

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-022155**Date Inspected:** 25-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.

East Tower leg:

Production welding is completed, QC inspections are completed and accepted, QA verification inspections completed.

South Tower leg:

This QA Inspector was informed by QC Inspector Fred Von Hoff he had completed and accepted the visual and Magnetic Particle Testing (MT) of the repair welding on Complete Joint Penetration (CJP) weld joint TG-S-P7-P8.

This QA Inspector randomly observed QC Inspector Mike Johnson performing Ultrasonic Testing (UT) of the repair weld on CJP weld joint TG-S-P7-P8. QC Inspector Mike Johnson informed this QA Inspector the UT inspection was accepted. This QA Inspector performed UT verification and the work appeared to comply with the contract requirements. This completes all QC inspections and QA verifications.

West Tower leg:

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Repair welding was completed at approximately 1300 hours yesterday (3/23/11), final QC inspections on weld joint TG-W-P2-P3 is pending the 48 hour waiting period (1300, 3/25/11). This QA Inspector was informed the final inspections were now scheduled to be completed Monday morning, 3/28/11.

North Tower leg:

This QA Inspector completed the UT verification of the CJP welds and observed an indication in weld joint TG-N-P1-P2, QC Inspector Mike Johnson was present and commented that he wanted to discuss the UT signals observed during his inspection of the weld joint. This QA Inspector was informed that QC Inspector Mike Johnson was now rejecting this weld joint. This QA Inspector randomly observed as QC Inspector Mike Johnson laid out the defects on CJP weld joints; TG-N-P5-P7 and TG-N-P1-P2. This QA Inspector randomly observed ABF welding personnel Gil Peralta (#9453) using the carbon arc process to excavate the defects in the welds noted above. This QA Inspector randomly observed QC Inspector Fred Von Hoff perform a visual and MT on the excavation area of each weld joint. This QA Inspector performed a visual verification of the excavations observing the following: excavation at TG-N-P1-P2 was approximately Y-300 mm, 160 mm long, 35 mm wide and 27 mm deep, excavation at TG-N-P5-P7 was approximately Y-490 mm, 230 mm long, 30 mm wide and 29 mm deep. This QA Inspector randomly observed as ABF welding personnel Gil Peralta (#9453) used a hand held gas torch to preheat the excavation at weld joint TG-N-P5-P7 prior to welding. This QA Inspector verified the preheat temperature to be greater than 200°F with a temperature indicating marker. This QA Inspector randomly observed QC Inspector Fred Von Hoff monitoring the work at this location. This QA Inspector randomly observed as ABF welding personnel Gil Peralta (#9453) completed repair welding at TG-N-P5-P7 and started the repair welding at TG-N-P1-P2. This QA Inspector observed QC Inspector Fred Von Hoff monitoring the work at this location. This QA Inspector observed the welding of both repairs appeared to be completed at approximately 1230 hours this date. QC Inspector Fred Von Hoff informed this QA Inspector he had completed and accepted a preliminary visual inspection of the repair welding. This QA Inspector performed a preliminary visual verification and the work appeared to comply at this time, prior to the 48 hour waiting period.

North and South Suspender Brackets:

Production welding is completed, QC inspections are completed and accepted, QA verification inspections 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.

Summary of Conversations:

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.

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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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