

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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-028373**Date Inspected:** 10-Sep-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

<b>CWI Name:</b>	William Sherwood and Barry Drake			<b>CWI Present:</b>	Yes	No	
<b>Inspected CWI report:</b>	Yes	No	N/A	<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A	<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A	<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A	<b>Approved WPS:</b>	Yes	No	N/A
				<b>Delayed / Cancelled:</b>	Yes	No	N/A
<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-PP111.1-C1 drop-in side plate outside, QA randomly observed ABF/JV qualified welder Rick Clayborn continuing to perform CJP groove welding repair on a Seismic Performance Critical Member (SPCM) due to Ultrasonic Testing (UT) detected defect on welded splice butt joint. The welder was given approval to excavate two (2) repairs per Caltrans approved Request for Weld Repair (RWR) #201209-067 and #201209-068. The welder preheated the repair area and its vicinity to >225°F using propylene gas torch prior excavation and then ground smooth the groove of the excavation. After its completion, ABF QC William Sherwood performed Magnetic Particle Testing (MT) on the removal of the defects with no relevant defect noted during the test.

The welder was noted using propylene gas torch to preheat the repair area and its vicinity to 325°F and as soon as the required temperature was attained the welder started performing the welding repair. Welder Rick Clayborn was observed manually welding in 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. Welder Rick Clayborn was noted welding repair at Y=470mm having boat shape excavation profile of 70mm long x 55mm wide x 11mm deep and Y=1990mm having boat shape excavation profile of 70mm long x 20mm wide x 10mm deep. During welding, ABF QC William Sherwood was noted monitoring the welder's welding parameter with measured working current of 126 amperes on the 3.2mm diameter E7018H4R electrode. After the welding completion, the welder performed the Post Weld Heat Treatment (PWHT) of 450°F using propylene gas torch and

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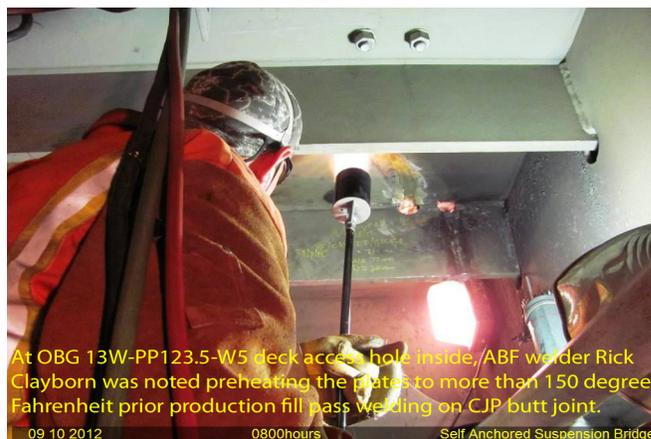
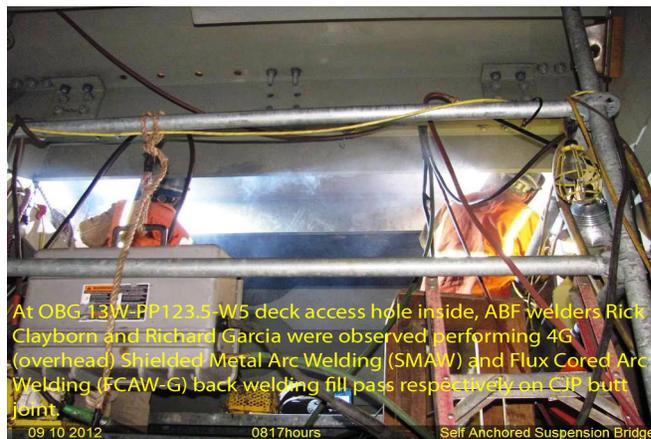
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held it for one hour as required. The welder has moved to OBG 13W-PP123.5-W5 deck access hole.

Welder Rick Clayborn has completed from outside the repairs listed below;

Y-location	Length	Width	Depth	RWR#	Remarks
1.	470mm	70mm	55mm	11mm	201209-067 Completed.
2.	1990mm	70mm	20mm	10mm	201209-068 Completed.

At OBG 13W-PP123.5-W5 deck access hole inside, QA randomly observed ABF/JV qualified welders Richard Garcia and Rick Clayborn simultaneously perform production fill pass to cover pass back welding on the Complete Joint Penetration (CJP) butt joint. The welders were observed manually welding in the 4G (overhead) position utilizing dual shielded Flux Cored Arc Welding (FCAW-G) and Shielded Metal Arc Welding (SMAW) respectively. ABF welder Richard Garcia was noted using E71T-1M, 1.6mm diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3110-4 while ABF welder Rick Clayborn was using 3.2mm diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1110A Revision 1. Using propylene gas torch, the welders preheated the plates to more than 150°F prior welding. ABF Quality Control (QC) Barry Drake was noted monitoring the welding parameters of the welders with measured working current of 250 amperes and working voltage of 23.4 volts for Richard Garcia and 134 amperes for Rick Clayborn. At the end of the shift, SMAW and FCAW-G fill pass to cover pass welding was completed.



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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.

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

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