

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-015830**Date Inspected:** 23-Jul-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: B1, Face B
- 2). OBG Field Splice 1W/2W Weld ID: D1 & D2, Face B
- 3). OBG Field Splice 4W/5W Weld ID: D1 & D2, Face B
- 4). OBG Field Splice 5W/6W Weld ID: F1, Face A
- 5). OBG Field Splice 5W/6W Weld ID: A1, Face A
- 6). OBG Field Splice 5W/6W Weld ID: E1 & E2, Faces A and B

- 1). OBG Field Splice 1W/2W Weld ID: B1, Face B

The QAI periodically observed SE QC Inspector Tom Pasqualone performing UT from the B Face of OBG Field Splice 1W/2W Weld ID: B1. Mr. Pasqualone utilized the UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 during the examination of UT repairs in 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 examination was completed from face B during this shift and the QAI spoke with the QC inspector regarding the UT results. See Summary of Conversations below.

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

The QAI periodically observed SE QC Inspectors Steve McConnel and Jesse Cayabyab performing Ultrasonic Testing (UT) from the B Face of OBG Field Splice 1W/2W Weld ID: D1 & D2. The two QC Inspectors utilized

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the UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 during the examination. The QAI periodically observed that the QC technicians performed the required longitudinal wave utilizing a 1" diameter transducer for testing base metal soundness and a .63 x .75 rectangular transducer to perform the shear wave testing during the testing for weld soundness. The UT examination was not completed during this shift. The QAI noted that both QC Inspectors had identified several indications which were marked on the B-face of the groove weld. See Summary of Conversations below.

3). OBG Field Splice 4W/5W Weld ID: D1 & D2, Face B

The QAI periodically observed AB/F personnel performing plasma cutting to remove the backing bar from the outside groove to prepare for back welding. The work at this location was not completed during this shift.

4). OBG Field Splice 5W/6W Weld ID: F1, Face A

The QAI periodically observed AB/F approved welder Xiao Jian Wan (ID 9677) performing FCAW-G on the A face of OBG Field Splice 5W/6W Weld ID: F1. SE 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-D1.5-3040B-3. The QA observed that Mr. Sherwood obtained the following welding parameters: welding amps = 230, welding volts = 21.5. See photo below. The welding was completed at this location and the work appeared to be in general compliance with contract documents.

5). OBG Field Splice 5W/6W Weld ID: A1, Face A

The QAI periodically observed AB/F approved welder Hua Quiang Hwang (ID 2930) grinding to excavate (2) two Ultrasonic Testing (UT) rejected indications on the A face of the OBG Field Splice 5W/6W Weld ID: A5. The QAI observed SE QC Inspector Tony Sherwood performing Magnetic Particle Testing (MT) of the excavated areas prior to the commencement of 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 periodically observed AB/F approved welder James Zhen (ID 6001) performing repair welding of the two excavated areas per the Shielded Metal Arc Welding (SMAW) process. See photo below. SE 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-D1.5-1001-Repair.

6). OBG Field Splice 5W/6W Weld ID: E1 & E2, Faces A and B

The QAI periodically observed in process fit-up activities at OBG Field Splice 5W/6W Weld ID: E1 & E2, Faces A and B. Inspector Tony Sherwood was present to verify that the joint fit-up was in compliance with contract documents. The QAI periodically observed AB/F approved welder Rick Clayborn (2773) adjusting the fit-up gear and performing welding per the SMAW process to attach U bars on the A Face of Weld ID: E1 & E2. QC Inspector Tony Sherwood was present to verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-F1200-A. Work appeared to be complete at this location.

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Summary of Conversations:

From item 1). The QC Inspector Mr. Pasqualone pointed out (1) rejectable indications in weld B1. The QC Inspector stated that the indication was a Class A reject with a rating of +1 and a depth of 10mm.

From item 2). The QAI spoke with the QC Inspector Mr. McConnell and asked what kind of indications he was finding. Mr. McConnell stated that the plates are 35mm thick at this splice weld and the indications are located throughout the thickness.

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