

**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-028643**Date Inspected:** 23-Oct-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

<b>CWI Name:</b>	William Sherwood and Steve Jensen			<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>	
<b>Inspected CWI report:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
				<b>Delayed / Cancelled:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Bridge No:</b>	34-0006			<b>Component:</b>	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 OBG 12E-E2.1-C corner drop-in side plate outside, QA randomly observed ABF/JV qualified welder Ric Chouinard continuing to perform CJP groove welding repair at location Y=4000mm to Y=5000mm with excavation profile of 1000mm long x 60mm wide x 10mm deep. The repair welding is being performed per Caltrans approved Request for Weld Repair (RWR) #201210-013. The welder was observed manually welding in the 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1004 Repair. The second time repair excavation was preheated to more than 225 degree Fahrenheit using Miller Proheat 35 Induction Heating System with the heater blanket put in place on top of the side plate prior excavation. During the shift, ABF QC William Sherwood was noted monitoring the welder with measured working current of 136 amperes on the 3.2mm E7018H4R electrode and adjusted preheat temperature of 325°F during welding. During the shift, welder has completed the welding repair mentioned above and performed the Post Weld Heat Treatment (PWHT) of 450°F and held it for one (1) hour after welding as required. After the completion of the bake out of the just concluded repair, the same welder has moved to another location of the same side plate Y=1000mm. This repair location has the same RWR approval and the welder has implemented the same WPS as mentioned above. The excavation profile of the repair was 900mm long x 60mm wide x 10mm deep. The welder performed the repair welding until the end of the shift wherein he was not able to complete the repair on the area. The welder performed the Post Weld Heat Treatment using the same Miller Proheat 35 Induction System and held it for one hour as required.

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At OBG 5E-PP-29.5-E5 deck access hole outside, QA randomly observed ABF/JV qualified welder Lou Xiao Hua continuing to perform CJP groove welding repair. The welder was observed welding in the 1G (flat) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1001-Repairs. The repair excavation was preheated to more than 150 degree Fahrenheit using propane gas torch prior welding. During the shift, ABF QC Barry Drake was noted monitoring the welder. The following second time repairs were noted excavated and welded during the shift;

Y-location   Length   Width   Depth   Remarks

1. 635mm      130mm      40mm 11mm R2 – completed.
2. 3510mm      80mm      36mm 12mm R2 – completed.

FW Spencer:

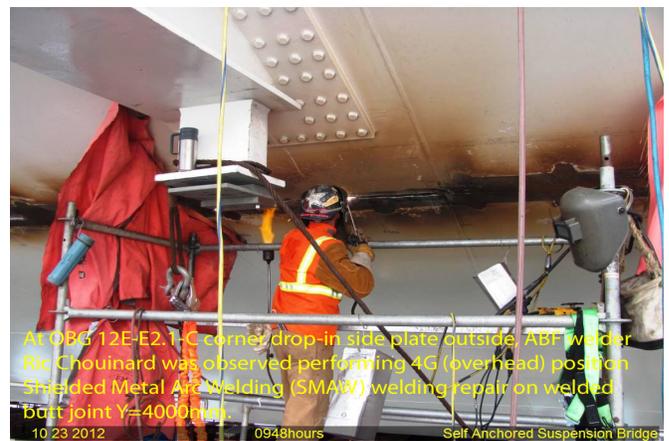
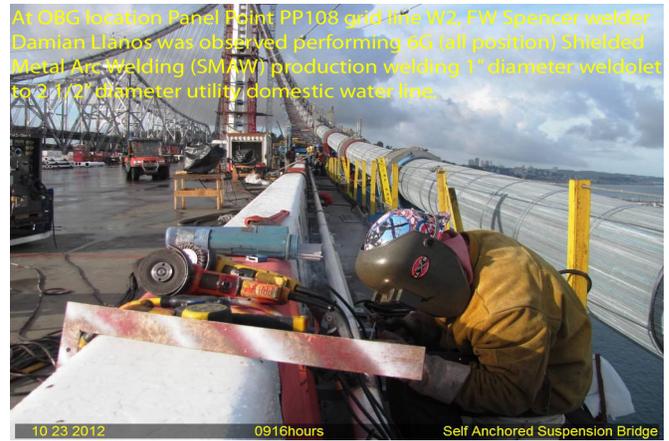
At OBG location Panel Point PP108 through PP110 NW and PP15.5 to PP16.5 Bike path East, this QA randomly observed FW Spencer qualified welder Damian Llanos continuing to perform Complete Joint Penetration (CJP) 6G (all position) Shielded Metal Arc Welding (SMAW) welding root pass to cover pass on 1" diameter weldolet to 2 1/2" diameter domestic utility water line and 2" diameter weldolet to 4" diameter compressed air utility 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 the end of the FW Spencer shift, CJP welding on four (2) 1" weldolet to 2 1/2" diameter utility water line and (2) 2" weldolet to 4" diameter utility compressed air line was completed.

Line Service Weldolet/Pipe Size Panel Point Location Joint Designation

1 Domestic Water	1"	108 Northwest 1/DW1/108/NW
2 Domestic Water	1"	110 Northwest 1/DW1/110/NW
3 Compressed Air	2"	15.5 Bikepath 1/CA2/15.5/BE
4 Compressed Air	2"	16.5 Bikepath 1/CA2/16.5/BE

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## 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 Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

**Inspected By:** Lizardo, Joselito

Quality Assurance Inspector

**Reviewed By:** Reyes, Danny

QA Reviewer