

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-017347**Date Inspected:** 12-Oct-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1100**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Tom Pasqualone**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:** OBG Section**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and to monitor American Bridge/Fluor (ABF) welding operations.

The following observations were made:

- 1) At weld joints E6/E7 – A1, outside the OBG section: It appeared QC personnel had performed Ultrasonic Testing (UT) of the repairs welded 10/8/2010. The area had what appeared to be markings of both the excavation of these repairs and new UT indication for repair. See below for details.
- 2) At weld joints E7/E8 – A1 thru A5, outside the OBG section: QC Inspector Tom Pasqualone was performing UT on the production welds.
- 3) At weld joints E6/E7 – D-1 and 2, outside the OBG section: ABF welding personnel Rory Hogan (#3186) and Jeremy Dolan (#5042) were setting up equipment in preparation to remove the backing bar.
- 4) At Round Deck Plate penetration 1E-PP-11-E3 #3, outside the OBG section: ABF welding personnel Darcel Jackson (#9967) was performing grinding in preparation of repair welding.
- 5) At Access Plate 2E-PP-13.5-E2-SW, outside the OBG section: QC Inspector Pat Swain was performing UT on the production weld.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

At weld joints E6/E7 – A1, outside the OBG section this QA Inspector observed markings on the deck indicating the UT inspection of the repair welds, which were transverse to the weld, had been performed and additional UT indications had been found both in the weld and base material. The repair cycle (3) defects located at 510 mm and 575mm from “B” weld had markings consisting of cross hatching with a paint marker and what appeared to be additional UT indications branching off from these areas. Please see photo below. This QA Inspector noticed these markings at approximately 0715 hours. Later this QA Inspector observed QC Inspector Steve McConnell walking across the deck and asked him if he had performed the UT and marked the indications, this QA Inspector was informed these marks had been removed and that further UT inspections were to be performed using both a straight beam and angle beam transducer.

At weld joints E7/E8 – A1 thru A5, outside the OBG section this QA Inspector observed QC Inspector Tom Pasqualone performing UT. This QA Inspector observed what appeared to be an AWS style transducer and 70 degree wedge combination being used for the inspection. This QA Inspector observed the various signals on the screen presentation and the scanning patterns being used. The work observed appeared to comply with the contract requirements.

At weld joints E6/E7 – D-1 and 2, outside the OBG section this QA Inspector observed ABF welding personnel Rory Hogan (#3186) and Jeremy Dolan (#5042) were setting up equipment in preparation to remove the backing bar. Please note that weld had not been completed on weld “E” at this location and that welding was not observed during this QA Inspector’s shift.

At Round Deck Plate penetration 1E-PP-11-E3 #3, outside the OBG section this QA Inspector observed ABF welding personnel Darcel Jackson (#9967) was performing grinding to excavate multiple repairs. This QA Inspector was informed by ABF welding personnel Darcel Jackson (#9967) that he had elected to use the carbon arc process to excavate the vast majority of the weld rather than have multiple excavations to re-weld. This QA Inspector observed the excavation process had created a through wall area approximately 25 mm in length and 12 mm wide. It was not decided at this time if ceramic or copper backing was to be used during the welding. QCM Jim Bowers was present while this QA Inspector asked ABF welding personnel Darcel Jackson (#9967) what the backing material would be and commented that it does not matter and that either one would be acceptable. Please see photo of excavation area below.

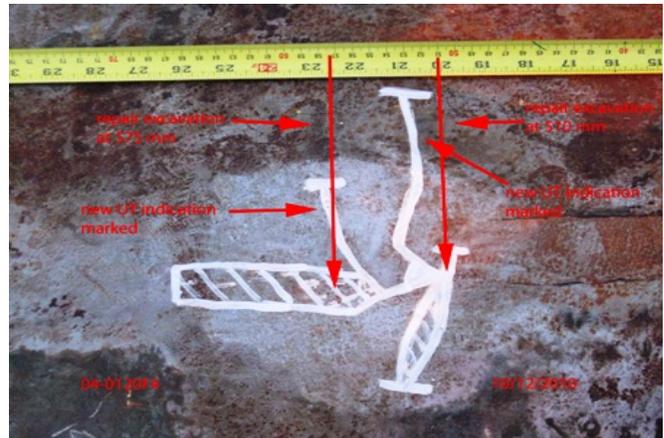
At Access Plate 2E-PP-13.5-E2-SW, outside the OBG section this QA Inspector observed QC Inspector Pat Swain performing UT. This QA Inspector observed what appeared to be an AWS style transducer and 70 degree wedge combination being used for the inspection. This QA Inspector observed the various signals on the screen presentation and the scanning patterns being used. The work observed appeared to comply with the contract requirements.

Summary of Conversations:

As noted above.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



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 Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

Inspected By: Hager, Craig

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer