

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1x.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026703**Date Inspected:** 13-Nov-2011**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:** Job Site

CWI Name:	Salvador Merino, Fred VonHoff, JC	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:

This Quality Assurance Inspector (QAI) was present at the Self Anchored Suspension (SAS) job site. The following items were observed; see individual item numbers in the body of this report for further details.

Field Splice 12E/13E

1, Edge Plate E. QA Ultrasonic Testing verification.

Segment 14E

- 2, Deck penetration SMAW welding in process.
- 3, Deck penetration QC Ultrasonic Testing in process.
- 4, Deck penetration QA Ultrasonic Testing verification.
- 5, Deck penetration excavation and SMAW repair welding in process.

Segment 14W

6, Deck penetration SMAW welding in process.

1. The QA inspector performed ultrasonic verification testing of the complete joint penetration (CJP) groove weld edge plate field splice 12E/13E - F. The ultrasonic testing (UT) was performed to verify the weld meets the requirements of the contract documents and AWS D1.5-2002. The weld and base metal were scanned utilizing a Krautkramer Branson USN 58 for the following scans. The base metal lamination check was performed with a 1.0" dia. round 2.25 MHz transducer. The shear wave scan was performed with a 0.75" x 0.625" 2.25 MHz transducer on a 70-degree angle wedge from face A. Scanning patterns A, B, C, and E were utilized. The welds

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examined were found acceptable in accordance with AWS D1.5- 2002 table 6.3 and the contract documents. The QA inspector concurred with the NDT level II technician's assessment. An Ultrasonic Test Report (TL-6027) for the welds that were tested was generated for this date.

2. The QAI periodically observed ABF approved welders Kevin Kananen, ID-6521, Salvador Sandoval, ID- 2202 and Todd Jackson, ID – 4639 welding lifting lug and vent deck penetration complete joint penetration weld inserts at the following locations.

Kevin Kananen, ID-6521, PP126.7 – E3.2 and PP126.7 – E2.9.

Salvador Sandoval, ID- 2202, PP126.2 – E3.7 and PP125.7 – E3.7.

Todd Jackson, ID – 4639, PP126.7 – E4.2 and PP126.7 – E5.

Welding was performed per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position. AB/F QC Inspector Fred Von Hoff was present to monitor the progress and verify that the filler metal and welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1050A-Rev 0. The work appeared to be in general compliance with contract documents.

3. The QA inspector observed the NDT technician perform ultrasonic testing of the complete joint penetration (CJP) lifting lug and vent deck penetration inserts 14E – PP128 – E1 to E4 and 14E – PP126.7 – E3. The welds were scanned utilizing a GE USM-35. The testing was performed in accordance with the approved procedure SE-UT-D1.5-CT-100 Rev.4. The welds 1, 2 and 3 were accepted in accordance with AWS D1.5-2002 in the longitudinal and transverse direction. The following indications were marked on the exterior face of the weld on this date.

Weld 14E - PP128 – E4 , Y=370mm, X=+10mm, L=10mm, D=12mm, rating +8 db.

Weld 14E - PP126.7 – E3 , Y=390mm, X=+15mm, L=10mm, D=14mm, rating +11 db, Y=150mm, L=10mm, D=13mm, rating +10 db.

4. The QA inspector performed ultrasonic verification testing of the complete joint penetration (CJP) lifting lug and vent deck penetration inserts 14E – PP128 – E3 – 1 and 3. The ultrasonic testing (UT) was performed to verify the weld meets the requirements of the contract documents and AWS D1.5-2002. The weld and base metal were scanned utilizing a Krautkramer Branson USN 58 for the following scans. The base metal lamination check was performed with a 1.0" dia. round 2.25 MHz transducer. The shear wave scan was performed with a 0.75" x 0.625" 2.25 MHz transducer on a 70-degree angle wedge from face A. Scanning patterns A, B, C, and E were utilized. The welds examined were found acceptable in accordance with AWS D1.5- 2002 table 6.3 and the contract documents. The QA inspector concurred with the NDT level II technician's assessment. An Ultrasonic Test Report (TL-6027) for the welds that were tested was generated for this date.

5. The QAI periodically observed ABF approved welder Rick Clayborn, ID - 2733 repair welding lifting lug deck penetration inserts 14E – PP128 – E4 – 2 and 4 of repair excavations at Ultrasonic Testing (UT) reject areas from the A face. Rick Clayborn performed the excavating by air – carbon arc gouging. The QAI periodically observed QC Inspector Fred Von Hoff performing Magnetic Particle Testing (MT) of the repair excavations prior to Mr. Clayborn performing welding at the repair locations. The QAI observed that after gouging the repair locations, the excavations were not ground to bright shiny metal as required by AWS D1.5 paragraph 12.17.6. This issue was brought to the attention of the QC Inspector Fred Von Hoff who informed Mr. Clayborn that excavations would have to be ground. Mr. Clayborn proceeded to weld the first excavation without grinding. After completing the first repair, Mr. Clayborn proceeded to grind the next two repairs. This QA Inspector informed QA

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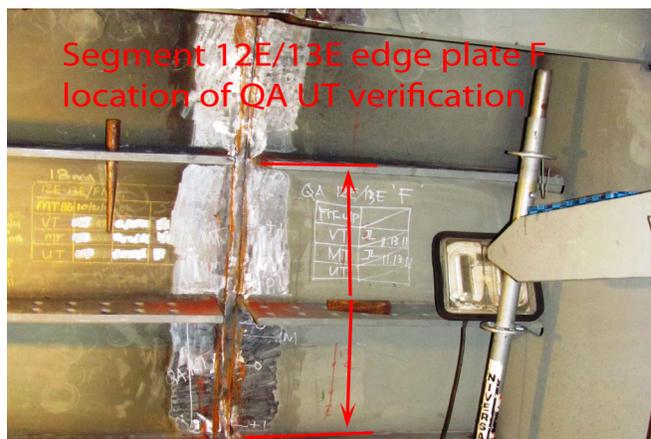
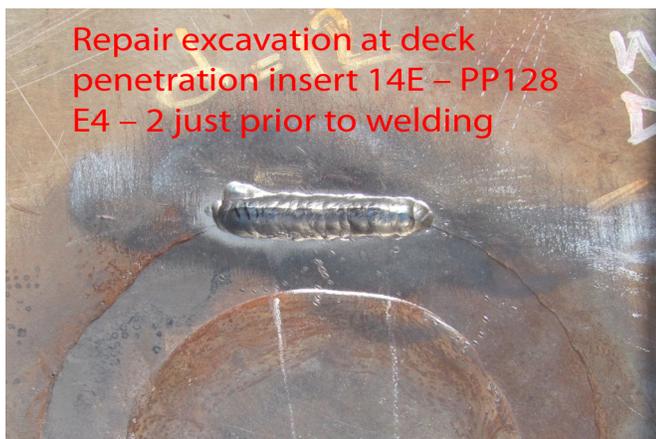
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inspector Mr. Danny Reyes of the unacceptable repair. Welding was performed per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position AB/F QC Inspector Fred Von Hoff was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1000-Repair.

6. The QAI periodically observed ABF approved welders Jorge Lopez, ID-6149 and Mike Jimenez, ID – 4671 welding side B of lifting lug deck penetration complete joint penetration weld inserts at the following locations. Jorge Lopez, ID-6149, PP128 – W4 – 1 and 2.

Mike Jimenez, ID – 4671, PP128 – W3 – 3 and 4.

AB/F personnel performed the excavating of side B by air – carbon arc gouging. After gouging, the weld groove was ground to a smooth contour. Welding was performed per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position. AB/F QC Inspector Salvador Merino was present to monitor the progress and verify that the filler metal and welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1050A-Rev 0. The work appeared to be in general compliance with contract documents.



Summary of Conversations:

Relevant conversations are 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 Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Lanz, Joe	Quality Assurance Inspector
Reviewed By:	Levell, Bill	QA Reviewer
