

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-018409**Date Inspected:** 29-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See below**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:** SAS OBG**Summary of Items Observed:**

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified as 8W/9W-A1-A5 and the following observations were made:

**8W/9W-A1-A5**

Upon the arrival of the QA Inspector at the above identified location it was observed the above identified weld joint appeared to be tack welded 100% on both sides of the steel backing bar. The QA Inspector noted the shielded metal arc welding (SMAW) tack welds or seal passes had been previously completed on 11-24-10 prior to the holiday break. The QA Inspector noted the induction heat blankets were in place and the weld joint was maintained at 200°F. The QA Inspector verified the temperature with a temperature indicating marker. The QA Inspector noted the contractor had the submerged arc welding tracks and machines set up and ready to deposit the SAW root pass and subsequent weld passes. The QA Inspector performed a random visual inspection of the weld joint to ensure the fit up and the condition of the full length tack welds were still in compliance with the contract requirements, after a four day break. The QA Inspector noted the weld joint appeared to be in general compliance with the contract requirements.

**A3-A5**

The QA Inspector randomly observed the ABF Welding Superintendent Dan Ieraci began performing SAW root pass in the center of A3 and weld to the end of section A5. The QA Inspector randomly observed the SAW parameters and they were 570 Amps, 32.5Volts and a travel speed of 385mm/min. The QA Inspector noted the SAW parameters appeared to be in general compliance with ABF-WPS-D1.5-4042B-1. The QA Inspector noted

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the ABF welder did not complete the SAW on this date.

## A3-A1

The QA Inspector randomly observed the ABF welding operator James Zhen began performing SAW root pass in the center of A3 and weld to the end of section A1. The QA Inspector randomly observed the SAW parameters and they were 560 Amps, 32.5Volts and a travel speed of 390mm/min. The QA Inspector noted the SAW parameters appeared to be in general compliance with ABF-WPS-D1.5-4042B-1. The QA Inspector noted the ABF welder did not complete the SAW on this date.

The QA Inspector spent the remainder of the shift coordinating and assisting in performing dimensional measurements of the areas of the "A" deck weld joint that had burn through previously. As per the Structures Material Representative Patrick Lowry, the QA Inspectors Scott Croff, Craig Hager, Danny Reyes , Jojo Lizardo and the Lead QA Inspector Rick Bettencourt identified areas of burn through and performed ultrasonic testing of the plate thickness. The QA Inspector noted the QA Inspectors identified the areas of burn through utilizing incident reports and the contractor's non conformance reports in an attempt to locate the burn through. The QA Inspector noted after the areas were identified, the QA Inspectors Scott Croff, Rick Bettencourt and Jojo Lizardo gathered the "Y" dimensions from under the top deck plate and transferred them to the top side of the "A" deck. After the "Y" dimensions were transferred to the top deck the QA Inspectors Danny Reyes and Craig Hager performed ultrasonic testing to determine if the areas where burn through was noted, had any loss of deck plate base material thickness. After the inspections and testing was completed the QA Inspector noted no material loss or plate thickness was noted. For additional information see TL-6027 for this date generated by the Caltrans QA Inspector Craig Hager.

## Summary of Conversations:

The QA Task Lead Inspector Bill Levell informed the Lead QA Inspector the SMR Patrick Lowry needed the results of the ultrasonic testing survey identified above by 1100. The Lead QA Inspector informed the Mr. Levell all available QA Inspectors were assisting in completing the survey in a timely fashion.

## 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 Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Bettencourt,Rick	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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