

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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-022764**Date Inspected:** 19-Apr-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**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>	Fred Von Hoff and Steve Jensen			<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 10E/11E side plate 'C2' (0mm to 2638mm) 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 perform 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 has 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 heater blankets located at the opposite side of the plate prior/during welding. During welding, ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welder. At the end of the shift, fill pass welding was still continuing and should remain tomorrow.

At OBG 7E-PP55-E5-#1 & 3 lifting lug access hole to top deck plate outside – ABF welder Jason Collins was observed 1G SMAW welding root pass to cover pass on the infill plate to top deck plate butt joints. The welder was noted using 1/8" and 5/32" diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1070. Prior welding, ABF QC Fred Von Hoff was observed inspecting the fit up of the butt joints. QA verified the fit up alignment of the two access holes which deemed acceptable to the contract requirements. During welding, ABF QC Fred Von Hoff was noted monitoring the

---

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 4 )

---

---

welder's welding parameters. During the shift, cover pass welding on the top side location of the two butt joints was completed and the welder has moved to access holes #2 and 4 at the same panel point (PP) location. The welder performed fit up on the two access holes and QC has checked the alignment as usual. The welder performed the root pass to fill pass until the end of the shift.

At OBG 10E/11E side plate 'E1' (0mm to 1100mm) inside, QA randomly observed ABF/JV qualified welder Fred Kaddu continuing to perform fill pass welding on the Complete Joint Penetration (CJP) splice butt joint where the track mounted Bug-o FCAW welder nozzle holder has limited access. The welder was observed manually welding in the 3G (vertical) position utilizing a Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040B. The joint being welded has a single V-groove butt joint with steel backing bar. During welding, ABF Quality Control (QC) John Pagliero was noted monitoring the welding parameters of the welder. At the end of the shift, fill pass SMAW welding was still continuing and should remain tomorrow.

At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT/MT of the Complete Joint Penetration (CJP) welding of top deck plate, four (4) lifting lug access hole to top deck plate butt joints and six (6) longitudinal stiffeners inside. The QA verification was performed to verify that the welding and the VT/MT inspection performed by the QC inspector meet the requirements of the contract documents. At the conclusion of the QA verification it appeared that the weld and the QC inspection complied with the contract documents.

1. OBG 10W/11W top deck plate 'A' outside - QA MT verified
2. OBG 8W/9W LS1 to LS6 longitudinal stiffeners inside - QA MT verified
3. OBG 7W-PP52-W3-#1 to 4 lifting lug access holes outside - QA VT/MT verified

Tower Splice – 83 Meter elevation, West shaft: This QA Inspector randomly observed the status of the upper and lower Interior Corner Closure Splice Plates located at the B- C corner and C-D corner. During this shift the following was observed.

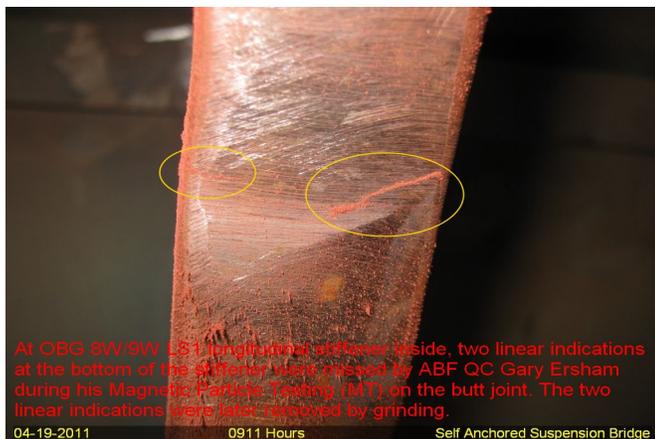
At West B-C corner, lower splice plate: This QA Inspector randomly observed ABF welding personnel Salvador Sandoval (#2202) performing production welding on the bottom half of the splice plate using the self shielded Flux Cored Arc Welding (FCAW) process. This QA Inspector observed a propane gas torch was being used to preheat areas prior to welding. This QA Inspector observed QC Inspector Steve Jensen using an infra red temperature gauge to verify the preheat temperature of more than 300°F. This QA Inspector performed a verification of the welding parameters and observed 270 amperes and 21.9 volts with a travel speed of 95 mm per minute with equivalent heat input of 3.73 Kj per mm. The welding appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-F2200-3. The welding of the vertical fillet welds was still continuing and should remain tomorrow. Before the end of the shift, at around 1630hours, the welder has stopped fillet welding and ABF personnel were noted covering the weld with heater blanket in preparation for the three hours holding of preheat temperature of more than 300°F as required. ABF personnel were using Miller Proheat 35 Induction Heating System to hold the preheat that was programmed to shut off after three hours.

At Northwest C-D corner, lower splice plate: This QA Inspector randomly observed ABF welding personnel Gil Peralta performing production welding on the bottom half of the splice plate using the self shielded Flux Cored

# WELDING INSPECTION REPORT

( Continued Page 3 of 4 )

Arc Welding (FCAW) process. This QA Inspector observed a propane gas torch was being used to preheat areas prior to welding. This QA Inspector observed QC Inspector Steve Jensen using an infra red temperature gauge to verify the preheat temperature of more than 300°F. This QA Inspector performed a verification of the welding parameters and observed 250 amperes and 22.4 volts with a travel speed of 95 mm per minute with equivalent heat input of 3.54 KJ per mm. The welding appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-F2200-3. The welding of the vertical fillet welds was still continuing and should remain tomorrow. Before the end of the shift, at around 1630hours, the welder has stopped fillet welding and ABF personnel were noted covering the weld with heater blanket in preparation for the three hours holding of preheat temperature of more than 300°F as required. ABF personnel were using Miller Proheat 35 Induction Heating System to hold the preheat that was programmed to shut off after three hours.



## Summary of Conversations:

No significant conversation occurred 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 Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

---

---

# WELDING INSPECTION REPORT

*( Continued Page 4 of 4 )*

---

---

**Inspected By:** Lizardo, Joselito

Quality Assurance Inspector

**Reviewed By:** Levell, Bill

QA Reviewer