

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-026615**Date Inspected:** 28-Oct-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:** 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:

13E/14E – weld joint D-2: This QA Inspector observed ABF welding personnel James Zhen (#6001) setting up to begin welding from the bottom side of the OBG section using the Flux Cored Arc Welding (FCAW) process, see photo below. This QA Inspector observed the induction heat blankets were being used to preheat the base metal, this weld joint requires continuous preheat during welding and a 3 hours post weld heat at a minimum temperature of 200°F. This QA Inspector randomly observed QC Inspector Fred Von Hoff verify the base metal was greater than the minimum preheat with an electronic temperature gauge. This QA Inspector was present when QC Inspector Fred Von Hoff informed ABF welding personnel James Zhen (#6001) that a thin film of rust had formed on the base metal and requested it be removed prior to the start of welding. This QA Inspector randomly observed as ABF personnel used a power wire brush to remove the rust from the weld joint groove. This QA Inspector observed QC Inspector Fred Von Hoff verify the following welding parameters; 280 amperes and 24.6 volts at a travel speed of 228 mm per minute to produce a heat input value of 1.81 KJ per mm. The welding observed appeared to comply with the Welding Procedure Specification (WPS) being used by the QC Inspector; ABF-WPS-D15-3110-4. This QA Inspector observed the root pass had been completed at approximately 0930 hours this date. This QA Inspector randomly observed the welding and QC functions at this location this date.

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This QA Inspector observed QC Inspector Fred Von Hoff monitoring the continuous preheat and welding in progress at various times during the shift. This QA Inspector observed towards the end of the shift the back gouged weld groove had been filled approximately 40 to 45 percent. This QA Inspector confirmed with QC Inspector Fred Von Hoff the induction heating blankets had been positioned over the weld groove, the thermocouples at the applicable spacing and the temperature was greater than 200°F at the end of the shift.

13W/14W – OBG section: This QA Inspector randomly observed the last lift of the project was performed this date and that OBG section 14W appeared to have been set into position for fit up at a later date, see photo below.

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

Reviewed By: Levell,Bill

QA Reviewer