

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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016075**Date Inspected:** 05-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**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 1W/2W Weld ID: D1 & D2, Face B
- 2). OBG Field Splice 2W/3W Weld ID: D1 & D2, Face A
- 3). OBG Field Splice 3W/4W Weld ID: D1 & D2, Face A
- 4). OBG Field Splice 4W/5W Weld ID: C1 & C2, Face A

- 1). OBG Field Splice 1W/2W Weld ID: D1 & D2, Face B

The QAI periodically observed Quality Control (QC) Inspector Tom Pasqualone performing Ultrasonic Testing (UT) of repair cycle 1 (R-1) UT repairs from the B Face of OBG Field Splice 1W/2W Weld ID: D1 and D2. The QAI observed 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 observed that The QC Inspector had marked some areas that appeared to be UT rejects. See Summary of Conversations. The UT examination was completed from face A during the QA Inspectors shift and the work at this location appeared to be in general compliance with contract documents. See photo below of QC UT in process.

- 2). OBG Field Splice 2W/3W Weld ID: D1 & D2, Face A

The QAI periodically observed QC Inspector Tony Sherwood performing Magnetic Particle Testing (MT) of

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completed R-1 Repairs from the A face of OBG Field Splice 2W/3W Weld ID: D1 & D2. Mr. Sherwood stated that no indications were observed. 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.

3). OBG Field Splice 3W/4W Weld ID: D1 & D2, Face A

The QAI periodically observed AB/F approved welder Fred Kaddu (ID 2188) performing repair welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position of R-1 repair excavations at Ultrasonic Testing (UT) reject areas from the A face. AB/F approved welder Kenneth Chappell was performing the excavating by grinding. The 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 periodically observed QC Inspector Tony Sherwood performing Magnetic Particle Testing (MT) of the repair excavations at the repair locations prior to Mr. Kaddu performing 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. Work was not completed at this location during the QA Inspectors shift and the work appeared to be in general compliance with contract documents. See Summary of Conversations.

4). OBG Field Splice 4W/5W Weld ID: C1 & C2, Face A

The QAI periodically observed AB/F approved welders Song Tao Huang (ID 3794) and Jin Quan Huang (ID 9340) positioning the Proheat 35 Induction Heating System element to preheat from the B face prior to performing Flux Cored Arc Welding (FCAW-G) from the A face of OBG Field Splice 4W/5W Weld ID: C1 & C2. Later in the shift after the required preheat of 100°C was verified, the QAI periodically observed AB/F approved welder Song Tao Huang (ID 3794) performing welding of a root pass in of a portion Weld ID: C1 & C2 per the FCAW-G process in the 3G (vertical) position. 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 QC Inspector stated that the welding amperes were measured at 250 amps, the welding volts were 24.2 volts and the travel speed was measured to be 290 mm/min. The QAI calculated the heat input at 1.25 kJ/mm. Later in the shift the QAI observed welder Song Tao Huang (ID 3794) preheating with a propane torch and then after verifying adequate preheat, performing welding of a root pass in another portion of Weld ID: C1 per the Shielded Metal Arc Welding (SMAW) process. See photo below. The work at this location was in process for the duration of the QA Inspectors shift and appeared to be in general compliance with contract documents.



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Summary of Conversations:

From item 1).

At the completion of the UT from face B at this location the QA Inspector asked how many areas had been rejected. The QC Inspector stated that 9 or 10 areas were class A rejects from the B face of OBG Field Splice 1W/2W Weld ID: D1 & D2.

From item 3).

The QAI inquired of the QC Inspector Mr. Tony Sherwood as to the number of weld repairs that were to be welded at OBG Field Splice 3W/4W Weld ID: D1 & D2, Face A. Mr. Sherwood referred to the QC UT Reports for welds D1 & D2 and stated that there were 7 QC UT rejects in weld D1 and 5 QC UT rejects in weld D2. He also stated that due to the shallow depth, all of the repairs were to be excavated and repair welded from the B face.

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
