

**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:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027206**Date Inspected:** 13-Feb-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:** 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 OBG**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 the Tower Base, ABF welder Wai Kitlai was observed performing tack welding of backing bar for the Partial Joint Penetration (PJP) of the 13 meters diaphragm plates to tower shear plates. The welder was observed welding in the 2F (horizontal) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1160. The welder was noted preheating the plates to more than 150 degrees Fahrenheit using propane gas torch. Since the joints were PJP it was not required to have the backing bar continuous. The tack welding of the backing was monitored by ABF QC Steve Jensen. While the welder was tack welding the backing bar to the 13 meters diaphragm plates, this QA together with QC Steve Jensen measured the alignment of the diaphragm plates with respect to the shear plates. The following measurements were noted;

Measured alignment between diaphragm plates and top of shear plates in millimeters:

Joint Loc. 1 2 3 4 5 Remarks

W109 -8.5 -11 -12 -11 -11 Measured from North to South

W108 -5 -3 -1 +4 +11.5 Measured from North to South

W107 -6 -1 +2 +5 +7 Measured from North to South

W106 0 +7.5 +10 +10 +9.5 Measured from North to South

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W105	+3 +7 +13 +12 +12	Measured from North to South
W104	-3 +3 +4 +6 +10.5	Measured from North to South
W103	-6 -5.5 -5 -2 -1	Measured from North to South
W101	-2.5 -6 -6 -6 -2	Measured from North to South
W114	+4 +4.5 +5 +5 +3	Measured from West to East
W115	+5 +1 0 +1 +2	Measured from West to East
W113	0 +13 +15 +14.5 +4	Measured from West to East
W112	+6 +3 +6.5 +8 +1	Measured from West to East

The minus sign (-) denotes that the diaphragm plate is lower than the top of shear plate while the positive sign (+) denotes that the diaphragm plate is higher than the top of the shear plate.

FW Spencer:

At location Panel Point PP60 of OBG grid line W2, FW Spender welder Damian Llanos was observed performing 6G (all position) Shielded Metal Arc Welding (SMAW) welding root pass to cover pass on the 2" weldolet branch of the 4" compressed air line. The welder was noted welding the root pass with 3/32" diameter E6010 electrode and followed by fill pass to cover pass using 3/32" diameter E7018H4R electrode implementing Caltrans approved procedure FW Spencer WPS 1-12-1. The welder was noted preheating and removing the moisture of the joint using a portable propane gas torch prior welding. During welding, ABF QC Steve Jensen was noted monitoring the parameters of the welder. At around 9:00 in the morning, the rain shower was more persistent and the welder decided to shut down their job and went home.



## Summary of Conversations:

No significant conversation occurred today.

## 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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