

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-022025**Date Inspected:** 17-Mar-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 Items Observed**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:** Tower Grillage**Summary of Items Observed:**

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the following work performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below:

- A). North Tower Shaft
- B). West Tower Shaft
- C). East Tower Shaft

The QA Inspector observed QC Inspector Fred Von Hoff perform visual Inspection on the various Complete Joint Penetration (CJP), Partial Joint Penetration (PJP) and Fillet welds in the North and West Tower. The welding was performed utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specification (WPS) and was also used by the QC Inspector to monitor the welding operation and to verify the welding parameters.

- A). North Tower Shaft

The QA Inspector observed the Partial Joint Penetration (PJP) welding of the cover plates to the outer skin plate, performed by the welders Rick Clayborn ID-2773 and Gil Peralta ID-9453. The PJP welding of the cover plates to the outer skin plate was completed during this shift and the welders commence the CJP welding on the cover plates utilizing the grillage plate as a back-up bar.

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B). West Tower Shaft

The QA Inspector observed the welder Jason Collins ID-8128 perform the fillet welding of the cover plate to the grillage plate and Salvador Sandoval, ID-2202, perform the CJP welding of the cover plates. The welding was not completed during this shift.

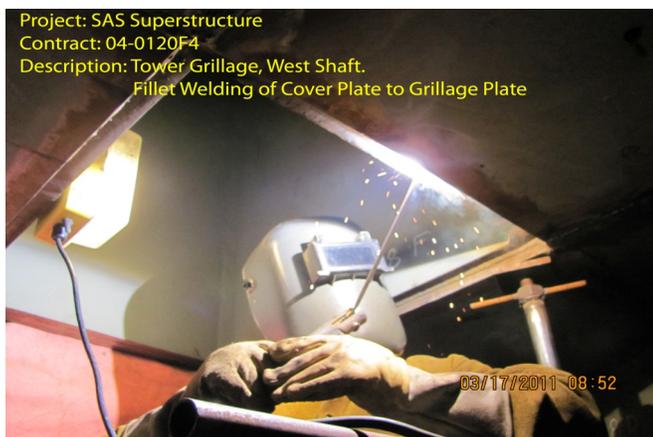
C). East Tower Shaft

At the request of the Quality Control inspector the QAI randomly verified the QC visual inspection of the CJP, PJP and fillet welding of the Tower Grillage, East Shaft. The QAI verification was performed to verify that the welding and the visual weld inspection performed by the QC inspector meet the requirements of the contract documents. At the conclusion of the QAI verification it appeared that the welds and the QC inspection complies with the contract documents.

QA Summary

The welding was performed in the overhead (4G) position with the work placed in an approximate horizontal plane and weld metal deposited from the underneath side. The welding parameters were verified and recorded by the QC inspector and appeared to comply with the WPS's identified as ABF-WPS-D15-F1206, Rev. 0, ABF-WPS-D15-1042A-4, Rev. 0 and ABF-WPS-D15-1162-4, Rev. 0. The welders utilized a slag hammer and a wire wheel attached to a 4" high cycle grinder to remove slag after deposit of each weld pass. The 3.2 mm and 4.0 mm electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers and the exposure limits of the electrodes identified as E9018-H4R and the minimum storage oven temperature of 120 degrees Celsius appeared to be in compliance with the contract documents. The WPS was also utilized by the QC inspector, Fred Von Hoff, 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 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 illustrate some of the work observed during this scheduled shift.



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Summary of Conversations:

There were general conversations with Quality Control (QC) Inspector, Fred Von Hoff, at the start of the shift regarding the location of American Bridge/Fluor 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
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Reviewed By:	Levell,Bill	QA Reviewer
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