

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-017229**Date Inspected:** 02-Oct-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted in Summary**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:** Orthotropic Box Girder**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.

Segment 1E

1. Top Plate A ventilation hatch QA verification Ultrasonic Testing performed.

Field Splice 7E/8E

2. Top plate A, SAW welding of top face in process.

Field Splice 6W/7W

3. Top Plate A, Ultrasonic Testing of weld repairs in process.

1). The QA inspector performed ultrasonic verification testing of the complete joint penetration (CJP) groove weld Segment 1E hatch L1E-N. 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 GE USM-52 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.

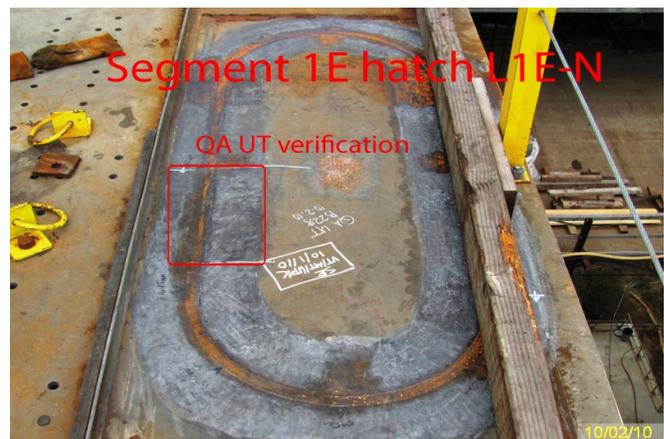
WELDING INSPECTION REPORT

(Continued Page 2 of 3)

2), The QAI observed the Submerged Arc Welding (SAW) of the complete joint penetration (CJP) groove weld of the transverse top deck plate field splice 7E/8E, Segments 1A through 5A. The welding was performed by the welding operators James Zhen, ID-6001 (A1 to A3) and Kenneth Chappell, ID-3833 (A3 to A5) utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-4042B-1 Rev. 0. The welding was observed by Quality Control (QC) Inspector Mr. William Sherwood. The minimum preheat temperature of 60 degrees Celsius and maximum interpass temperature of 230 degrees Celsius was verified by the QA inspector utilizing Tempilstik temperature indicators. The SAW fill pass by Mr. Zhen, average amperage of 560 DC and voltage of 32.2 DC at the welding head gages and average travel speed of 400 millimeters per minute were verified to be within the WPS parameter ranges of 550 to 686 DC amps, 29.9 to 34.8 DC volts and travel speed of 337 to 814 millimeters per minute by QA inspector. The SAW fill pass by Mr. Chappell, average amperage of 550 DC and voltage of 32.5 DC at the welding head gages and average travel speed of 395 millimeters per minute were verified to be within the WPS parameter ranges of 550 to 686 DC amps, 29.9 to 34.8 DC volts and travel speed of 337 to 814 millimeters per minute by QA inspector. At approximately 1300 hours on this date, welding was completed on segments A1 to A5, and appears to be in general compliance with contract documents.

3), The QA inspector observed the NDT technician Tom Pasqualone perform ultrasonic testing of the complete joint penetration (CJP) groove weld top deck field splice 6W/7W-A1 repairs. The weld repairs 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 weld repair witnessed was examined in accordance with AWS D1.5-2002 in the longitudinal and transverse direction. The following indication was marked on the exterior face of the weld on this date.

Weld repair at Y= 4340mm, Indication Y=4380mm, L=50mm, D=18mm, with a +10 indication rating.



Summary of Conversations:

General conversations with QC personnel regarding welding locations and schedule.

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.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

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