

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:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026612**Date Inspected:** 01-Nov-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** On Site**CWI Name:** Pat Swain**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:** OBG Segments**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Art Peterson arrived on site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor the welding operations performed by American Bridge Fluor (ABF) welding personnel. The following observations were:

OBG Bottom Plate Section "D2" on Segment 13W ~ 14W:

This QA Inspector along with QC Inspector Mr. Pat Swain performed the preliminary planar offset measurements on the inside of OBG Bottom Plate "D2" plate section at OBG Segment 13W ~ 14W field splice. This inspection is part of a joint inspection agreed upon between Caltrans and ABF. The preliminary planar offset measurements were recorded on the bottom plate for review by Caltrans Lead Inspector Mr. Danny Reyes prior to performing the final planar offset measurements. Except on the South side of the full height diaphragm at location W3 (offset measured 3.5 mm), the planar offset measurement readings appeared to be in general compliance with the contract specifications.

This QA Inspector randomly observed ABF welders' Mr. James Zhen (Welder ID 6001), Mr. Xiao Jian Wan (Welder ID 9667), and Mr. Wai Kitlai (Welder ID 2953) positioning the heat induction blankets for preheating on the outside of OBG Bottom Plate "D2" plate section in preparation to performing the Flux Cored Arc Welding (FCAW) process seal weld root pass in the (2G) horizontal position on the inside of "D2" plate. Afterwards, this QA Inspector observed QC Inspector Mr. Pat Swain verify prior to the start of welding that the welding parameters for the aforementioned welders were in accordance with WPS-3200-2. This QA Inspector also verified that the preheat temperature of the groove weld and surrounding base metal was at the minimum preheat temperature of

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200 degrees F. The seal weld root pass was completed on the inside of OBG Bottom Plate "D2" section at the field splice of OBG Segment 13W ~ 14W.

OBG Deck Plate Section "A2 ~ A5" on Segment 13W ~ 14W:

This QA Inspector along with QC Inspector Mr. Junior Daquinag performed the preliminary planar offset measurements on the outside of OBG Deck Plate "A2 ~ A5" section at OBG Segment 13W ~ 14W field splice. This inspection is part of a joint inspection agreed upon between Caltrans and ABF. The preliminary planar offset measurements were recorded on the deck plate for review by Caltrans Lead Inspector Mr. Danny Reyes prior to performing the final planar offset measurements. There were several areas inspected along the length of the Deck Plate "A2 ~ A5" that were outside the tolerance allowed for the planar offset. This QA Inspector observed ABF welder Mr. Rick Clayborn proceed to perform the fillet weld operation per the Shielded Metal Arc Weld (SMAW) process in the (2F) horizontal position on "Blank" nuts located across the field weld splice to fit the "Key" plate over the nuts and thereafter drive the bull pins through blank nuts and utilize the "Key" plate" to pull down one side of the deck plate across the field weld splice to reduce the planar offset values and try to bring the values into compliance. This QA Inspector also observed that "U" bars were also used as needed on areas where the "Key" plate was located and the planar offset values were still outside of the specified offset tolerance. The thickness of the Deck Plate at this field weld splice location was 20 mm. This QA Inspector observed QC Inspector Mr. Junior Daquinag verify prior to the start of the fillet weld operation that the welding parameters (Amps, Volts, and Travel Speed) and preheat temperature were in accordance with WPS -F1200A. This QA Inspector verified that the 7018M electrodes being used to perform the fillet weld operation were stored and removed from a heated quiver. The planar offset inspection performed by QC Inspector Mr. Junior Daquinag was in-process at the end of the QA Inspectors' shift.

OBG Bottom Plate Section 12W ~ 13W:

This QA Inspector randomly observed ABF Welder Mr. Jeremy Dolman performing the back-gouge operation on OBG Bottom "D" plate section 12W ~ 13W per the plasma arc process to back-gouge the weld to sound metal in preparation to weld the second side of the double groove weld. The plasma-arc gouging process was in-process at the end of this QA Inspectors' shift.



Summary of Conversations:

No significant conversations were reportable on this date.

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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.

Inspected By:	Peterson, Art	Quality Assurance Inspector
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Reviewed By:	Levell, Bill	QA Reviewer
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