

**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-027635**Date Inspected:** 21-May-2012**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>	As noted below		
<b>Inspected CWI report:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A

<b>CWI Present:</b>	Yes	No	
<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved WPS:</b>	Yes	No	N/A
<b>Delayed / Cancelled:</b>	Yes	No	N/A

**Bridge No:** 34-0006**Component:** 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:

## 13E Drop-In Panels (Interior)

This QA Inspector randomly observed ABF welders performing Shielded Metal Arc Welding (SMAW) in the 4G overhead positions on the Drop-In Panels at 13E on the interior of the OBG. ABF welder Salvador Sandoval (ID 2202) was observed making the final passes on 13E-E2.8. Upon completion of E2.8, the welder began work on 13E-E2.2. On subsequent observations throughout the shift, the work at this location was in progress. ABF welder Steven Davis (ID 7889) was observed welding at 13E PP121.6 and was in progress by the end of the shift. ABF welder Khit Lounechaney (ID 4985) was observed welding at 13E-E2.4 and on random observations throughout the shift, it was noted that work at that location was in progress. QC Inspector Sal Merino monitored the welding and the parameters to include pre-heat and inter-pass temperatures for conformance to ABF-WPS-D1.5-1040C-CU. This QA Inspector verified that the electrodes were stored in electric rod ovens and appeared to be in accordance with AWS D1.5 Section 4.5.2 and exposure rates appeared to be in accordance with AWS D1.5 Table 4.7. During subsequent observations it was noted that the welders were using a power disc grinder and/or rotary die grinders at weld start/stops as needed and were cleaning between weld passes with power wire wheel brushes. QC Inspector Sal Merino performed a final Magnetic Particle Inspection (MT) on 13E-A.1 from 0mm to 1800mm. upon completion of the testing Mr. Merino observed no rejectable indications. Upon acceptance by QC, this QA Inspector performed MT testing on 10% of 13E-A1. This QA Inspector performed MT testing utilizing

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the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26. This QA Inspector noted that no rejectable indications were found at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work at this location appeared to be in general conformance with the contract specifications. Completed weld locations for this date were 13E-E2.8 and 13E-E2.4. The completed welds appeared to be in general conformance with the contract specifications.

### 12E PP109.5 E2-DAH (Interior)

This QA Inspector randomly observed ABF welder Mike Jimenez (ID 4671) continuing to perform the back-gouge operation of ultrasonic rejectable indications on the Deck Access Hole (DAH) at 12E PP109.5 E2. The welder was observed working on excavation #3 at y+4220mm located above the Transverse Stiffener (TS). This QA Inspector observed QC Inspector Sal Merino perform a Magnetic Particle Inspection (MT) of the excavation to determine the soundness of the metal. Upon completion of the testing this QA Inspector observed that no rejectable indications were present. This QA Inspector randomly observed the welder performing the repair welding operation as per the SMAW process in the (4G) overhead position. This QA Inspector observed the use of E7018-H4R electrodes and QC Inspector Sal Merino verify that the preheat temperature was at least the minimum required and that the welding parameters were in accordance with WPS D1.5-1001- Repair. On a subsequent observation, the welder was noted as continuing the repair welding and between passes the QC Inspector verified the welding parameters and surface temperatures utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempilstik Heat Indicators for verifying the preheat and inter-pass temperatures. This QA Inspector noted that the electrodes were stored in 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. This QA Inspector noted that the work by Mr. Jimenez was in progress and appeared to be in general conformance with the contract documents.

### 13E PP121.2 (Exterior)

This QA Inspector randomly observed QC Inspector Steve McConnell performing Ultrasonic Inspection (UT) on the completed R1 weld repairs along Seismic Performance Critical Member (SPCM) 13E PP121.2 of the Drop-In Panel. The Inspector was observed scanning from both sides of the weld as well as various angles to the axis and recorded one (1) rejectable indication located at y+1175mm: 35mm in length and 16-20mm deep. QC Manager Bonifacio Daquinag Jr. submitted a request for a Request for Weld Repair (RWR). This QA Inspector noted that the work at this location appeared to be in general conformance with the contract documents and SE-UT-D1.5-CT-100.

### 13E PP122.2 (Interior)

This QA Inspector observed QC Inspector Sal Merino measure the planar offset of the Longitudinal Stiffener at 13E PP122.2-LS1. The measurements were verified by this QA Inspector and recorded as y+0mm-70mm (5), y+70mm-120mm (4), y+120mm-170mm (3), y+170mm-210mm (2) and y+210mm-230mm (1). The measurements were received by QC Manager Bonifacio Daquinag Jr. for a RWR.

### **Summary of Conversations:**

This QA Inspector met with QC Inspector Sal Merino pertaining to 13E Drop-In Panels progress and required testing for the shift.

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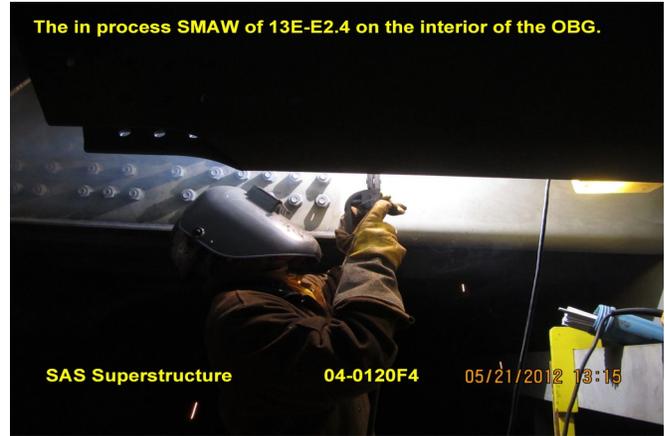
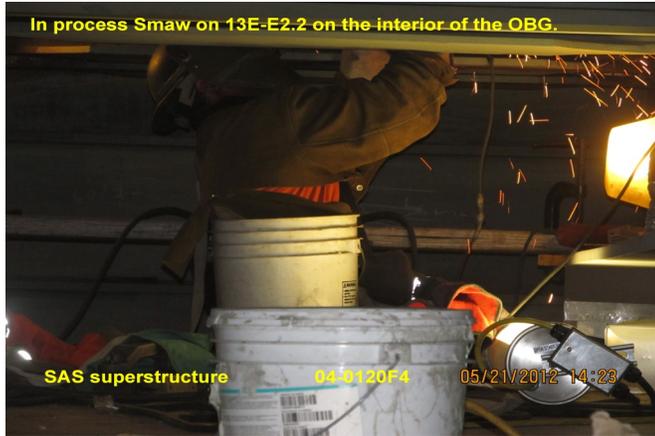
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## Comments

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.

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**Inspected By:** Frey,Doug

Quality Assurance Inspector

**Reviewed By:** Levell,Bill

QA Reviewer