

**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-016705**Date Inspected:** 10-Sep-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**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>	Jesse Cayabyab and John Pagliero			<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 6E/7E top deck plate A1 to A5, QA randomly observed two ABF certified welders Bryce Howell ID #5591 and Mike Maday ID #3391 perform 1G (flat position) Submerged Arc Welding (SAW). The welders were 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 two welders were welding simultaneously in two separate locations (A1 to A3 and A3 to A5) with two separate welding machines. 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 located on top of the plate prior welding and maintained the preheat by moving the heater blankets on the side of the plate during welding. Welding parameters were monitored by two separate ABF/QC Steven Mc Connell (for Mike Maday) and Jesse Cayabyab (for Bryce Howell). QA noted the welding parameters, the workmanship and appearances of the completed fill passes satisfactory and were deemed acceptable to contract requirements. At the end of the shift, SAW welding was still continuing and should continue tomorrow.

At OBG 6E/7E bottom plate 'D', QA randomly observed ABF certified welders James Zhen ID #6001 and Songtao, Huang ID #3794 perform 1G (flat position) Submerged Arc Welding (SAW). The welders were 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

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V-groove butt joint with backing bar. The plates were preheated to more than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System 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 appearances of the completed fill and cover passes satisfactory and were deemed acceptable to contract requirements. At the end of the shift, SAW welding was completed on most of the splice butt joint except at north end (600mm) and south end (1000mm) wherein the Lincoln Electric feeder track has limited access to both ends. According to QC John Pagliero, the welders will perform manual welding on those two locations tomorrow.

At OBG 1E/2E top deck 'A' inside, QA observed three ABF welders grinding separately the back gouging of the welded infill plates from the top at the following locations; 1E-PP11@e3#1, 1E-PP8.5@E3#3 and 1E-PP9.5@E4#3. At the end of the shift, grinding was still continuing and no welding was performed.

At OBG 1E/2E top deck plate 'A' south side (PP10 – PP11), QA observed two ABF personnel performing grinding/beveling to 30 degree the top deck manhole cover and the top deck manhole edges in preparation for the single V butt joint to be welded. The welder Fred Kaddu and the other personnel were using disc grinder to make the 30 degree bevel and were also noted using a bridge cam gauge to measure the bevel angle while grinding. During the shift, grinding/beveling to 30 degrees the edges of the cover and the hole was completed and was noted proceeding to fit up the joint.

At OBG 6E/7E top deck plate 'A' outside, surface profile of the SAW welding being performed at the splice butt joint.



09-10-2010 1344Hrs. Self Anchored Suspension (SAS) Bridge

At OBG 6E/7E bottom plate 'D' inside, ABF welder Mike Maday was noted performing Submerged Arc Welding (SAW) on the splice butt joint. The welder was using Lincoln Electric track mounted feeder.



09-10-2010 1150Hrs. Self Anchored Suspension (SAS) Bridge

At OBG 6E/7E bottom plate 'D' inside, ABF welders James Zhen and Songtao, Huang were noted performing Submerged Arc Welding (SAW) on the splice butt joint.



09-10-2010 1149Hrs. Self Anchored Suspension (SAS) Bridge

At OBG 1W top deck plate 'A' outside, ABF welder Fred Kaddu was observed grinding/beveling the edges of the manhole cover to 30 degrees in preparation for the CJP welding of the joint.



09-10-2010 1329Hrs. Self Anchored Suspension (SAS) Bridge

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**Summary of Conversations:**

1. During conversation with ABF QC Bonifacio Daquinag, he mentioned to QA that ABF superintendent Dan Ieraci has pulled out all welders performing the 3G splice welding and buttering of all the longitudinal stiffeners being welded at OBG east and west for unknown reason.

2. Working hours for the ABF personnel were cut short to eight hours 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 Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials 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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