

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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-013060**Date Inspected:** 15-Apr-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**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 Girders (OBG)**Summary of Items Observed:**

Quality Assurance inspector (QA) Michael Foerder was at the American Bridge/Flour (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

1. OBG Field Inside Splice 2E/3E C-2 (Second Side)
2. OBG Inside Field Splice 3E/4E C-2 FCAW

Field Splice 2E/3E Face C (Second side-Outside)

The QA inspector periodically observed ABF welding operators Rory Hogan and Jerney Dolan performing grinding, blending and Flux Cored Arc Welding (FCAW) at the junction between the bottom and side plates in order to level area identified prior to utilizing the semi automatic welding equipment ("bug-o"). QC inspector Jim Cunningham was noted to be present in order to monitor the progress and ensure the welding was within the established Welding Procedure Specification (WPS) noted as ABF-WPS-D1.5-3040A-4 (Overhead). The preheat and interpass temperature was verified by the QC and QA inspector to be greater than 93° Celsius (C) and the parameters were verified to be 230 amps, 24 volts and a measured travel speed of 220mm/min. The work progressed throughout the balance of the QA inspector's shift with no Semi-automatic welding performed at this location at the times of review. It was noted the heating coils were in place for the entire distance of the previously completed weld and the QC inspector was monitoring the hold time and temperature.

Field Splice 3E/4E Face C-2 (First side-Inside)

The QA inspector periodically observed the in process Flux Cored Arc Welding (FCAW-G) being performed by

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ABF welding personnel Song Tao Huang for the root pass at weld 2. Prior to the initiation of the arc the QC inspector Tom Pascaulone was observed performing a fit-up inspection to ensure the dimensions were in conformance with the established Welding Procedure Specification (WPS) noted as ABF-WPS-D1.5-3042B-1. An area approximately 150mm in length was identified to have a gap in the backing bar and the welder remedied the situation prior to striking the arc. The QC inspector accepted the fit-up and dimensions and the welder performed the root pass with the following electrical parameters: the preheat and interpass temperature was verified to be greater than 93° Celsius (C), 230 amps, 23.5 volts and a measured travel speed of 230mm/min. After the completion of the root pass it was noted several areas existed which exhibited wormhole porosity and the welder and helper spent the remaining portion of the morning shift removing these areas by grinding and blending. The work progressed throughout the morning shift, was not completed and appeared to be in general conformance with the contract documents.

Summary of Conversations:

No significant conversations held on this date for this contract.

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 Mohammad Fatemi (916)813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Foerder, Mike	Quality Assurance Inspector
Reviewed By:	Levell, Bill	QA Reviewer
