

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-023625**Date Inspected:** 12-May-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 Report 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 Girders**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 onsite inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed on various field fit-up of weld joints and the Complete Joint Penetration (CJP) groove welds of the East and West Orthotropic Box Girders (OBG's). The welding was performed utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specifications (WPS's).

A). Lifting Lug Holes

The QAI observed the CJP welding of the lifting lug holes identified as WN:8E-PP64-E4-W1 & W4 and 8W-PP68-W3-W1-W4. The welding was performed by Jason Collins ID-8128 and Darcel Jackson ID-9967 utilizing the WPS's identified as ABF-WPS-D15-1050A-CU, Rev.0 and 1110A. The QAI also observed the QC inspector perform a visual inspection and a Magnetic Particle Test (MPT) of the back gouging and later in the shift at the request of the QC inspector verified the completed welds identified as WN: 8W-PP68-W3-W1-W4. The QA verification was performed to verify the weld and inspection performed by the QC inspector comply with the contract specifications.

The welding and the inspection performed by John Pagliero and Fred Von Hoff appeared to comply with the contract specifications.

B). Pipe Supports

The QAI observed the installation of the PS-5 pipe supports with the corresponding weld numbers; 1100511-07,

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110511-08, 110511-05 & 06 and 110511-09 & 10. The pipe supports were located at the E5, E8 and E9 OBG's along the grid line E5. The fit-up and fillet welding was performed by FW Spencer personnel Rick Kiikvee utilizing the WPS identified as Fillet Murex. The completed welding and the inspection performed by Steve Jensen appeared to comply with the contract specifications.

This QA Inspector also performed a daily review 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, vertical and overhead positions utilizing the E7018-H4R low hydrogen electrodes. The 3.2 mm and the 4.0 mm electrodes were stored in electrically heated, thermostatically controlled oven after 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 WPS's were also utilized by the QC inspectors as a reference to monitor the welding operation, verify the welding parameters and verify the minimum preheat and the interpass temperatures. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter for 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 illustrates some of the related work activities observed during this scheduled shift.



Summary of Conversations:

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

In conversation with Mr. Daquinag regarding the removal of the threaded studs from the bike support beams the QAI was informed by Mr. Daquinag that the QC department had not received documentation regarding removal and inspection of the areas of interest.

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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
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Reviewed By:	Levell,Bill	QA Reviewer
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