

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-018269**Date Inspected:** 22-Nov-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)
- 2). OBG Field Splice of Access Penetration Insert Longitudinal Stiffeners (QA verification)
- 3). OBG Field Splice 7E/8E Weld ID: E1 & E2, Face B – (FCAW-G)
- 4). OBG Field Splice 7E/8E Weld ID: F1, Face B – (SMAW)

- 1). OBG Field Welding of Lifting Rod Access Penetration Insert (SMAW)

Interior: OBG 4E-PP25-E3 – weld 2

The QAI periodically observed AB/F approved welder Earl Espinoza (ID 5824) performing back welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position of E3-weld 2. 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-D1.5-1110B. Back welding was completed at weld 2 and the QAI observed that the work appeared to be in general compliance with contract documents.

Interior: OBG 4E-PP27-E3 - welds 2 & 4

The QAI periodically observed AB/F approved welder Darcell Jackson (ID 9967) performing back welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position of E3 welds 2 & 4. The QAI periodically observed Mr. Jackson performing flush grinding of E3-welds 2 & 4. QC Inspector John Pagliero was periodically present to monitor the progress and verify that the welding parameters were within the limits

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established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1110B rev. 1. Grinding was completed at E3-welds 2 & 4 and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

Interior: OBG 4E-PP27-E4 - welds 1 & 3

The QAI periodically observed AB/F approved welder Mike Jimenez (ID 4671) performing back welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position of E4-welds 1 & 3. 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-D1.5-1110B rev.1. The QAI observed QC Inspector John Pagliero performing Magnetic Particle Testing (MT) of the excavated areas prior to back 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. Welding was completed and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

Interior: OBG 3E-PP20-E4 - welds 1 & 3 (R-1 repairs)

The QAI periodically observed AB/F approved welder Rick Clayborn (ID 2773) performing air carbon arc back gouging of one each repair area in Weld #'s 1 and 3. The QAI later periodically observed AB/F approved welder Darcell Jackson (ID 9967) performing grinding and repair welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position. 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. The QAI observed QC Inspector John Pagliero performing Magnetic Particle Testing (MT) of the excavated areas prior to back 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. Welding was completed and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

Interior: OBG 2E-PP15-E3 - welds 1 & 2 (R-1 repairs)

The QAI periodically observed AB/F approved welder Rick Clayborn (ID 2773) performing air carbon arc back gouging of one each repair area in Weld #'s 1 and 2. The QAI later periodically observed AB/F approved welder Earl Espinoza (ID 5824) performing grinding and repair welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position. 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. The QAI observed QC Inspector John Pagliero performing Magnetic Particle Testing (MT) of the excavated areas prior to back 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. Welding was completed and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

Exterior: OBG 2E-PP15-E3 - welds 1, 2 & 3 (R-1 repairs)

The QAI periodically observed AB/F approved welder Salvador Sandoval (ID 2202) performing air carbon arc back gouging, grinding of excavated areas and subsequent R-1 repair welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position. See photo below. QC Inspector Patrick 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 QC Inspector Pat Swain performing Magnetic Particle Testing (MT) of the excavated areas prior to back 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. Repair welding was completed and the QAI observed that the work at this location appeared to be in general compliance with contract documents. The QAI observed the following

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number of excavations at the following locations: Weld # 1) – 4 excavated areas, Weld # 2) – 1 excavated area and Weld # 3) – 4 excavated areas.

Exterior: OBG 2E-PP17-E3 - welds 1 & 3 (R-1 repairs)

The QAI periodically observed AB/F approved welder Rick Clayborn (ID 2773 performing air carbon arc back gouging and later AB/F approved welder Salvador Sandoval (ID 2202) performing grinding of excavated areas and subsequent R-1 repair welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position. QC Inspector Patrick 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 QC Inspector Pat Swain performing Magnetic Particle Testing (MT) of the excavated areas prior to back 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. Repair welding of weld #3 was in process and the QAI observed that the work at this location appeared to be in general compliance with contract documents. The QAI observed the following number of excavations at the following locations: Weld # 1) – 6 excavated areas and Weld # 3) – 3 excavated areas.

Exterior: OBG 3E-PP20-E3 - welds 3 & 4 (R-1 repairs)

The QAI periodically observed AB/F approved welder Rick Clayborn (ID 2773 performing air carbon arc back gouging of R-1 repairs at welds 3 & 4. The QAI observed the following number of excavations at the following locations: Weld # 3) – 2 excavated areas and Weld # 4) – 4 excavated areas.

