

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-018600**Date Inspected:** 14-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**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 8E/9E Weld ID: C1, Face A (SMAW)
- 2). OBG Field Splice 7E/8E Weld ID: F1, Face B – (SMAW R-1 Repairs)
- 3). OBG Field Splice 7E/8E Weld ID: D2, Face B – (FCAW-G)
- 4). OBG Field Splice 8E/9E Weld ID: A4, Face A – (SMAW R-1 Repairs)
- 5). OBG East Line Access Penetration Insert Weld at 6E PP46.5 E2 SE (SMAW)
- 6). OBG Field Welding of East Line Lifting Rod Access Penetration Inserts (SMAW Repairs)
- 7). Longitudinal Stiffeners (A-LS) Splice at OBG Field Splice 8E/9E (SMAW)

1). OBG Field Splice 8E/9E Weld ID: C1, Face A (SMAW)

The QAI periodically observed AB/F approved welder Song Tao Huang (ID 3794) performing welding of the 1st 1010mm at the top OBG Field Splice 8E/9E Weld ID: C1 per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position. See photo below. The QAI observed QC Inspector Fred Von Hoff was present periodically 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-D1.5-1040A. The welding of root, fill and cover passes was completed at weld C1, and the QAI observed AB/F approved welder Jin Quan Huang (ID 9340) setting up for welding per the Flux Cored Welding (FCAW-G) process at weld C2. The QAI observed that the work at this location appeared to be in general compliance with contract documents.

2). OBG Field Splice 7E/8E Weld ID: F1, Face B – (SMAW R-1 Repairs)

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The QAI periodically observed AB/F approved welder Fred Kaddu (ID 2188) performing air carbon arc gouging and grinding at (5) five R-1 Ultrasonic Testing (UT) reject areas in the B face (interior) of OBG Field Splice 7E/8E Weld ID: F1. The QAI did not observe repair welding during the QA Inspector's shift at this location.

3). OBG Field Splice 7E/8E Weld ID: D2, Face B – (FCAW-G)

The QAI periodically observed AB/F approved welder Rory Hogan (ID 3186) assisted by AB/F approved welder Jeremy Dolman (ID 5042) performing welding on the exterior of OBG Field Splice 7E/8E Weld ID: D2 per the Flux Cored Welding (FCAW-G) process in the 4G (overhead) position. The QAI observed QC Inspector Fred Von Hoff was present periodically 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-D1.5-3110-4. The welding of fill and cover passes was complete at weld D2 and the QAI periodically observed that work at this location appeared to be in general compliance with contract documents.

4). OBG Field Splice 8E/9E Weld ID: A4, Face A – (SMAW R-1 Repairs)

The QAI periodically observed AB/F approved welder Wai Kitlai (ID 2953) performing grinding to excavate and prepare (5) five R-1 Ultrasonic Testing (UT) repair locations for welding. The QAI periodically observed QC Inspector Steve McConnell performing Magnetic Particle Testing (MT) of the excavated areas prior to repair welding. 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 AB/F approved welder Wai Kitlai (ID 2953) performing R-1 repair welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position of OBG Field Splice 8E/9E Weld: A4. See photo below. QC Inspector Steve McConnell 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-D1.5-1001 Repair. The QAI observed that welder (2953) completed fill and cover pass welding of the five areas on this date and work at this location appeared to be in general compliance with contract documents. The QAI observed that the (5) five excavated areas in weld A4 had the following dimensions and the following Y locations:

Indication #1) Excavation Y = 1785mm, Length = 125mm, Depth = 14mm and Width = 25mm.

Indication #2) Excavation Y = 1945mm, Length = 160mm, Depth = 14mm and Width = 30mm.

Indication #3) Excavation Y = 3115mm, Length = 120mm, Depth = 14mm and Width = 25mm.

Indication #4) Excavation Y = 3905mm, Length = 135mm, Depth = 13mm and Width = 25mm.

Indication #5) Excavation Y = 4315mm, Length = 125mm, Depth = 14mm and Width = 25mm.

5). OBG East Line Access Penetration Insert Weld at 6E PP46.5 E2 SE (SMAW)

The QAI periodically observed AB/F approved welder Hua Qiang Hwang (ID 2930) performing fill and cover pass welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position on the exterior of OBG East Line Access Penetration Insert Weld 6E PP46.5 E2 SE. QC Inspector Steve McConnell 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-D1.5-1010 rev 1. Cover pass welding was completed and the QAI observed the work at this location appeared to be in general compliance with contract documents.

6). OBG Field Welding of East Line Lifting Rod Access Penetration Inserts (SMAW Repairs)

Interior: OBG 4E PP27 E4 welds 2 & 4 (R-1 repairs)

The QAI periodically observed AB/F approved welder Earl Espinoza (ID 5824) performing welding of fill and cover passes per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position. QC Inspector

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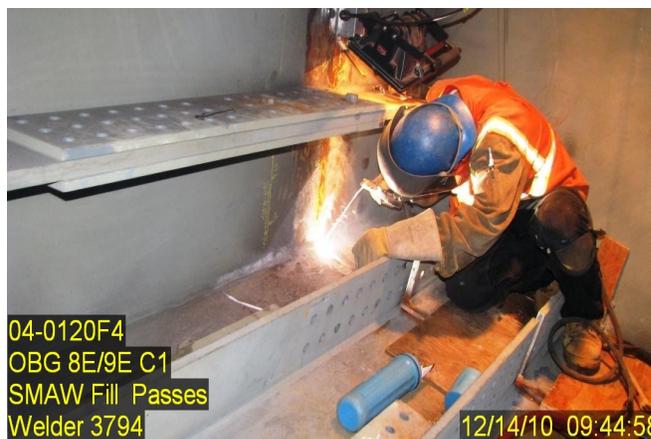
Pat Swain was periodically present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1001 Repair. Welding and flush grinding were completed and the QAI performed a visual examination of the interior surface of welds 2 & 4 and observed that the work at this location appeared to be in general compliance with contract documents.

Exterior: OBG 3E PP22 E3 welds 1 (R-2 repair) & 2 (R-1 repair)

The QAI periodically observed AB/F approved welder Salvador Sandoval (ID 2202) performing repair welding of fill and cover passes per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position. QC Inspector Pat Swain 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 and flush grinding were completed and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

7). Longitudinal Stiffeners (A-LS) Splice at OBG Field Splice 8E/9E (SMAW)

The QAI periodically observed AB/F approved welder Xiao Jian Wan (ID 9677) performing welding of root, fill and cover passes per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position of OBG Field Splice at A-LS-5 at OBG Field Splice 8E/9E. QC Inspector John Pagliero was present periodically 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-D1.5-1012-3. The welding was completed on the South face during the QA Inspector's shift and the QAI observed that the work at this location appeared to be in general compliance with contract documents.



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.

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Inspected By: Madison,Bert

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer