

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-013057**Date Inspected:** 08-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 E-2 FCAW
2. OBG Inside Field Splice 3E/4E E-1 SMAW
3. OBG Inside Field Splice 3E/4E F-1 FCAW
4. OBG Inside Field Splice 3E/4E C-1 and C-2

Field Splice 2E/3E Face E-2 (First side-inside)

The QA inspector periodically observed the in process Flux Cored Arc Welding (FCAW-G) being performed by ABF welding personnel Mitch Sittinger and Song Tao Huang between Y locations designated 7900mm – 10, 200mm. QC inspector Tom Pascaulone 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-D1.5-3042B-1 and supporting Procedure Qualification Records (PQR). Prior to initiating the welding the welder and helper increased the root opening by grinding in order to comply with the WPS requirements in areas identified by the QC inspector. The preheat and interpass temperature was verified by the QC and QA inspector to be greater than 65° Celsius (C) and the parameters were verified to be within the heat input of the established WPS for the root pass. The welder was noted to be performing proper cleaning between the weld pass and the progressed to place additional weld passes in this location. The work progressed throughout the shift, was not completed by the end of the QA inspectors shift and appeared to be progressing in general conformance with the contract documents.

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Field Splice 3E/4E E1 (First side-inside)

The QA inspector periodically observed ABF welding personnel Chun Fai Tsui performing SMAW for the fill and cover passes between Y locations designated 0-350mm where the edge and side plates converge. QC inspector Jessie Cayabyab was noted to be present in order to ensure the adherence to the WPS designated as ABF-WPS-D1.5-1040-B with the welding parameters verified to be 110 amps. The preheat and interpass temperature was verified by the QC and QA inspector to be greater than 65° Celsius (C) and the welder was noted to be performing proper interpass cleaning. The work was completed and appeared to be in general compliance with the contract documents.

Field Splice 3E/4E F-1 (First side-inside)

The QA inspector periodically observed ABF welding personnel James Zhen performing FCAW for the fill and cover passes. QC inspector Jessie Cayabyab was noted to be present in order to ensure the adherence to the WPS designated as ABF-WPS-D1.5-3040B-3 with the welding parameters verified to be 230 amps, 22 volts and a measured travel speed of 200mm/min. The preheat and interpass temperature was verified by the QC and QA inspector to be greater than 65° Celsius (C) and the welder was noted to be performing proper interpass cleaning. The work progressed throughout the shift, was completed and appeared to be in general compliance with the contract documents.

Field Splice 3E/4E C-1 and C-2 (First side-inside)

The QA inspector verified that the QC inspection department had completed a preliminary review of the inside faces of these welds and the QA inspector performed a random visual review of these welds. The items appeared to be in general conformance with the contract documents with the exception of previous locations identified for planar offset.

Summary of Conversations:

The QA inspector was approached by QC inspector Mike Johnson and the QC inspector relayed after further review of the QC reports for the area identified with a loss of pre heat the previous day at 3E/4E C-2, SMAW filler metal was placed in this location with an H4R designator. The QA inspector relayed to the QC inspector that with this further discovery there was no violation of the contract documents for this area due to a lower required pre heat when utilizing an H4R designator. The QA inspector relayed this information to the lead QA inspector Bill Levell and the incident report generated the previous day will not be issued for this item.

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
