

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019037**Date Inspected:** 03-Jan-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**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 9E/10E Weld ID: D1 & D2, Face A (SAW)
- 2). OBG Field Welding of East Line Lifting Lug Hole Inserts (SMAW R-3 Repairs)
- 3). OBG Field Splice 7E/8E Weld ID: B1, Face B – (SMAW R-1 Repairs)
- 4). OBG Field Splice 8E/9E A Longitudinal Stiffeners (QA verification)
- 5). East Line Lifting Lug Hole Insert Welds (QA verification)

- 1). OBG Field Splice 9E/10E Weld ID: D1 & D2, Face A (SAW)

The QAI periodically observed AB/F approved welder James Zhen (ID 6001) performing welding of the root and fill passes on weld ID: D1 & D2 per the Submerged Arc Welding (SAW) process in the 1G (flat) position. See photo below. The QAI observed QC Inspectors John Pagliero and Fred Von Hoff were 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-D1.5-4042B-1. The QAI observed that the work at this location was in process and appeared to be in general compliance with contract documents.

- 2). OBG Field Welding of East Line Lifting Lug Hole Inserts (SMAW R-2 Repairs)

Interior: OBG 4E PP27 E4 weld 2 (one R-3 repair)

The QAI periodically observed AB/F approved welder Salvador Sandoval (ID 2202) performing grinding to excavate one repair and subsequently performing welding per the Shielded Metal Arc Welding (SMAW) process

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in the 4G (overhead) position. QC Inspector Steve McConnell was periodically 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-D1.5-1001 Repair. Welding was completed and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

Exterior: OBG 4E PP27 E4 weld 2(one R-3 repair) and E3 weld 2 (one R-3 repair)

The QAI periodically observed AB/F approved welder Salvador Sandoval (ID 2202) performing air carbon arc gouging and grinding to excavate one repair in E3 weld2 and one repair in E4 weld2. The QAI randomly observed QC Inspector Steve McConnell performing Magnetic Particle Testing (MT) of the excavated areas prior to repair welding. The QAI randomly 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. Subsequent the QAI randomly observed R-3 repair welding at both E3 and E4 per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position. QC Inspector Steve McConnell was periodically 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-D1.5-1001 Repair. Welding was completed and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

3). OBG Field Splice 7E/8E Weld ID: B1, Face B – (SMAW R-1 Repairs)

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 on the interior of OBG Field Splice 8E/9E Weld B1. The welding at this location was a continuation of a repair area excavated on 12-30-10 located at Y = 150mm. The QAI noted that Mr. Kaddu was welding with 1/8" 7018 low hydrogen electrodes at approximately 120 -125 welding Amps. Later in this shift, the QAI randomly observed Mr. Kaddu performing air carbon arc gouging and grinding on the interior surface of OBG Field Splice 7E/8E Weld ID: B1 to prepare other R-1 Ultrasonic Testing (UT) reject areas for repair welding. The QAI randomly observed QC Inspector Fred Von Hoff performing Magnetic Particle Testing (MT) of the excavated areas prior to repair welding. The QAI randomly 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 randomly observed AB/F approved welder Fred Kaddu (ID 2188) performing repair welding of three excavated areas. QC Inspector Fred Von Hoff was present periodically to monitor the progress and verify that the repair welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1001 Repair. The QAI observed that fill and cover pass welding of three excavations was in process during the QA Inspectors shift on this date and work at this location appeared to be in general compliance with contract documents. The QAI observed that the repair areas excavated on this date in weld B1 had the following dimensions and the following Y locations:

Y = 50mm, Length = 105mm, Depth = 13mm, Width = 15mm.

Y = 520mm, Length = 140mm, Depth = 14mm, Width = 25mm.

Y = 570mm, Length = 140mm, Depth = 14mm, Width = 25mm.

4). OBG Field Splice 8E/9E A Longitudinal Stiffeners (QA verification)

The QAI performed verification Ultrasonic Testing (UT) of 100% of the lengths of OBG Field Splice 8E/9E ALS 1, 2, 3, 4, 5 & 6. The OBG Field Spllices verified by the QAI appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

5). East Line Lifting Lug Hole Insert Welds (QA verification)

The QAI performed verification Ultrasonic Testing (UT) of 25% of the lengths of OBG Field Welds of Lifting

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Lug Hole Inserts at the following locations:

4E PP25-E4-Weld 1 & 4E PP25-E3-Welds 1 through 4.

The OBG Field Welds verified by the QAI at these locations appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.



Summary of Conversations:

Conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities and locations of welds released to the QAI for verification testing.

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.

Inspected By: Madison, Bert

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer