

**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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018431**Date Inspected:** 02-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1830**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

<b>CWI Name:</b>	Steven Mc Connell and William SCAW Present:			<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>	Orthotropic Box Girder	

**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 7W/8W top deck plate 'A2' outside, QA randomly observed ABF/JV qualified welder Wai Kitlai perform CJP groove welding repair number 4. The welder was observed welding in the 1G (flat) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1001-Repairs. The repair excavation located at A2 Y-dimension 4880mm and having excavation profile of 360mm long x 25mm wide x 14mm deep was preheated to more than 140 degree Fahrenheit using propane gas torch prior welding. Prior welding, ABF QC Steven Mc Connell was observed performing Magnetic Particle Testing (MT) on the boat shape repair excavation. During the shift, ABF QC Mc Connell was noted monitoring the welder and his welding parameters. Repair welding at location mentioned above was completed at the end of the shift.

At OBG 7W/8W side plate 'C' (1000mm to 3200mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continuing to perform CJP groove welding cover pass on the splice butt joint. The welder was observed welding in the 3G (vertical) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3042B-1. The joint being welded has a single V-groove butt joint with backing bar. During the FCAW welding, the splice joint was preheated and maintained to greater than 150 degrees Fahrenheit using Miller Proheat 35 Induction Heating System heater blankets located at the opposite side

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of the plate prior/during welding. ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welder. During the shift, cover pass FCAW welding was completed and the welder has moved to 0mm to 1000mm and welded the area using the SMAW due to limited access of the track mounted Bug-o FCAW nozzle holder. At the end of the shift, fill pass welding of the splice joint at location mentioned above was still continuing and should remain tomorrow.

At OBG 8W/9W top deck plate 'A1 to A5' outside, ABF QC Salvador Merino was noted performing Magnetic Particle Testing (MT) on the flush ground weld cover reinforcement of the splice butt joint. The ABF QC was using a Parker Contour Probe electromagnetic yoke. At the end of the QC MT test, QC informed QA that he found no defects during the test.

At OBG 8W/9W top deck plate 'A' outside, this QA performed 10% MT verification on the welded splice butt joint. QA was using Parker Contour Probe Model DA 400 electromagnetic yoke. QA found no defects during the verification and this should confirm the test performed by QC. Please see TL-6028 report for more information.



## Summary of Conversations:

No significant conversation 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

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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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