

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-027291**Date Inspected:** 07-Mar-2012**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:** jobsite**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:** SAS project**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 /or monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

Tower Elevation 13-Meters:

This QA Inspector observed ABF welding personnel Danny Ieraci (#3232) and 2 assistant welding personnel setting up equipment at the 13 meter elevation, Partial Joint Penetration (PJP) weld W-101. The heating equipment and a Submerged Arc Welding (SAW) crawler were being positioned to start welding. This QA Inspector observed QC Inspector Fred Von Hoff was present and monitoring the preheating of the base metal prior to the start of welding. At approximately 0820 hours QC Inspector Fred Von Hoff informed ABF welding personnel Danny Ieraci (#3232) and this QA Inspector the preheat temperature was 325°F, which was above the minimum preheat temperature. This QA Inspector randomly observed as the first SAW pass was welded by ABF welding personnel Danny Ieraci (#3232) and QC Inspector Fred Von Hoff verified the amperage, voltage and travel speed; 550 amperes and 32.5 volts at a travel speed of 381 mm per minute. This QA Inspector calculated the heat input to be 2.81 KJ per mm. This QA Inspector reviewed the Welding Procedure Specification (WPS) ABF-WPS-D15-4062-1, being used by QC, and observed the welding parameters and preheat temperature were within the ranges specified. This QA Inspector observed the full length of the weld joint was approximately 2,980 mm long, but due to the proximity of the tower and the size of the SAW crawler the last 700 mm on the North end could not be welded with the SAW unit in the current position. This QA Inspector performed a random visual

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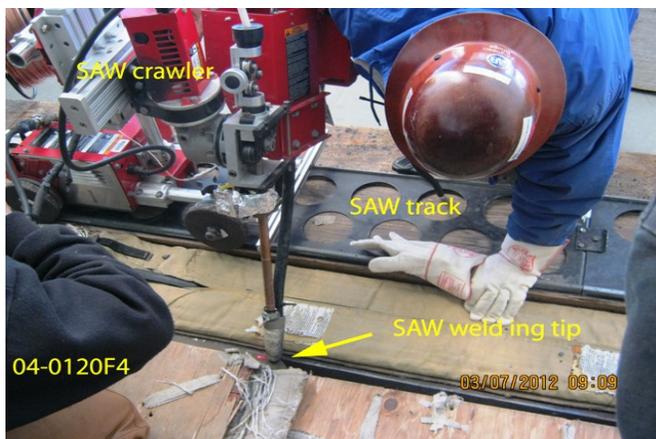
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inspection of the first SAW pass and the work appeared to comply with the contract requirements. This QA Inspector observed ABF welding personnel Danny Ieraci (#3232) completed 2 more weld passes and was then replaced with ABF welding personnel James Zhen (#6001). This QA Inspector observed QC Inspector Fred Von Hoff verify the welding parameters and informed this QA Inspector and ABF welding personnel James Zhen (#6001) they were basically the same as what was noted above. This QA Inspector observed ABF welding personnel James Zhen (#6001) continued the welding until the cover passes were completed on this section of the weld (South end) at approximately 1330 hours.

This QA Inspector observed induction heating blankets and SWA crawler were moved for welding the North end of the weld. This QA Inspector ABF welding personnel Danny Ireaci (#3232) had returned to this location and welded the first 2 passes. This QA Inspector observed ABF welding personnel James Zhen (#6001) then resumed welding and completed approximately 65% of the fill passes by the end of the shift this date. While welding was being performed this QA Inspector verified the filler metal was ESAB Spoolarc 81 and that ESAB -OK10.62 flux was being used. This QA Inspector reviewed the WPS (ABF-WPS-D15-4062-1) and observed these materials were in compliance with the WPS. This QA Inspector was informed the Post Weld Heat Treatment (PWHT) was started at approximately 1700 hours this date and the equipment had been set to hold the temperature (325°F) for 3-hours. See photos below of the SAW in progress at weld joint W-101 this date.

Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) personnel, QC personnel and Caltrans personnel during the shift. Except as described 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
