

**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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016240**Date Inspected:** 13-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Jobsite**CWI Name:** See below**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:** SAS OBG**Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance Inspector (QAI) Bert Madison was present at Yerba Buena Island in California between the times noted above for observations relative to the work being performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below.

- 1). OBG Field Splice 1W/2W Weld ID: B1, Face B
- 2). OBG Field Splice 2W/3W Weld ID: D2, Face A
- 3). OBG Field Splice 3W/4W Weld ID: F1, Face A & B
- 4). OBG Field Splice 5W/6W Weld ID: B1, Face B
- 5). OBG Field Splice 5W/6W Weld ID: C1 & C2, Face A

- 1). OBG Field Splice 1W/2W Weld ID: B1, Face B

The QAI performed verification visual & magnetic particle testing of 10% of the lengths of OBG Field Splice 1W/2W weld ID: B1, Face B. The QAI inspected 150mm of Weld B1 from Y = 1242mm to Y = 1392mm. The welds verified by the QAI were found to be in general compliance with contract documents. See Report of Magnetic Particle Testing Form TL-6028 generated by the QAI on this date.

- 2). OBG Field Splice 2W/3W Weld ID: D2, Face A

The QAI periodically observed QC Inspector Tom Pasqualone performing Ultrasonic Testing (UT) of UT repair locations from the A Face of OBG Field Splice 2W/3W Weld ID: D2. Prior to observing the testing the QAI observed QC Mr. Pasqualone performing the required calibration check of the GE USM 35 UT Instrument and the 70° Search Unit. The QAI observed Mr. Pasqualone perform a calibration check of the transducer index point, the transducer sound path angle, the horizontal sweep distance and the sensitivity. The calibration check appeared

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to be in compliance with contract documents and the QAI observed that Mr. Pasqualone set the reference level at 50% full screen height with a zero reference level sensitivity of 49dB. The QAI observed Mr. Pasqualone utilized the UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 during the examination of the splice weld. The QC technician performed the required shear wave testing during the testing for weld soundness utilizing a .63 x .75 rectangular transducer. The UT examination was not completed from face A during the QA Inspectors shift and the work at this location appeared to be in general compliance with contract documents.

### 3). OBG Field Splice 3W/4W Weld ID: F1, Face A & B

The QAI periodically observed AB/F approved welder Kenneth Chappell (3833) performing grinding to excavate UT repairs on the A & B Faces of OBG Field Splice 3W/4W Weld ID: F1. The QAI periodically observed AB/F approved welder Fred Kaddu (ID 2188) performing repair welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position at the excavated areas. The QAI observed QC Inspector Steve McConnell performing periodic Magnetic Particle Testing (MT) of the excavations prior to repair welding. See photo below. The QAI observed that the performance and evaluation of the MT appeared to comply with the MT procedure identified as SE-MT-CT-D1.5-101 Rev. 4. The QAI periodically observed the QC Inspector Tony Sherwood was present to monitor the progress and verify that the welding parameters were within the limits established by the approved Welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1000-Repair. Work at this location was in process and appeared to be in general compliance with contract documents.

### 4). OBG Field Splice 5W/6W Weld ID: B1, Face B

The QAI performed verification visual & magnetic particle testing of 10% of the lengths of OBG Field Splice 5W/6W weld ID: B1, Face B. The QAI inspected 150mm of Weld B1 from Y = 1242mm to Y = 1392mm. The welds verified by the QAI were found to be in general compliance with contract documents. See Report of Magnetic Particle Testing Form TL-6028 generated by the QAI on this date.

### 5). OBG Field Splice 5W/6W Weld ID: C1 & C2, Face A

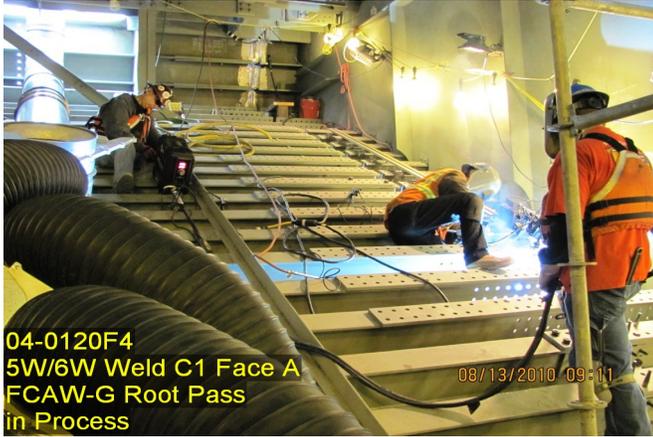
The QAI periodically observed AB/F approved welder Song Tao Huang (ID 3794) setting up and subsequently performing welding per the Flux Cored Arc Welding (FCAW-G) process in the 3G (vertical) position of root and fill passes on weld ID: C1 & C2. The QAI observed QC Inspector Tony Sherwood was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-3042B-1. Prior to the commencement of welding the QAI observed the QC Inspector Tony Sherwood performing a fit-up inspection and the QAI performed a fit-up inspection of the OBG Splice at this location. When welding commenced the QC Inspector measured the welding parameters and obtained the following: the welding amperes were 250 amps, the welding volts were 24.2 volts and the travel speed was measured to be 292mm/min. See photo below. The work at this location was in process for the duration of the QA Inspectors shift and appeared to be in general compliance with contract documents.

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## Summary of Conversations:

Conversations on this date were with various QC Inspectors and were of a general nature pertaining to on going welding and inspection activity.

## 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 Mohammed Fatemi (916) 813 3677, who represents the Office of Structural Materials for your project.

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**Inspected By:** Madison,Bert

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer