

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-017462**Date Inspected:** 15-Oct-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:** See below**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 as 7W/8W-A and hole restoration, and the following observations were made:

7W/8W-A1-A5

Upon the arrival of the QA Inspector, it was observed all production welding was completed on the top deck plate. The QA Inspector randomly observed the ABF representatives remove the welding connex and all welding equipment. The QA Inspector randomly observed the ABF welder Kenneth Chappell begin removing the weld reinforcement with semi automated grinding machine.

7E/8E-A1

Upon the arrival of the QA Inspector, the ABF welder identified as Fred Kaddu was setting up to perform excavations and weld repairs of previously rejected and indicated weld defects. The QA Inspector randomly observed the ABF welder begin excavating the indicated area of the above identified weld joint. The QA Inspector noted the ABF welder was utilizing a burr bit grinder to perform the weld excavation. The QA Inspector randomly observed the excavations through completion. The QA Inspector performed visual testing and random dimensional verification of the first excavation. The QA Inspector randomly observed the first excavation dimensions to be 95mm X 22mm X 19mm deep. The QA Inspector noted the excavation appeared to have been ground and blended to a weldable profile. The QA Inspector noted the Y location of the excavation was Y=605mm-700mm. The QA Inspector randomly observed the second excavation dimensions to be 95mm X 23mm X 19mm deep. The QA Inspector noted the excavation appeared to have been ground and blended to a weldable profile. The QA Inspector

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noted the Y location of the excavation was Y=755mm-850mm. The QA Inspector randomly observed the QC Inspector Tom Pasqualone perform magnetic particle testing of the excavated area to ensure all weld defects had been removed, the QA Inspector noted the QC Inspector did not locate any relevant indications at the time of the testing. The QA Inspector randomly observed the ABF welder preheat and begin performing the shielded metal arc welding (SMAW) repair. The QA Inspector randomly observed the ABF welder to be utilizing 1/8" E7018 low hydrogen electrodes with 125 Amps. The QA Inspector noted the ABF welder spent the remainder of the QA Inspectors shift performing the SMAW repair. The QA Inspector noted the SMAW weld repair was completed on the QA Inspectors shift. The QA Inspector noted the above identified repairs were only two out of 23 total rejects to be repaired.

The QA Inspector performed visual verifications of all 14 transverse weld joints on the job side. The visual production and NDT verification update included 7 East bound and 7 West bound transverse weld splices including 6 weld joints per splice. The QA Inspector recorded all completed production and Quality Control/Quality Assurance Non Destructive Testing. In addition the QA Inspector performed the same visual verifications of the 4 completed man hole access restorations as well as all lifting lug hole restorations. The QA Inspector spent the remainder of the shift updating tracking log spreadsheets for all completed production welding as well as completed and future Non Destructive testing.

Summary of Conversations:

The SE QC Supervisor Leonard Cross informed the QA Inspector he was concerned with the sensitivity difference between the QA Inspector Bert Madison and the SE QC Inspectors. The Lead QA Inspector informed Mr. Cross, the QA Inspector Bert Madison would gladly calibrate with any and all QC Inspectors UT machines for an accurate comparison of sensitivity. In addition Mr. Cross informed the QA Inspector that Mr. Madison was not performing a code scan, or in other words was in violation of AWS D1.5 scanning patterns in section 6 of the AWS D1.5-02 code book. Mr. Cross elaborated by saying he did not feel Mr. Madison was in compliance with the code when he utilized the ground flush surface of the weld to perform UT. Mr. Cross informed the QA Inspector the "climbing up on the weld" was not permitted by the code. The QA Inspector informed Mr. Cross he would get back with him on the scanning pattern issue after some research. Later in the shift after the Lead QA Inspector consulted with the QA Task Lead Inspector Bill Levell and some additional code research, the QA Inspector informed Mr. Cross there was not code violation in Mr. Madison utilizing the ground flush surface of the weld to perform UT and locate and reject weld defects. In addition the QA Inspector asked Mr. Cross to point out or state where in the AWS D1.5-02 code book states the utilizing the ground flush weld reinforcement is not in compliance with scanning patterns. At that time Mr. Cross was unable to recite any sections of the code where it may state such a violation. In addition Mr. Cross appeared to back out of the original statement accusing Mr. Madison of not scanning in compliance with the code.

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

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Reviewed By: Levell,Bill

QA Reviewer