

**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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017428**Date Inspected:** 12-Oct-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>	John Pagliero and Jesse Cayabyab			<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>	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 bottom plate 'D' inside, QA randomly observed ABF certified welder James Zhen ID #6001 continuing to perform 1G (flat position) Submerged Arc Welding (SAW) welding fill pass then cover pass on the CJP splice butt joint. The welder was utilizing F7A6-EM12K-H8, 3.2mm electrode with corresponding Esab OK Flux 10.62 flux and implementing Caltrans approved Welding Procedure Specification (WPS)

ABF-WPS-D15-4042B-1. The joint being welded had a single V-groove butt joint with backing bar. The plates were preheated to more than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System heater blankets located at the opposite side of the plate prior/during welding. Welding parameters were monitored by ABF/QC John Pagliero. QA noted the welding parameters, the workmanship and appearance of the completed fill/cover pass deemed satisfactory. At the end of the shift, SAW cover pass welding on the splice butt joint was completed except the north and south ends wherein the SAW track mounted wire feeder has limited access.

At OBG 6W/7W side plate 'E1' (7955mm to 9855mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continuing to perform CJP groove (splice) welding fill pass to cover pass on the splice butt joint. The welder was observed perform automatic 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-D15-3042A-1. The joint being welded had a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 150 degrees

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Fahrenheit using Miller Proheat 35 Induction Heating System heater blankets located at the opposite side of the plate prior/during welding. During welding, ABF Quality Control (QC) John Pagliero was noted monitoring the welding parameters of the welder. During the shift, welding of the weld cover reinforcement on the splice butt joint was completed and the welder has moved to 9855mm to 10555mm location wherein he manually welded the joint. The welder has also used the same process and procedure mentioned above. At the end of the shift, this location was still continuing and should remain tomorrow.

At OBG 4W/5W bottom plate 'D' inside, QA randomly observed ABF/JV qualified welder Fred Kaddu ID # 2188 perform CJP groove welding repair. 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-D15-1000-Repairs. The repair was located at Y dimension 3975mm and was having a repair excavation dimension of 275mm long x 26mm wide x 13mm deep. The repair excavation was preheated to more than 140 degree Fahrenheit using propane gas torch prior welding. During the shift, ABF QC Jesse Cayabyab was noted monitoring the welder. Prior welding, ABF QC Jesse Cayabyab 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. Before the end of the shift, welding repair at this location was completed and visually accepted by ABF QC.



## Summary of Conversations:

At OBG 7W/8W top deck plate 'A' outside, the splice butt joint was noted idle. There was limited activity except for SAW wire feeder track preparation. According to ABF Superintendent Dan Ieraci, ABF intends to start Submerged Arc Welding the splice joint tomorrow.

## 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) 813-3677, who represents the Office of Structural Materials for your project.

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**Inspected By:** Lizardo, Joselito

Quality Assurance Inspector

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**Reviewed By:**      Levell,Bill

QA Reviewer