

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-015676**Date Inspected:** 15-Jul-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Tony Sherwood, Jesse Cayabyab, CWI McCannell			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:

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified 5W/6W, and the following observations were made:

Bike Path Cantilever Beams

The QA Inspector randomly observed the ABF welder identified as Fred Kaddu continue the fillet weld threaded stud repairs associated with CCO#44. The QA Inspector noted it was previously observed and identified that the fillet weld size for the threaded studs did not meet the requirements of the contract documents. The QA Inspector randomly observed the ABF helper perform grinding tasks with a flapper wheel in an attempt to remove the majority of the previous under sized fillet welds, paint and galvanization. The QA Inspector randomly observed the ABF helper working in front of the ABF welder preparing the studs for the fillet welds to be repaired by shielded metal arc welding.

The QA Inspector randomly observed the Smith Emery (SE) Quality Control (QC) Inspector Tony Sherwood on site to monitor the in process repairs. The QA Inspector noted the QC inspector set the SMAW machine and parameters to 135 Amps with 1/8" E7018 low hydrogen electrodes. The QA Inspector noted the preheat and welding parameters appeared to be in general compliance with ABF-WPS-D1.5-F1200-A. The QA Inspector randomly observed the ABF welder complete several of the studs on the QA Inspectors shift. It was observed the Bike Path Cantilever Beams identified as:

BK001-011 PP15

BK-001-005 PP27

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BK-0001-001 PP25
BK-001-004 PP21
BK-001-018 PP33
BK-001-020 PP39
BK-001-019 PP37

were completed on the previous shift. The QA Inspector noted the following bike path cantilevers were completed with welding and visual testing by the end of the QA Inspectors shift:

BK001-022-PP43
BK001-023-PP45
BK001-016-PP35
BK001-024-PP47
BK001-006-PP31
BK001-008-PP13

The QA Inspector noted a total of 4 welds per beam were completed. The QA Inspector randomly observed the SE QC Inspector Tony Sherwood perform visual testing (VT) of the completed welds. The QA Inspector noted the welds were accepted by the QC Inspector and indicated directly on the material adjacent to the completed weld. The QA Inspector performed random visual testing (VT) and noted the size and profile of the completed fillet welds appeared to meet the general requirements of the contract documents. The QA Inspector noted no paint or coating had been re-installed on the completed welds, the QA Inspector noted the welds and exposed base material had begun to show oxidation.

The QA Inspector it was randomly observed the ABF welding operators Mike Maday and Bryce Howell continue the submerged arc welding (SAW) fill/cover pass. The QA Inspector noted the weld joint appeared to be approximately 50% complete upon the arrival of the QA Inspector. The QA Inspector randomly observed the ABF welding personnel had pre determined and indicated with a distinguishing marking on base material the sequencing in which the joint would be welded. The QA Inspector observed the weld was broken into 5 sections beginning in the center and moving outward toward the edges of deck plate.

5W/6W-A

A3-A1

Upon the arrival of the QA Inspector it was observed the ABF welder Mike Maday had not performed any SAW. The QA Inspector was informed by the SE QC Inspector Jesse Cayabyab, multiple slag inclusions were located through out the weld segment identified above. The QA Inspector randomly observed the ABF welder and helper performing grinding tasks in an attempt to remove any slag inclusions. The QA Inspector randomly observed the ABF welder Mike Maday perform shielded metal arc welding (SMAW) in the areas which were previously excavated for slag inclusions. The QA Inspector noted the ABF welder was utilizing 1/8" E7108 low hydrogen electrodes with 130 Amps. After the SMAW repairs were completed, the QA Inspector observed the ABF welder continue the SAW fill passes.

The QA Inspector randomly observed the ABF welding operator Mike Maday begin welding the SAW fill pass in the center of A3 and weld to the end of section A1 at approximately 1000 after the SMAW repairs were complete. The QA Inspector randomly observed the SAW parameters and they were 570 Amps, 31.5 Volts and a travel

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speed of 381mm/min. The QA Inspector noted the SAW parameters appeared to be in general compliance with ABF-WPS-D1.5-4042B-1. After the root pass was completed between the center of A3-A1, the SE QC Inspectors performed MT of the root pass. The QA Inspector noted no relevant indications were located at the time of the testing. After some minor grinding and blending the QA Inspector randomly observed the ABF welder continue performing the SAW fill passes. The QA Inspector randomly observed the ABF welding operators performing the SAW fill passes for the remainder of the shift.

A3-A5

The QA Inspector randomly observed the ABF welding operator Bryce Howell continue welding the SAW fill pass in the center of A3 and weld to the end of section A5. The QA Inspector randomly observed the SAW parameters and they were 560 Amps, 32.1Volts and a travel speed of 381mm/min. The QA Inspector noted the SAW parameters appeared to be in general compliance with ABF-WPS-D1.5-4042B-1. After the root pass was completed between the center of A3-A5, the SE QC Inspectors performed MT of the root pass. The QA Inspector noted no relevant indications were located at the time of the testing. After some minor grinding and blending the QA Inspector randomly observed the ABF welder continue performing the SAW fill passes. The QA Inspector randomly observed the ABF welding operators performing the SAW fill passes for the remainder of the shift.

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:	Bettencourt,Rick	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
