

**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:** Casey, William  
**Address:** 333 Burma Road  
**City:** Oakland, CA 94607

**Report No:** WIR-028159  
**Date Inspected:** 10-Aug-2012

**Project Name:** SAS Superstructure  
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV  
**Contractor:** American Bridge/Fluor Enterprises, a JV

**OSM Arrival Time:** 700  
**OSM Departure Time:** 1900  
**Location:** Job Site

<b>CWI Name:</b>	As noted below			<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>	SAS OBG		

**Summary of Items Observed:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

## 12E-E2.1-C1 (Exterior)

This QA Inspector randomly monitored the in process Shielded Metal Arc Welding (SMAW) of temporary attachment sites along the weld seam at 12E-E2.1-C1 on the exterior of the OBG. ABF/JV qualified welder Deli Zhang #4735 was observed grinding the areas and backfilling the 2mm-3mm deep sites and then ground flush utilizing a small disc grinder. Prior to welding QC Inspector Salvador Merino was observed monitoring the pre-heating of the joint and the parameters as they pertain to ABF-WPS-D1.5-1004-Repair. This QA Inspector verified that the 3.2mm electrodes were stored in an electrically heated thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters. The welder was observed grinding and blending the start/stop edges of the work utilizing a small disc grinder and compressed air in between passes as QC measured the inter-pass temperatures with an infra-red temperature gun. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the production welding at this location was in progress and appeared to be in general conformance with the contract documents.

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# WELDING INSPECTION REPORT

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## 12E-E2.1 (Interior)

This QA Inspector randomly observed ABF/JV qualified welder Xiao Jian Wan #9677 continuing to perform production welding using the Flux Core Arc Welding (FCAW) process in the 4G overhead position on the A deck joint at 12E-E2.1 on the interior of the OBG. The splice joint was preheated to greater than 200 degrees Fahrenheit using Miller Proheat 35 Induction Heating System with the heater blanket located at the opposite side of the deck prior/during welding. This QA Inspector observed QC Inspector Salvador Merino verify prior to the start of welding operations, that the minimum preheat temperature as per the approved WPS was established; and afterwards verified that the welding parameters were in accordance with ABF-WPS-D1.5-1-3110-4. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted the work at this location is in progress and appeared to be in general conformance with the contract specifications.

## QC UT (Exterior)

This QA Inspector randomly observed QC Inspectors Pat Swain and Fred Michels at 12E PP111.1-C1 performing Ultrasonic Testing (UT) on the exterior of the OBG. The QC Inspectors were observed scanning from each side of the weld and the scanning pattern as described in D1.5 6.24. The QC Inspectors were noted as identifying rejectable indications and the work at these locations is ongoing and appeared to be in general conformance with the contract documents and SE-UT-D1.5-CT-100-Revision 4.

### Summary of Conversations:

Discussed welder assignments and locations with Quality Control Inspector Salvador Merino.



### 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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**Inspected By:** Frey,Doug

Quality Assurance Inspector

**Reviewed By:** Levell,Bill

QA Reviewer

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