

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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026049**Date Inspected:** 05-Aug-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:** 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 & Tower**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) process.

A). Lifting Lug Holes

The QA inspector observed the CJP welding of the Lifting Lug Hole identified as WN: 10E-PP88-E3-W2 and W4. The welding was performed by the welder Salvador Sandoval ID-2202 utilizing the SMAW as per the WPS identified as ABF-WPS-D15-1110A Rev. 1 which was also used by the QC inspector as a reference to monitor the welding and verify the welding parameters. The QC inspection and the work associated with the welding operation was performed by Fred Von Hoff. The welding was performed in the overhead (4G) position with the work placed in an approximate horizontal plane and the weld metal deposited from the underside of the joint.

Later in the shift, at random intervals, this QAI observed the welding and the inspection, performed by Mr. Von Hoff, which appeared to comply with the contract specifications.

B). Tower Shear Plates

Prior to the repair welding the final dimensions of the excavations was performed by the QC inspector Steve McConnell and was observed and verified by the QAI as follows; WN: N-045 (E), 25 mm wide x 125 mm L x 25

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mm d, WN: E-045 (F), 30 mm wide x 120 mm L x 24 mm d, WN: E-041(R), 50 mm wide x 290 mm wide L x 30 mm d, and WN: S-041 (S), 30 mm wide x 210 mm L x 30 mm d. These excavations were visually inspected and tested by QC utilizing the Magnetic Particle Testing (MPT) method. The testing was performed by the QC inspector John Pagliero and at the conclusion of the testing no rejectable indications were noted by this QAI.

Later in the shift, at random intervals, the QAI observed the QC inspector monitoring the welding operation. The welding was completed during this shift and appeared to comply with the contract specifications.

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 E7018-H4R. The 3.2 mm H4 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.

The digital photographs below illustrate some of the work observed during this scheduled work date.



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.

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Inspected By: Reyes,Danny

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer