

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-017482**Date Inspected:** 13-Oct-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1200**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Jesse Cayabyab		
Inspected CWI report:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A

CWI Present:	Yes	No	
Rod Oven in Use:	Yes	No	N/A
Weld Procedures Followed:	Yes	No	N/A
Verified Joint Fit-up:	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 W6/W7 – A1, A3 and A5, outside the OBG section: ABF welding personnel Fred Kaddu (#2188) was using the Shielded Metal Arc Welding (SMAW) process to perform repair welding. QC Inspector Jesse Cayabyab was present and monitoring the work.
- 2) W7/W8 – A1 thru A5, inside the OBG section: ABF welding personnel were setting up equipment to start Submerged Arc Welding (SAW) while the deck and weld joint were being preheated.
- 3) Access Plate 2E-PP-17.5-E2-SW, outside the OBG section: ABF welding personnel Wai Kitlai (#2953) was grinding the previously back gouged section of the weld joint.
- 4) E6/E7- A1, outside the OBG section: This QA Inspector observed marking from Ultrasonic Testing (UT) indications representative of defects had been marked at a previous repair site.
- 5) At weld joints E6/E7 – D-1 and 2, outside the OBG section: ABF welding personnel Rory Hogan (#3186) and Jeremy Dolan (#5042) were using a plasma torch to remove the backing bar.

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6) At weld joints W6/W7 – D1 and D2, outside the OBG section: ABF welding personnel Bryce Howell (#5591) was setting up equipment to remove the backing bar.

At weld joints W6/W7 – A1, A3 and A5, outside the OBG section this QA Inspector observed ABF welding personnel Fred Kaddu (#2188) was in the process of grinding out UT defects and using the SMAW process to perform repair welding. The first excavation observed was at A4, approximately 5400 mm. This QA Inspector randomly observed as the excavation was made using a grinding wheel and later a burr. This QA Inspector observed QC Inspector Jesse Cayabyab perform and accept a visual and Magnetic Particle Testing (MT) of the excavation. This QA Inspector performed a visual verification and measured the excavation as: 16 mm deep, 27 mm wide and 110 mm long. The UT indication marked next to the excavation noted the defect to be 10 mm deep and 40 mm long. This QA Inspector observed as QC Inspector Jesse Cayabyab verified the SMAW welding parameters as follows: 115 amperes using a 3.2 mm diameter E7018H4R electrode. Later in the shift this QA Inspector observed ABF welding personnel Fred Kaddu (#2188) had finished welding the repair area noted above and was in the process of grinding out another repair located at weld A3, approximately 3600 mm. This QA Inspector randomly observed QC Inspector Jesse Cayabyab perform and accept the visual and MT on the excavation. This QA Inspector performed a visual verification and measured the excavation as: 11 mm deep, 20 mm wide and 105 mm long. The UT indication marked next to the excavation noted the defect to be 9 mm deep and 35 mm long. This QA Inspector performed a verification of the SMAW welding parameters used by ABF welding personnel Fred Kaddu (#2188) at this location and observed the following: 120 amperes using a 3.2 mm diameter E7018H4R electrode. The welding observed this date appeared to comply with ABF-WPS-D15-1001 Repair. Welding at A3 was completed prior to the end of this QA Inspector shift, but repair welding had not started at A5. This QA Inspector provided QA Inspector Jojo Lizardo a turnover noting this information.

At W7/W8 – A1 thru A5, inside the OBG section this QA Inspector observed multiple ABF welding personnel setting up equipment in preparation to start the SAW. This QA Inspector observed the preheating blankets were in position but that the base material did not appear to have reached the minimum temperature.

At Access Plate 2E-PP-17.5-E2-SW, outside the OBG section this QA Inspector observed ABF welding personnel Wai Kitlai (#2953) was using a grinder to remove the slag and prepare the area for welding after back gouging had been performed. Welding was not observed at this location during this QA Inspector's shift.

At E6/E7- A1, outside the OBG section this QA Inspector observed marking on the weld which appeared to be Ultrasonic Testing (UT) indications representative of defects. Please note multiple repairs and UT markings have been observed at this location and previously reported. The marking this date appeared at 500 mm (depth of 9-11 mm and 35 mm long), 565 mm (depth of 10 mm and 18 mm long) and at 620 mm (depth of 13-19 mm and 40 mm long).

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 using a plasma torch to remove the backing bar.

At weld joints W6/W7 – D1 and D2, outside the OBG section this QA Inspector observed ABF welding personnel Bryce Howell (#5591) was setting up equipment in preparation to remove the backing bar.

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Summary of Conversations:

As noted above.

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
