

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-017903**Date Inspected:** 05-Nov-2010**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 Welding of East Line Lifting Rod Access Penetration Inserts (SMAW)
- 2). OBG Field Splice of Ventilation Access Insert Weld at 5E-PP29.5-E2-S – (SMAW)
- 3). OBG Field Splice 6E/7E Weld ID: B1, Face A – (SMAW R-1 Repairs)
- 4). OBG Field Splice 6W/7W Weld ID: E1 & E2, Face A (QAI Verification)

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

Exterior: OBG 1E-PP8.5-E4-weld 2

The QAI periodically observed R-3 repair welding in the A deck at PP8.5 of the Lifting Rod Access Penetration Welds. Repair welding was per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position. The QAI observed AB/F approved welder Earl Espinoza (ID 5824) performing welding of one excavated area at PP8.5 weld E4-2. 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-D1.5-1000 Repair rev. 2. Welding was completed from the exterior at E4-2 and the QAI observed that the work appeared to be in general compliance with contract documents.

Exterior: OBG 1E-PP11-E4-welds 1 & 2

The QAI periodically observed AB/F approved welder Earl Espinoza (ID 5824) performing air carbon arc gouging to excavate two UT rejectable indications from the exterior surface of OBG 1E-PP11-E4-weld 1 and one UT rejectable indication from the exterior surface of OBG 1E-PP11-E4-weld 2. The excavated areas at this location

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are R-2 repairs.

Exterior: OBG 1E-PP11-E4-weld 1

The QAI periodically observed repair welding in the A deck at PP11 of the Lifting Rod Access Penetration Welds. Repair welding was per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position. The QAI observed AB/F approved welder Earl Espinoza (ID 5824) performing welding of one R-2 excavated area (encompassing two UT rejectable indications) at PP11 weld E4-1. 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-D1.5-1000 Repair rev. 2. The QAI observed QC Inspector Patrick Swain performing Magnetic Particle Testing (MT) of the excavation area prior to repair welding at this location. 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 from the exterior at E4-1 and the QAI observed that the work appeared to be in general compliance with contract documents.

Exterior: OBG 4E-PP27- E4-weld 3

The QAI periodically observed welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position to restore the Lifting Rod Access Penetration in the A deck at PP27. The QAI observed AB/F approved welder Melvin Ivy (ID 8309) performing fit-up, root, fill and cover passes at 4E PP27 weld E4-3. The QAI periodically observed 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-D1.5-1070. See photo below. Welding was completed at this location and the QAI observed that the work appeared to be in general compliance with contract documents.

2). OBG Field Splice of Ventilation Access Insert Weld at 5E-PP29.5-E2-S – (SMAW)

The QAI periodically observed the welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position to restore the Ventilation Access Insert at 5E-PP29.5-E2-S. The QAI observed that AB/F approved welder Jin Pei Wang (ID 7299) performed welding from the exterior of the OBG at this location. 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-D1.5-1010 rev 1. The QAI observed that welding of fill, cover passes was completed, and the work at this location appeared to be in general compliance with contract documents.

3). OBG Field Splice 6E/7E Weld ID: B1, Face A – (SMAW R-1 Repairs)

The QAI periodically observed AB/F approved welder Fred Kaddu (ID 2188) performing grinding to prepare R-1 Ultrasonic Testing (UT) repair locations and subsequently performing welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position of OBG Field Splice 6E/7E Weld ID: B1. 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. Mr. McConnell also performed Magnetic Particle Testing (MT) of the excavated areas prior to the 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 observed that Mr. Kaddu completed welding of (4) four excavations with the following dimensions at the following Y locations:

Indication 1) - Y = 220mm, Length = 135mm, Depth = 16mm and Width = 25mm,

Indication 2) - Y = 505mm, Length = 165mm, Depth = 12mm and Width = 20mm.

Indication 3) - Y = 810mm, Length = 100mm, Depth = 19mm and Width = 25mm

Indication 4) - Y = 1040mm, Length = 100mm, Depth = 14mm and Width = 20mm

The QAI observed that work at these locations appeared to be in general compliance with contract documents.

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4). OBG Field Splice 6W/7W Weld ID: E1 & E2, Face A (QAI Verification)

The QAI performed verification Ultrasonic Testing (UT) of 10% of the lengths of OBG Field Splice 6W/7W Weld ID: E1 & E2. The 6W/7W Weld ID: E1 & E2 verified by the QAI appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027.



Summary of Conversations:

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