

**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 #: 1x.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026614**Date Inspected:** 02-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 randomly observed ABF welder Mr. James Zhen (Welder ID 6001) preparing to perform the fill pass weld operation per the Submerged Arc Welding (SAW) process in the (1G) position on the inside of OBG Bottom Plate "D2" plate section. This QA Inspector observed QC Inspector Mr. Pat Swain verify prior to the start of welding that the welding parameters were in accordance with WPS#4042B-1. This QA Inspector also verified that the preheat temperature of the groove weld and surrounding base metal were at the minimum preheat temperature of 200 degrees F. During that time, the welding operation was suspended by ABF management due to an alignment issue with Segment 14W and Crossbeam (CB) 19. The welding operation resumed at 1430 hours and this QA Inspector verified prior to the start of the fill pass weld operation that the preheat temperature of the groove weld and surrounding base metal were at the minimum preheat temperature of 150 degrees F. The fill pass welding operation was still in-process at the end of this QA Inspectors' shift on the inside of OBG Bottom Plate "D2" section at the field splice location of OBG Segment 13W ~ 14W.

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

This QA Inspector along with Caltrans Lead Inspector Mr. Danny Reyes and QC Lead Inspector Mr. Junior Daquinag performed the final planar offset measurements on OBG Deck Plate "A2 ~ A5" section at OBG Segment

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field weld splice location 13W ~ 14W. The inspection is part of a joint inspection agreed upon between Caltrans and ABF. The locations where the offset measurements were out of the specified tolerance of 2 mm were mapped out and recorded by QC Lead Inspector Mr. Junior Daquinag on a document and submitted to ABF QA Manager Mr. Jim Bowers for review and the final disposition would be made by the Caltrans Resident Engineer. The welding operation on OBG Deck Plate "A2 ~ A5" section was pending upon the final disposition made by the Caltrans Resident Engineer. Afterwards, Lead Inspector Mr. Junior Daquinag informed this QA Inspector that ABF Welding Superintendent Mr. Dan Ieraci would start the seal root pass weld operation at 1430 hours.

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

This QA Inspector randomly observed ABF welders' Mr. Xiao Jian Wan (Welder ID 9667) and Mr. Wai Kitlai (Welder ID 2953) were in preparation to perform the Flux Cored Arc Welding (FCAW) process seal root pass weld operation in the (1G) flat position on OBG Deck A2 ~ A5" field weld splice location. This QA Inspector observed QC Inspector Mr. Pat Swain verify prior to the start of welding operation that the welding parameters for the aforementioned welders were in accordance with WPS-3200-2. This QA Inspector observed that the ABF welders positioned the heat induction blankets for preheating on the OBG Deck Plate "A2 ~ A5" plate section in preparation to perform the preheat operation. During that time, the welding operation was suspended by ABF management due to an alignment issue with Segment 14W and Crossbeam (CB) 19. The welding operation resumed at 1430 hours and this QA Inspector verified prior to the start of the "seal" root pass weld operation that the preheat temperature of the groove weld and surrounding base metal were at the minimum preheat temperature of 150 degrees F. The seal root pass weld operation was still in-process at the end of this QA Inspectors' shift on OBG Deck Plate "A2 ~ A5" section at the field splice location of OBG Segment 13W ~ 14W.

OBG Deck Plate Lifting Lug Holes (LLH) on Segment 12W:

This QA Inspector randomly observed ABF welder Mr. Salvador Sandoval (Welder ID 2202) performing the fit-up operation of LLH #3 on the exterior side of OBG 12W at Panel Point (PP) 114 LLH #3 (12WPP114W3 - LLH-3), The thickness of the LLH insert plate was 30 mm. This QA Inspector observed ABF QC Inspector Mr. Pat Swain perform the offset measurement and root-gap measurement after ABF welder Mr. Sandoval completed the fit-up operation of the LLH insert plate on LLH #3. The offset and root gap inspection results performed by Mr. Pat Swain were in accordance with the contract specifications and the WPS. Afterwards, this QA Inspector observed ABF welder Mr. Sandoval performing the Shielded Metal Arc Welding (SMAW) process in the (1G) position. This QA Inspector observed Mr. Pat Swain verify prior to the start of welding operation that the welding parameters and the preheat temperature were in accordance with WPS-1050A-CU.



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**Summary of Conversations:**

See above for significant conversations reported on this date.

**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>	Peterson, Art	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell, Bill	QA Reviewer

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