

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-017610**Date Inspected:** 21-Oct-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 6W/7W Weld ID: C2, Face A - (FCAW-G)
- 2). OBG Field Splice 6W/7W Weld ID: E1 & E2, Face B - (Plasma Cutting)
- 3). OBG Field Splice 7W/8W Weld ID: A2 & A5, Face A - (QC UT)
- 4). OBG Field Splice 7W/8W Weld ID: A1, Face A - (SMAW R-1 Repairs)

- 1). OBG Field Splice 6W/7W Weld ID: C1, Face A - (SMAW)

The QAI periodically observed AB/F approved welder Song Tao Huang (ID 3794) assisted by AB/F approved welder Jin Quan Huang, performing welding per the Flux Cored Arc Welding (FCAW-G) process in the 3G (vertical) position of cover passes on weld ID: C2. See photo below. The QAI observed 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-D1.5-3042B-1. The QAI observed as Mr. Sherwood measured the welding parameters and noted the following measurements were obtained: amps = 250, volts = 23.5 and travel speed=333. The QAI calculated the heat input as 1.05 kJ/mm. The QAI observed that the work at this location was in process and appeared to be in general compliance with contract documents.

- 2). OBG Field Splice 6W/7W Weld ID: E1 & E2, Face B - (Plasma Cutting)

The QAI periodically observed AB/F approved welders Rory Hogan (ID 3186) and Jeremy Dolman (ID 5042)

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

performing Plasma Cutting to remove the backing bar and prepare a groove for back welding. The work at this location was in process for the remainder of the QA Inspectors shift.

3). OBG Field Splice 7W/8W Weld ID: A2 & A5, Face A – (QC UT)

The QAI periodically observed QC Inspector Tom Pasqualone performing UT of OBG Field Splice 7W/8W Weld ID: A5 from the A face. Mr. Pasqualone utilized the UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 during the examination of the splice weld. The QC technician performed the required shear wave testing during the testing for weld soundness utilizing a .63 x .75 rectangular transducer. The QAI also periodically observed QC Inspector Steve McConnell performing UT of OBG Field Splice 7W/8W Weld ID: A2 from the A face. Mr. McConnell utilized the UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 during the examination of the splice weld. The QC technician performed the required shear wave testing during the testing for weld soundness utilizing a .63 x .75 rectangular transducer. The UT examinations were in process during this shift and the QAI observed that work at this location appeared to be in general compliance with contract documents.

4). OBG Field Splice 7W/8W Weld ID: A1, Face A – (SMAW R-1 Repairs)

The QAI periodically observed AB/F approved welder Jin Pei Wang (ID 7299) performing grinding to excavate R-1 Ultrasonic Testing (UT) repair areas identified by UT performed by QC on 10-20-10 on OBG Field Splice 7W/8W Weld ID: A1. The QAI periodically observed QC Inspector Steve McConnell performing Magnetic Particle Testing (MT) of the excavated areas prior to welding. Once the excavated areas were determined to be deep enough and free of indications the final dimensions were measured by the QC as noted below. 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 also periodically observed AB/F approved welder James Zhen (ID 6001) performing welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position. 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 areas excavated during the QA Inspectors shift were verified by the QAI, and were located at the following Y locations and had the following dimensions:

- 1) Y = 0mm, Length = 265mm Width = 27mm and Depth = 20mm,
- 2) Y = 1000mm, Length = 470mm Width = 20mm and Depth = 20mm
- 3) Y = 2400mm, Length = 160mm Width = 20mm and Depth = 14mm
- 4) Y = 3570mm, Length = 125mm Width = 20mm and Depth = 14mm

The work at this location appeared to be in general compliance with the contract documents.



WELDING INSPECTION REPORT

(Continued Page 3 of 3)

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
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Reviewed By:	Levell,Bill	QA Reviewer
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