

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-025374**Date Inspected:** 26-Jul-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**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:** Orthotropic Box Girder**Summary of Items Observed:**

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed on the various field fit-up of weld joints and the Complete Joint Penetration (CJP). The welding was performed utilizing the Shielded Metal Arc Welding (SMAW) and the Flux Cored Arc Welding (FCAW-G) processes.

A). OBG E11/E12

The QAI observed the ABF personnel Fred Kaddu grinding the CJP groove weld identified as 11E-12E-F1. The grinding was performed to meet the weld profile requirements as per the contract specifications prior to QC inspection and testing. The grinding was not completed during this shift and it was observed by this QAI that this operation was randomly monitored by the QC inspector, Fred Von Hoff, during this scheduled shift.

B). OBG E10/E11

The QAI observed the excavation of two rejects found during the Ultrasonic Testing (UT) on the bottom plate field splice CJP groove weld identified as 10E-11E-D1. The excavations were performed by welding personnel Wai Kitlai, ID-2953 and at the conclusion of the excavations and grinding these areas to a bright metal the QC inspector, John Pagliero, performed the Magnetic Particle Testing (MPT) and no indications were noted at the time of testing. Later in the shift this QAI randomly observed the repair welding and the QC inspector monitoring the welding utilizing the Weld Procedure Specification (WPS) identified as ABF-WPS-D15-1001- Repair, Rev. 0.

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C). OBG W10/W11

The QAI observed the CJP welding of the side plate field splice identified as 10W-11W-C utilizing the semi-automatic FCAW-G welding process as per the WPS ABF-WPS-D15-3042B-1 Rev. 0. The welding was performed by the welding operator James Zhen, ID-6001 and the inspection was performed by the QC inspector Fred Von Hoff who utilized the noted WPS as a reference during the monitoring of the welding and when verifying the welding parameters. The welding was performed in the overhead position with the work placed in a fixed position at an approximate 22 degree incline. The in process welding and inspection appeared to comply with the contract documents.

This QA Inspector also performed a daily review of field inspection reports and update of the field document control tracking records regarding the Orthotropic Box Girders, Longitudinal and Transverse "A" Deck Stiffeners and Deck Access Holes.

QA Summary

The welding was performed in the flat and horizontal positions utilizing the low hydrogen H4R electrodes and the E71T-1 consumable. The 3.2 mm low hydrogen electrodes were stored in electrically heated, thermostatically controlled oven after the removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by the QAI.

Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection and N.D.E. testing personnel scheduled for this shift.

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:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
