

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-024046**Date Inspected:** 27-May-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:** SAS Tower**Summary of Items Observed:**

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At Tower East Shaft Splice #1 @ Elevation 50.3 meters:

At Southeast (C-D) corner, upper splice plate; This QA Inspector randomly observed ABF welding personnel Mike Jimenez continuing to perform production welding on the bottom half of the upper splice plate using the self shielded Flux Cored Arc Welding (FCAW) process with 1.8mm diameter E71T-8 wire electrode implementing Caltrans approved (WPS) ABF-WPS-D15-F2200-3. This QA Inspector observed ABF personnel using a propylene gas torch to preheat the plates to be welded prior to welding. This QA Inspector observed QC Inspector Steve Jensen using a Fluke infra red temperature gauge to verify the preheat temperature of more than 300°F. This QA Inspector performed a verification of the welding parameters and observed 230 amperes and 21.0 volts with a travel speed of 80 mm per minute with equivalent heat input of 3.6 KJ per mm. The welding appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-F2200-3. At the end of the shift, 3F fillet welding of the bottom half was still continuing which should remain tomorrow. ABF personnel were noted covering the weld with heater blanket in preparation for the three hours holding of preheat temperature of more than 300°F as required. ABF personnel were using Miller Proheat 35 Induction Heating System to hold the preheat that was programmed to shut off after three hours. The work shift today was cut short to five (5) hours due to barbeque party given by ABF for the welders.

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At Tower East Shaft Splice #1 @Elevation 50.3meters:

At East (B-C) corner, upper splice plate; This QA Inspector randomly observed ABF welding personnel Salvador Sandoval continuing to perform production welding on the top half of the upper splice plate using the self shielded Flux Cored Arc Welding (FCAW) process with 1.8mm diameter E71T-8 wire electrode implementing Caltrans approved (WPS) ABF-WPS-D15-F2200-3. This QA Inspector observed ABF personnel using a propylene gas torch to preheat the plates to be welded prior to welding. This QA Inspector observed QC Inspector Steve Jensen using a Fluke infra red temperature gauge to verify the preheat temperature of more than 300°F. This QA Inspector performed a verification of the welding parameters and observed 350 amperes and 24.5 volts during welding of the top (2F) of the plate. After the welding completion of the horizontal fillet at the top of the plate, the welder has moved to the sides of the same splice top half of the same corner location and performed 3F FCAW fillet welding until the end of the shift. ABF personnel were noted covering the weld with heater blanket in preparation for the three hours holding of preheat temperature of more than 300°F as required. ABF personnel were using Miller Proheat 35 Induction Heating System to hold the preheat that was programmed to shut off after three hours. The work shift today was cut short to five (5) hours due to barbeque party given by ABF for the welders.

At Tower South Shaft Splice #3 @Elevation 114 meters:

At Tower South Shaft South (C-D) corner, upper splice plates, ABF welder Xiao Jian Wan was observed continuing tack welding splice plates to the interior corner closure plate. The welder was noted using self shielded Flux Cored Arc Welding (FCAW) with 1.8mm diameter E71T-8 wire electrode implementing Caltrans approved (WPS) ABF-WPS-D15-F2200-3. This QA Inspector observed ABF personnel using a propylene gas torch preheating the plates to be welded prior to welding. This QA Inspector observed QC Inspector Steve Jensen using a Fluke infra red temperature gauge to verify the preheat temperature of more than 300°F. At the end of the shift, tack welding of the splice plate to interior corner closure plate was completed.



## Summary of Conversations:

The work shift today was cut short to five (5) hours due to barbeque party given by ABF for the welders.

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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 SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Lizardo, Joselito	Quality Assurance Inspector
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<b>Reviewed By:</b>	Levell, Bill	QA Reviewer
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