

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-015237**Date Inspected:** 28-Jun-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>	Jim Cunningham and Bernie Docena			<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>	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 L4E/L5E side plate 'C' (9855mm to 10555mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continue perform CJP groove (splice) welding root then fill pass on the splice butt joint.

The welder was observed perform manual welding in the 3G (vertical) position utilizing a Shielded Arc Metal Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040B. The joint being welded has a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 70 degree Fahrenheit using Miller Proheat 35 Induction Heating System located at the opposite side of the plate prior/during welding. During welding, ABF Quality Control (QC) Bernie Docena was noted monitoring the welding parameters of the welder. At the end of the shift, welding of the fill passes on the splice butt joint was not completed and should continue tomorrow.

QA randomly observed ABF/JV qualified welder Mitch Sittinger perform CJP groove (splice) welding fill to cover pass on Orthotropic Box Girder (OBG) L4E/L5E side plate 'E' inside near the corner of 'D' plate. The welder was observed welding around 6 inches long weld in the 3G (vertical) position utilizing a Shielded Arc Metal Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040B. During welding, ABF Quality Control (QC) Jim Cunningham was noted monitoring the welding parameters of the welder. During the shift, the partial cover pass

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## WELDING INSPECTION REPORT

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welding of the splice butt joint back weld was completed. After the welding completion of the partial length from the inside, QA noted the welder moved to the outside location of the same splice joint and started plasma arc gouging the just welded joint. At the end of the shift, gouging of the welded joint from the inside was still in progress and should continue tomorrow.

At OBG L2W/L3W side plate 'C2' inside, QA randomly observed ABF/JV qualified welder James Zhen perform CJP groove welding repair. The welder was observed welding in the 3G (vertical) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repairs. The repair excavations were preheated to more than 140 degree Fahrenheit using propane gas torch prior welding. During the shift, ABF QC Tom Pasqualone was noted monitoring the welder. Prior welding, ABF QC Tom Pasqualone was also observed performing Magnetic Particle Testing (MT) using Parker Contour Probe with red magnetic powder as detecting media on the repair excavation. There were no significant defects noted during the test. During the shift, the welder has completed four repairs from the inside of the splice joint.

At L3E/L4E bottom plate 'D' inside, QA randomly observed ABF QC Jesse Cayabyab perform Ultrasonic Testing (UT) on the welded splice butt joint. QC has started the UT on the joint but was not able to complete due to the generator's breakdown that shortened the work hours today from ten to eight.

### Summary of Conversations:

During the shift, ABF QC Tom Pasqualone has informed QA that welder James Zhen has completed four welding repairs on the splice butt joint of L2W/L3W side plate 'C'. Per Tom Pasqualone, this should complete all the repairs on this joint and he intends to perform the Ultrasonic Testing (UT) of the repairs tomorrow after the 24 hours cooling period.

### 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 Mohammad Fatemi (916) 227-5298, 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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