

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-023234**Date Inspected:** 30-Apr-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 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 following work performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below:

- A). Lifting Lug Holes
- B). QC Inspection Request

The QA Inspector observed the onsite inspection performed by the contractor's QC Inspection 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:6W-PP44-W4-W2 & W4. The welding was performed by utilizing the WPS's identified as ABF-WPS-D15-1050A-CU, Rev.0 and 1110A, Rev.1. The field inspection performed by Steve McConnell appeared to comply with the contract specifications. The completed CJP welding appeared to comply with contract specifications.

- B). QC Inspection Request

This QAI at the request of Lead Inspector, Bonifacio Daquinag, Jr., performed an inspection to verify the weld and

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testing performed by QC comply with the contract specifications of the following; WN: 8W-PP61.5-W5-LSE & LSW, WN: 9W-10W-A-LS1, LS2 & LS4-LS6 and WN: 6W-PP40-W4-W1-W4. For additional information see QAI inspection reports TL-6027 and TL-6028.

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 overhead (4G) position utilizing the E7018-H4R low hydrogen electrodes. The 3.2 mm electrode 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 inspector 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 photograph 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., 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.

In conversation with Structures Representative, Doug Wright, this QAI was informed that the Electroslag Welding (ESW) of the shear plate mock up would not commence on Monday, May 02, 2011, due to possible power issues.

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

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your project.

Inspected By: Reyes,Danny

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer