspected:** 17-Oct-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Fred Von Hoff**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:

12E/13E weld joint F: This QA Inspector randomly observed ABF welding personnel Jorge Lopez (#6149) using the Flux Cored Arc Welding (FCAW) process for the fill and cover passes from outside the OBG section at this location. This QA Inspector randomly observed QC Inspector Pat Swain verify the following welding parameters after verifying the preheat temperature; 240 amperes and 23.4 volts at a travel speed of 230 mm to produce a heat input value of 1.47 KJ per mm. The welding periodically observed at this location appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-3040B-3. This QA Inspector observed QC Inspector Pat Swain periodically monitoring the work at this location during the shift and observed welding had been completed from outside the OBG at this weld joint.

12E/13E weld joint E-1 and E-2: This QA Inspector randomly observed ABF personnel setting up the FCAW track systems at this location to begin welding, see photo below. This QA Inspector observed the seal/continuous tack welding had been performed prior to the beginning of the shift this date. This QA Inspector observed a track system was being set up for both weld joint E-1 and E-2. This QA Inspector observed the induction heating pads had been positioned on the outside of the weld joint to provide the required minimum preheat of 200°F. This QA

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Inspector randomly observed as QC Inspector Fred Von Hoff verified the following welding parameters; FCAW track system at E-1 with ABF welding personnel Wai Kitlai (#2953) 255 amperes and 24.5 volts at a travel speed of 260 mm per minute to produce a heat input value of 1.44 Kj per mm and FCAW track system at E-2 with ABF welding personnel James Zhen (#6001) 260 amperes and 24.5 volts at a travel speed of 260 mm per minute to produce a heat input value of 1.47 Kj per mm. After welding was started at these locations above ABF welding personnel Jin Pei Wang started using the FCAW process by hand at the end of E-2, adjacent to weld joint D-1, where the track system did not have access and his welding parameters were as follows; 240 amperes and 24.4 volts with a travel speed of 401 mm per minute to produce a heat input value of 0.87 Kj per mm. The welding parameters for ABF welding personnel Jin Pei Wang were verified by QC Inspector Pat Swain. This QA Inspector randomly observed the welding performed and QC Inspector Fred Von Hoff monitoring the work at these locations during the shift. The welding observed appeared to comply with ABF-WPS-D15-3042A-1. By the end of the shift this date this QA Inspector observed the FCAW welding had been completed, except at the following locations; the top 2,000 mm (starting from weld joint F), at the end of E-1 and area approximately 1,000 mm in length separating the two track systems and an area approximately 1,000 mm in length 1,000 mm above the end of the weld joint (from weld joint D). In general the welding observed this date appeared to comply with the contract requirements.

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