

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-022994**Date Inspected:** 25-Apr-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:** Steve Jensen**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**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.

South Tower leg, Splice at the 83 meter elevation: The upper and lower Interior Corner Closure Splice Plates located at the B- C corner and C-D corner are complete at this location.

West Tower leg, Splice at the 83 meter elevation: This QA Inspector randomly observed the work in progress on the upper and lower Interior Corner Closure Splice Plates located at the B- C corner and C-D corner. During this shift the following was observed.

West - B-C corner, upper and lower plate: This QA Inspector randomly observe QC Inspector Steve Jensen perform a visual inspection on the welding. This QA Inspector observed multiple areas marked for additional welding and/or grinding by QC Inspector Steve Jensen. . This QA Inspector observed several areas where the weld appeared to need additional cleaning to remove slag and/or dark smoke residue prior to performing the final visual inspection. This QA Inspector informed QC Inspector Steve Jensen of this condition and was informed that ABF personnel had tried a long wire length steel brush on the 9-inch grinder, but it found to be difficult to fit into multiple areas. QC Inspector Steve Jensen concurred there were areas that should be cleaned better and that ABF personnel were looking at different solutions for this problem.

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West – C-D corner, lower plate: This QA Inspector observed ABF welding personnel Richard Garcia (#5892) using the Flux Cored Arc Welding (FCAW) process for production welding. This QA Inspector observed QC Inspector Steve Jensen inform ABF welding personnel Richard Garcia of several areas where additional weld was required to correct under fill. This QA Inspector was informed by QC Inspector Steve Jensen of the following welding parameters; 245 amperes and 21.5 volts at a travel speed of 95 mm per minute to produce a heat input of 3.46 KJ per mm. The welding observed by this QA Inspector appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-2200-3. /This QA Inspector observed welding appeared to be completed by approximately 1145 hours this date at this location and the splice plate covered with an induction heat blanket for a 3 hour/300°F post heat.

North Tower leg, Splice at the 83 meter elevation: This QA Inspector randomly observed the work in progress on the upper and lower Interior Corner Closure Splice Plates located at the B- C corner and C-D corner. During this shift the following was observed.

North B-C corner and C-D corner; This QA Inspector observed ABF welding personnel Salvador Sandoval (#2202) using the Flux Cored Arc Welding (FCAW) process for tack welding the upper and lower plates (4) at each corner location. This QA Inspector randomly observed QC Inspector Steve Jensen verify the following welding parameters; 245 amperes and 21.2 volts at a travel speed of 90 mm per minute producing a heat input of 3.46 KJ per mm. The welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-F2200-3. This QA Inspector later observed ABF personnel Todd Jackson removing the various fit up aids.

East Tower leg, Splice at the 83 meter elevation: ABF welding foreman Eric Sparks informed this QA that rain water was running down the tower skin and splice joints therefore work would not be performed in this tower this date.

Elevation 51, South and East Tower legs: This QA Inspector randomly observed the work in progress on the upper and lower Interior Corner Closure Splice Plates located at the B- C corner and C-D corner. During this shift the following was observed.

South Tower leg, elevation 51 meter this QA Inspector randomly observed ABF personnel Ian Murphy using a power grinder to remove the paint from the tower skin, bolted corner plate and splice plates in preparation of laying out the fit up areas for the splice plates at the B-C and C-D corners both upper and lower plates. This QA Inspector observed there was an offset between the bolted corner plate and the tower skin in the C-D corner at the lower splice, see photo below of offset and general location. The offset appeared to be between 3 and 5 mm and the actual gap between the splice plate and tower skin will depend upon exactly where the splice plate is located.

West Tower leg, elevation 51 meter this QA Inspector randomly observed ABF personnel Darcel Jackson and Paul Frambrini using a power grinder to remove the paint from the tower skin, bolted corner plate and splice plates in preparation of laying out the fit up areas for the splice plates at the B-C and C-D corners both upper and lower plates.

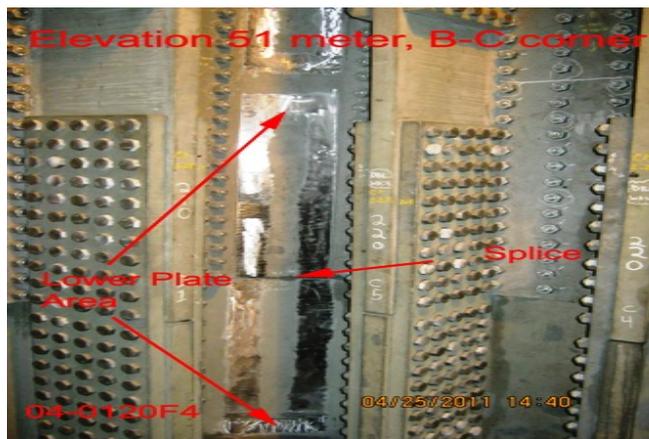
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Tower Base – 3 to 13 Meter elevation; This QA Inspector was informed by ABF welding foreman Eric Sparks that blasting was still being performed and that welding would not be performed at this location this date.

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 below 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
