

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-021770**Date Inspected:** 12-Mar-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:** Tower Grillage**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 was on site between the times noted above.

This QA Inspector was informed the Ultrasonic Testing (UT) for the Complete Joint Penetration (CJP) welds would be a 25% length of each weld by Caltrans Engineer Doug Wright per Caltrans Engineer Mark Woods.

This QA Inspector randomly observed QC Inspector Fred Von Hoff perform visual and Magnetic Particle Testing (MT) on the various Complete Joint Penetration (CJP), Partial Joint Penetration (PJP) and Fillet welds in the South Tower. This QA Inspector observed ABF welding personnel Richard Garcia (#5892) using the Shielded Metal Arc Welding (SMAW) process to fill a low area in weld joint TG-S-P2-P3, marked by QC Inspector Fred Von Hoff. ABF welding personnel Richard Garcia (#5892) continued to work with QC Inspector Fred Von Hoff by grinding various welds marked by the QC Inspector.

This QA Inspector randomly observed QC Inspector Mike Johnson performing UT and was informed this was additional preliminary inspections. This QA Inspector informed QC Inspector Mike Johnson of the welding observed this date at TG-S-P2-P3 and reminded him of the 48 hour waiting period prior to final inspections.

This QA Inspector observed ABF welding personnel Todd Jackson (#4639) moving the preheating equipment and start setting up the equipment on the North Tower leg.

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South Tower leg:

This QA Inspector randomly observed as QC inspections were in process as noted above. QC Inspector Fred Von Hoff stated at the end of the shift this date that he had completed and accepted the visual and MT inspections of the CJP, PJP and Fillet welds.

East Tower leg:

This QA Inspector randomly observed ABF welding personnel Jason Collins (# 8128) performing Shielded Metal Arc Welding (SMAW) to finish welding the last CJP weld. After the CJP welding was completed he set up to begin production welding on the various fillet welds, by the end of the shift it appeared one of the six fillet welds (PF8) had been completed.

West Tower leg:

This QA Inspector randomly observed ABF welding personnel Gilbert Peralta (#9453) and Rick Clayborne (#2733) performing SMAW passes on various PJP welds on outer skins plates A and D. This QA Inspector randomly observed ABF welding personnel Todd Jackson monitoring the preheat equipment and using an electronic temperature gauge to verify the equipment reading. This QA Inspector randomly observed the welding personnel use hand held gas torches to preheat the weld area inside the tower skin plates. This QA Inspector also observed QC Inspector Fred Von Hoff verify the minimum preheat temperature of 350°F at various times throughout the day using an electronic temperature gauge. This QA Inspector observed by early afternoon the PJP welds appeared to have been completed.

This QA Inspector was informed by QC Inspector Fred Von Hoff the welding parameters for the personnel noted above were within the required heat input range in the Welding Procedure Specifications (WPS) ABF-WPS-D15-1162-4 for the PJP welds, ABF-WPS-D15-1042A-4 for CJP welds and ABF-WPS-D15-F1206 for Fillet welds. Note the welding parameters are the same for all three procedures. This QA Inspector randomly observed the amperages and voltages of ABF welding personnel noted above and they appeared to be within the ranges in the WPS. This QA Inspector observed that both 3.2 mm and 4.0 mm diameter E9018H4R electrodes were being used and stored in separate heated storage containers. This QA Inspector also observed the 1-hour exposure limit for the electrodes appeared to be monitored and adhered to.

The welding/work observed this date appeared to comply with the contract requirements.

This QA Inspector had previously received Weekly Welding Report submittal; ABF-Sub-001536 Rev-45. This QA Inspector performed a review of the documents to determine compliance with the Welding Quality Control Plan (WQCP) submitted by the contractor, compliance with the applicable contract requirements and to determine if any Quality Control (QC) documents were missing. This QA Inspector documented the findings on a weld specific tracking log and informed QA Inspector Bill Levell of the findings. This QA Inspector placed the reviewed documents in the applicable files.

Summary of Conversations:

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This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this 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
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Reviewed By:	Levell,Bill	QA Reviewer
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