Exterior: OBG 3E-PP20-E4 - welds 1 & 2 (R-1 repairs)

The QAI periodically observed AB/F approved welder Rick Clayborn (ID 2773 performing air carbon arc back gouging of R-1 repairs at welds 1 & 2 The QAI observed the following number of excavations at the following locations: Weld # 1) – 2 excavated areas and Weld # 2) – 3 excavated areas.

2). OBG Field Splice of Access Penetration Insert Longitudinal Stiffeners (QA verification)

The QAI performed verification Ultrasonic Testing (UT) of 100% of the lengths of OBG Field Splice of Access Penetration Insert Longitudinal Stiffeners at 1E PP10.5 E2 LS-West and 2E PP13.5 E2 LS-West. The OBG Field Splices 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.

3). OBG Field Splice 7E/8E Weld ID: E1, Face B – (FCAW-G)

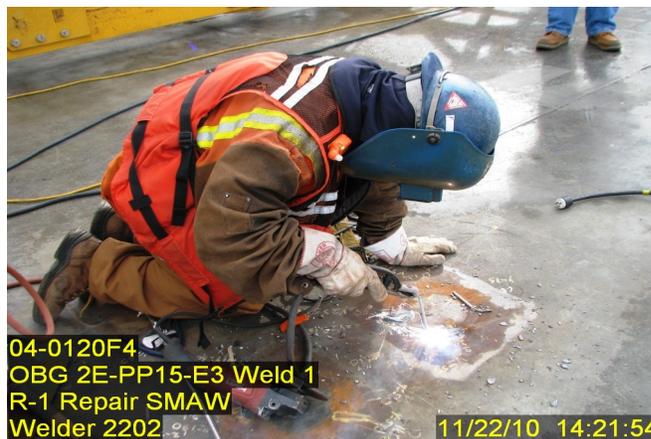
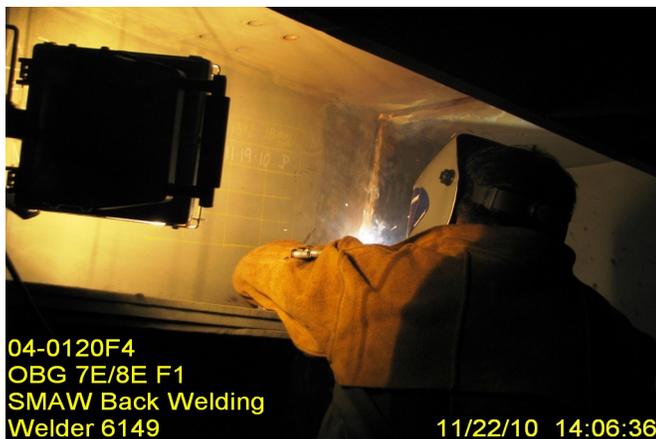
The QAI periodically observed AB/F approved welder Rory Hogan (ID 3186) performing welding per the Flux Cored Arc Welding (FCAW-G) process in the 4G (overhead) position. The QAI periodically observed QC inspector Mike Johnson was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-3042A-1. The welding of fill and cover passes at weld E1 was in process at this location and the work appeared to be in general compliance with contract documents.

4). OBG Field Splice 7E/8E Weld ID: F1, Face B – (SMAW)

The QAI periodically observed AB/F approved welder Jorge Lopez (ID 6149) performing welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position of OBG Field Splice 7E/8E Weld ID: F1 from the interior. 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-D1.5-1040B. The welding was in process at this location and appeared to be in general compliance with contract documents.

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Summary of Conversations:

The QAI was informed by QC John Pagliero that OBG Field Splices of Access Penetration Insert Longitudinal Stiffeners at 1E PP10.5 E2 LS-West and 2E PP13.5 E2 LS-West were accepted by QC and released to the QAI for verification testing.

The QAI entered the QC field office and spoke with QC lead inspector Bonafacio Daquinag Jr. and Leonard Cross. The QAI spoke with them regarding the pending repair of a linear indication in the Lifting Rod Access Penetration Insert Weld at 4E-PP25-E4-Weld 3, (observed by the QAI and QC Inspector John Pagliero on 11-17-10.) The QAI stated to Mr. Daquinag that the repair at this location (because of the linear nature of the indication,) may need engineering approval prior to proceeding with the repair. Mr. Leonard Cross then stated that he would discuss the matter on this date with AB/F QC Manager Jim Bowers at Pier 7.

Conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities.

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.

Inspected By: Madison,Bert

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer