

**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-027006  
**Date Inspected:** 11-Jan-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:** 1730  
**Location:** Job Site

**CWI Name:** Salvador Merino  
**Inspected CWI report:** Yes No N/A  
**Electrode to specification:** Yes No N/A  
**Qualified Welders:** Yes No N/A  
**Approved Drawings:** Yes No N/A

**CWI Present:** Yes No  
**Rod Oven in Use:** Yes No N/A  
**Weld Procedures Followed:** Yes No N/A  
**Verified Joint Fit-up:** Yes No N/A  
**Approved WPS:** Yes No N/A  
**Delayed / Cancelled:** Yes No N/A  
**Component:** OBG Components

**Bridge No:** 34-0006**Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Kenneth Riley was present at the San Francisco Oakland Bay Bridge job site at Yerba Buena Island to observe erection and welding activities for the San Francisco Oakland Bay Bridge (SFOBB) project. This Quality Assurance Inspector (QAI) observed the following work performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below:

- A) NDT
- B) Lifting Lug Holes Repairs

A). NDT

This QAI observed that QC personnel performing Magnetic particle and Ultrasonic Testing (MT and UT) had completed their inspection. This QAI then proceeded, to perform a random verification utilizing MT & UT for the field weld splice located at 12w/13w transverse splice. This weld location is Seismic Performing Critical member (SPCM). This QAI selected a random area of the welds and performed the verifications. The areas tested were as follows.

UT and MT performed;  
12W-13W-A2

UT only (MT performed previously by other QAI)  
12W-13W-A3

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See TL-6028 and TL-6027 for additional information on this date.

### B). Lifting Lug Holes

The QAI observed that welder Mike Jimenez, was performing Shielded Metal Arc Welding (SMAW) using electrode E7018 under Welding Procedure Specification (WPS) ABF-WPS-D15-1050A-CU for the Complete Joint Penetration weld with the welding current observed at 193 amps for the 4.0mm diameter electrode. The welder was observed using a rosebud to pre-heat the repair area to 65 degrees Celsius (150 degrees F) that was verified using a tempstik and infrared gun by the QC. The location of the welding was on the west bound lane (WB) at PP111-W4-W1 hole. The QC inspector for this location was Salvador Merino and was observed onsite overseeing the welding operations for this location. Mr. Merino was observed verifying and documenting the welding parameters for this location. Later in the shift the welder had completed lifting lug hole W1 and proceeded onto hole W4. The QC inspector verified the joint fit up and Mr. Jimenez continued with the welding process for this location. The QC was observed as overseeing the welding operations at this location.

The QAI observed that welder Todd Jackson, performing Shielded Metal Arc Welding (SMAW) using electrode E7018 under Welding Procedure Specification (WPS) ABF-WPS-D15-1050A-CU for the Complete Joint Penetration weld with the welding current observed at 170 amps for the 4.0mm diameter electrode. The welder was observed using a rosebud to pre-heat the repair area to 65 degrees Celsius (150 degrees F) that was verified using a tempstik and infrared gun by the QC. The location of the welding was on the west bound lane (WB) at PP115-W3-W4 hole. The QC inspector for this location was Salvador Merino and was observed onsite overseeing the welding operations for this location. Mr. Merino was observed verifying and documenting the welding parameters for this location. Later in the shift the welder had completed lifting lug hole W4 and proceeded onto hole W2. The QC inspector verified the joint fit up and Mr. Jimenez continued with the welding process for this location. The QC was observed as overseeing the welding operations at this location.

### QA Observation and Verification Summary

The QA inspector observed the QC activities and the welding utilizing the WPS's as noted above, which appeared to be posted at the weld station. The welding parameters and surface temperatures were verified by the QC inspectors utilizing a Fluke 337 clamp meter for the electrical welding parameters and a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. The consumables utilized for the welding process stated appeared to comply with the AWS Specification and AWS Classification. The QC inspection, testing and welding performed on this shift appeared to be in general compliance with the contract documents. At random intervals, the QAI verified the QC inspection, testing, welding parameters and the surface temperatures utilizing various inspection equipment and gages which included a Fluke 337 Clamp Meter and Tempilstik Temperature indicators. Unless noted otherwise, all work observed on this date appeared to be in general compliance with the contract documents at the time of observations.

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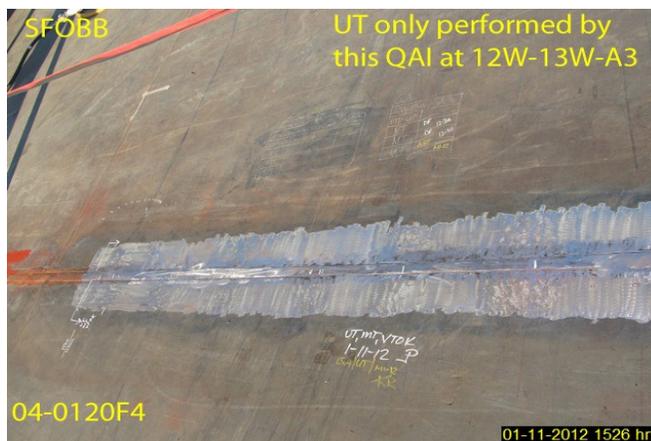
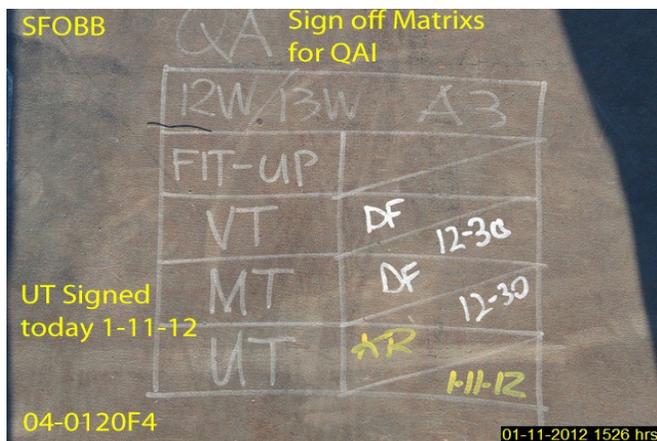
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## Summary of Conversations:

Basic conversation, fundamental to completion of the tasks at hand, occurred between this QAI and ABF QC personnel.

## 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:** Riley, Ken

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer