

**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-015956**Date Inspected:** 29-Jul-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**CWI Name:** William Sherwood**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** 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 L5E/L6E side plate 'E' (5940mm to 8110mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continuing to perform CJP groove (splice) welding fill pass on the splice butt joint. The welder was observed performing 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-D15-3042B-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 Fahrenheit using Miller Proheat 35 Induction Heating System located at the opposite side of the plate prior/during welding. ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welder. During the shift, fill pass welding of the splice joint at location mentioned above was not completed and should continue tomorrow.

At OBG 5E/6E edge plate 'F' inside, ABF welder Hua Qiang Hwang was noted air arc gouging on the edge plate backing bar removal of the splice butt joint. During the shift, welder Hua Qiang Hwang has not completed the air arc gouging and should remain tomorrow.

At OBG 4E/5E side plate 'C' outside, plasma arc gouging on the backing bar removal of the splice joint was seen completed. After the gouging completion, ABF personnel were seen removing their plasma arc gouging machine

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and the Bug-o track for the nozzle holder. The personnel were noted getting ready to grind the groove of the gouged surface. Also at the other side of the same OBG side plate 'E' outside, grinding of the groove gouged surface of the backing bar removal was seen completed. The profile was having a width of 30mm and depth of 8-10mm. The profile of the ground surface deemed satisfactory. It is now awaiting QC's visual test (VT) and Magnetic Particle Testing (MT) on the ground groove surface so overhead welding could proceed.

At OBG 5E/6E side plate 'E' outside, QA observed the removal of the fitting gear/temporary attachment was completed. After the removal of the temporary attachment, same ABF personnel were seen grinding the plate where the attachments were welded.



## Summary of Conversations:

At OBG 4W/5W side plate 'E' inside, it was previously reported that there was a 4mm misalignment on the fit up of the splice butt joint. Today, QA noted that the reported misalignment was fixed by welding additional fitting gear and pushing insert rod against the fitting gear and plate of the affected area. When measured, the misalignment came down to acceptable reading of 2mm.



## 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

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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
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<b>Reviewed By:</b>	Levell, Bill	QA Reviewer
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