

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-018587**Date Inspected:** 09-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1830**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 Welding of Lifting Rod Access Penetration Inserts. (SMAW R-1 Repairs)
- 2). OBG East Line Access Penetration Insert Splice at 8E PP61.5 E2 SW. (SMAW)
- 3). Longitudinal Stiffeners (A-LS) Splice at OBG Field Splice 8E/9E. (SMAW)
- 4). Longitudinal Stiffeners (A-LS) Splice at OBG Field Splice 6E/7E. (SMAW R-1 Repairs)
- 5). OBG Field Splice 8E/9E Weld ID: C1 & C2, Face A (FCAW-G)
- 6). OBG Field Splice 6E/7E Weld ID: D1 and D2, Face A – (QAI Verification)
- 7). OBG Lifting Lug Bracket Removal – (Oxy-Acetylene Scarfing)

- 1). OBG Field Welding of East Line Lifting Rod Access Penetration Inserts (SMAW)

Interior: OBG 4E PP25 E4 welds 2 & 4 (R-1 repairs)

The QAI periodically observed AB/F approved welder Earl Espinoza (ID 5824) performing air carbon arc gouging and grinding of R-1 repair excavations at OBG 4E PP25 E4 welds 2 & 4. The QAI periodically observed welding of fill and cover passes per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position. The QAI observed that there was one excavation in each weld. QC Inspector John Pagliero 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 was completed and the QAI performed a final visual examination of the weld surfaces. The QAI observed that the work at this location appeared to be in general compliance with contract documents.

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Interior: OBG 4E PP25 E34 welds 1 & 3 (R-1 repairs)

The QAI periodically observed AB/F approved welder Earl Espinoza (ID 5824) performing air carbon arc gouging and grinding of R-1 repair excavated areas at OBG 4E PP22 E4 welds 1 & 3. The QAI periodically observed welding of fill and cover passes per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) 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. The QAI observed that there were two excavations in each weld. Welding was in process and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

2). OBG East Line Access Penetration Insert Splice at 8E PP61.5 E2 SW

The QAI periodically observed AB/F approved welder Wai Kitlai (ID 2953) performing fill pass welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position on the exterior of the OBG East Line Access Penetration Insert Splice at 8E PP61.5 E2 SW. 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. Fill pass welding was not completed and later in the shift the QAI periodically observed welder 2953 performing back grinding on the interior at 8E PP61.5 E2 SW. The QAI observed the work at this location appeared to be in general compliance with contract documents.

3). 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-4 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 North face and back grinding and root pass welding was in process on the South face. The QAI observed that the work at this location appeared to be in general compliance with contract documents.

4). Longitudinal Stiffeners (A-LS) Splice at OBG Field Splice 6E/7E (SMAW R-1 Repairs)

The QAI periodically observed AB/F approved welder Hua Qiang Hwang (ID 2930) performing R-1 repair welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position on A-LS-1 and A-LS-2 at OBG Field Splice 6E/7E. See photo below. QC Inspector Fred Von Hoff 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-D1.5-1002 Repair. The welding was completed of two excavations in the North face of A-LS-1 and one excavation in the North face of A-LS-2 and the QAI observed that the work at this location appeared to be in general compliance with contract documents. The excavated areas were at the following Y locations with the following dimensions:

A-LS-1 Excavation #1 - Y = 20mm, Length = 50mm, Width = 22mm and Depth = 17mm.

A-LS-1 Excavation #2 - Y = 120mm, Length = 55mm, Width = 20mm and Depth = 18mm.

A-LS-2 Excavation #1 - Y = 5mm, Length = 60mm, Width = 22mm and Depth = 18mm.

5). OBG Field Splice 8E/9E Weld ID: C1 & C2, Face A (FCAW-G)

The QAI periodically observed AB/F approved welder Song Tao Huang (ID 3794) assisted by AB/F approved

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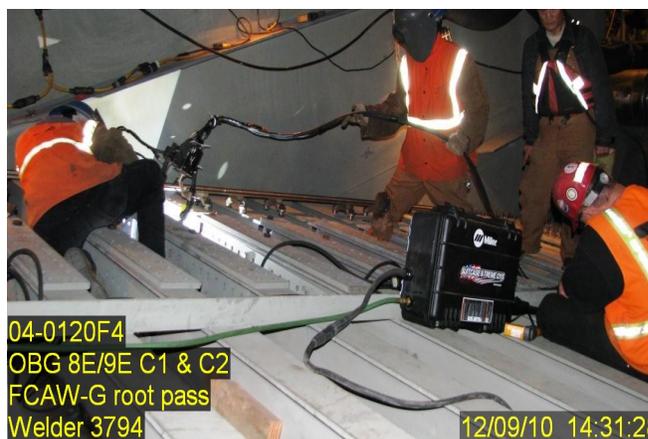
welder Jin Quan Huang (ID 9340) performing welding of OBG Field Splice 8E/9E Weld ID: C1 & C2 per the Flux Cored Arc Welding (FCAW-G) process in the 3G (vertical) position. See photo below. The QAI observed QC Inspector John Paglieri was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1. 5-3042B-1. The welding of root and fill passes was in process and the QAI observed that the work appeared to be in general compliance with contract documents.

6). OBG Field Splice 6E/7E Weld ID: D1 and D2, Face A – (QAI Verification)

The QAI performed verification Ultrasonic Testing (UT) of 10% of the length of OBG Field Splice 6E/7E Weld ID D1 & D2. The OBG Field Splice of D1 was verified from Y = 0mm to Y = 450mm and of D2 from Y = 3800mm to Y = 4250mm the by the QAI and appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

7). OBG Lifting Lug Removal – (Oxy-Acetylene Scarfing)

The QAI periodically observed AB/F apprentice Ian Murphy performing Oxy-Acetylene Scarfing to remove lifting lugs at the following locations per ABF-RFI-001151R01
1E PP8.5 E3 bracket #2, 1E PP9.5 E3 bracket #2



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
