

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-016045**Date Inspected:** 03-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 A
- 2). OBG Field Splice 1W/2W Weld ID: D1 & D2, Face B
- 3). OBG Field Splice 1W/2W Weld ID: F1, Face A & Face B
- 4). OBG Field Splice 3W/4W Weld ID: D1 & D2, Face A

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

The QAI periodically observed AB/F approved welders Xiao Jian Wan (ID 9677) and Jin Pei Wang (ID 7299) grinding to excavate Ultrasonic Testing (UT) reject areas from the A face of OBG Field Splice 1W/2W Weld ID: D1 & D2. The QAI observed AB/F approved welder Xiao Jian Wan (ID 9677) performing Shielded Metal Arc Welding (SMAW) of excavated areas in the 1G (flat) position. The QAI observed QC Inspector Tom Pasqualone 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 Tom Pasqualone performing Magnetic Particle Testing (MT) of the repair excavations prior to welder Xiao Jian Wan performing welding at the repair locations. 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 QC Inspector Tom Pasqualone assisted by Jin Pei Wang performing lay-out of one additional indication on the A face of weld D2. See Summary of Conversations. The work at this location was in process for the remainder of the QA Inspector's shift and appeared to be in general compliance with

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contract documents.

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

The QAI periodically observed AB/F approved welders James Zhen (ID 6001) and Hua Quiang Hwang (ID 2930) grinding to excavate UT reject areas from the B face of OBG Field Splice 1W/2W Weld ID: D1 & D2. The QAI periodically observed AB/F approved welder James Zhen (ID 6001) performing Shielded Metal Arc Welding (SMAW) in the 4G (overhead) position. The QAI observed QC Inspector Tom Pasqualone and later QC Inspector John Paglieri 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 work at this location was in process for the remainder of the QA Inspector's shift and appeared to be in general compliance with contract documents.

3). OBG Field Splice 1W/2W Weld ID: F1, Face A & Face B

The QAI periodically observed QC Inspector Steve McConnell performing Ultrasonic Testing (UT) of one (1) (R-2) repair area. The UT examination was completed from face B during this shift and the QAI observed that the QC Inspector had marked "INT. UT OK" on face B on the steel adjacent to the repair area. The QC Inspector explained that the weld was not yet acceptable as he still needed to scan from the face A side. The QAI then periodically observed QC Inspector Steve McConnell performing UT of the same (R-2) repair area from face A. See Photo of QC UT in process below. The QC utilized the UT Procedure identified as SE-UT-D1.5-CT-100 Rev. 4 during the examination of the splice weld repair. The QC technician performed the required shear wave testing during the testing for weld soundness utilizing a .63 x .75 rectangular transducer. The QC Inspector completed the UT of the (R-2) repair area on this shift and The QAI observed that the QC Inspector did not accept the UT repair and had marked two separate indications on the weld repair on Face A. The indications were located by the QC Inspector at Y = 55mm and Y = 100mm with depths of 12 to 14mm and 15mm respectively. See photo of UT indications below. The QA noted that the repair excavation of the R-1 repair at this location on 07-30-10 was 15mm to 16mm in depth from the A face which appears to coincide with the UT rejected R-2 indication depth.

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

The QAI periodically observed QC Inspector Jesse Cayabyab performing UT from the A Face of OBG Field Splice 3W/4W Weld ID: D1& D2. The QAI periodically observed that Mr. Cayabyab 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 longitudinal wave testing utilizing a 1" diameter transducer for base metal soundness and 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 A during the QA Inspectors shift and the work at this location appeared to be in general compliance with contract documents.

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Summary of Conversations:

As stated in the body of this report, and From item 1):

The QAI asked the QC Inspector Tom Pasqualone why he was laying out an additional indication on the A Face of D2 on this date. The QC Inspector stated that an indication was being excavated from the B face when they discovered a slag line. As they ground to remove the slag, the excavation depth was getting to deep. The QC Inspector added that the welder on the outside (the B Face) was repair welding over the slag in the excavated area and the slag line would be excavated from the inside (the A 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