

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-018131**Date Inspected:** 12-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 East Line Lifting Rod Access Penetration Insert Welds (QC UT)
- 3). OBG Field Splice 6W/7W Weld ID: B1, Face B – (SMAW R-1 Repairs)
- 4). OBG Field Splice 6W/7W Weld ID: F1, Face B – (SMAW R-1 Repairs)
- 5). OBG Field Splice 6W/7W Weld D2, Face B (FCAW-G)
- 6). Bent Cap W2 Pipe Supports (SMAW)

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

Exterior: OBG 3E-PP20-E4- weld 2 & weld 4

The QAI periodically observed AB/F approved welder Earl Espinoza (ID 5824) performing welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position of E4-welds 2 & 4. The welding at this location was to repair blow through areas from air carbon arc gouging on the interior for back welding. 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-D1.5-1110B rev. 1. Welding was completed on the exterior at E4-welds 2 & 4. The QAI observed that the work was completed at this location and appeared to be in general compliance with contract documents.

- 2). OBG East Line Lifting Rod Access Penetration Insert Welds (QC UT)

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

The QAI periodically observed QC Inspectors Patrick Swain and Tom Pasqualone performing Ultrasonic Testing (UT) from Face A of OBG East Line Lifting Rod Access Penetration Insert Welds.

The QAI periodically observed Mr. Swain performing QC UT at the following locations with the following results:

Location:	QC UT Results:
2E-PP17-E3 weld 3	12 Rejectable Indications

The QAI periodically observed Mr. Pasqualone performing QC UT at the following locations with the following results:

Location:	QC UT Results:
2E-PP15-E4 weld 1	1 Rejectable Indication
2E-PP15-E4 weld 2	1 Rejectable Indication
2E-PP15-E4 weld 4	1 Rejectable Indication

The QAI observed that the QC Inspectors utilized the UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 during the examination of the repair welds. The QAI observed as the QC technician performed the required shear wave testing during the testing for weld soundness utilizing a .63 x .75 rectangular transducer. The UT examination appeared to be in general compliance with contract documents.

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

The QAI periodically observed AB/F approved welder Fred Kaddu (ID 2188) performing R-1 repair welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position. See photo below. QC Inspector Tony Sherwood 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-D1.5-1000 Repair. The QAI observed that welding was completed and work at this location appeared to be in general compliance with contract documents. The QAI observed that three excavated areas were present on the B face of weld B1 with the following Y locations and dimensions:

Excavation 1) - Y = 55mm, Length = 400mm, Depth =16mm and Width = 25mm
Excavation 2) - Y = 500mm, Length = 235mm, Depth =13mm and Width = 25mm
Excavation 3 - Y = 940mm, Length = 420mm, Depth =14mm and Width = 25mm

4). OBG Field Splice 6W/7W Weld ID: F1, Face B (SMAW R-1 Repairs)

The QAI periodically observed AB/F approved welder Jorge Lopez (ID 6149) performing R-1 repair welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position. See photo below. QC Inspector Tony Sherwood 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-D1.5-1000 Repair. The QAI observed that welding was in process and work at this location appeared to be in general compliance with contract documents. The QAI observed that seven excavated areas were present on the B face of weld F1 with the following Y locations and dimensions:

Excavation 1) - Y = 20mm, Length = 270mm, Depth =13mm and Width = 30mm
Excavation 2) - Y = 410mm, Length = 100mm, Depth =8mm and Width = 25mm
Excavation 3 - Y = 600mm, Length = 140mm, Depth =15mm and Width = 32mm
Excavation 4) - Y = 755mm, Length = 120mm, Depth =15mm and Width = 25mm
Excavation 5) - Y = 1010mm, Length = 100mm, Depth =11mm and Width = 23mm
Excavation 6 - Y = 1120mm, Length = 110mm, Depth =10mm and Width = 23mm
Excavation 7 - Y = 1270mm, Length = 90mm, Depth =10mm and Width = 20mm

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

5). OBG Field Splice 6W/7W Weld D2, Face B (FCAW-G)

The QAI periodically observed the in process welding of OBG Field Splice 6W/7W weld ID: D2, Face B per the Flux Cored Welding (FCAW-G) process in the 4G (overhead) position by AB/F approved welder Rory Hogan (ID 3186). 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-D1.5-3040A-4. Welding of fill and cover passes was completed during the QA Inspector's shift and work at this location appeared to be in general compliance with contract documents.

6). Bent Cap W2 Pipe Supports (Fit-up and Tack Welding)

The QAI periodically observed the fit-up and tack welding of pipe supports to embeds in the bent cap located at the W2 line. The tack welding was performed by F. W. Spencer approved welder David Garcia (ID 8789) utilizing a 3.2 mm electrode as per the Welding Procedure Specification (WPS) identified as Fillet Murex. The QAI did not observe any welding other than tack welding on this date. 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.

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