

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-013163**Date Inspected:** 16-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 Splice 2E/3E Face E (Second Side)
2. OBG Field Splice 3E/4E C-2 FCAW
3. OBG Field Splice 3E/4E Face E Inside Face (MT)
4. OBG Field Splice 3E/4E Face D Inside Face (MT)

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

The QA inspector noted and periodically observed ABF welding operators Rory Hogan and Jeremy Dolan performing the backgouging and grinding operations for face E on the second side (Outside). The welding operators continued setting the equipment up and periodically performing the operation throughout the shift. The work was not completed on this date or turned over to QC for verification at this time but appeared to be progressing in general conformance with the contract documents.

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 ABF welding personnel Mitch Sittinger and Song Tao Huang between Y locations designated 0-2500mm. 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

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Procedure Qualification Records (PQR). 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 250 amps, 24 volts with a measured travel speed of 260mm/min. It was noted by the QA inspector the contractor was having difficulty in maintaining the required pre heat and the QC inspector had intervened on several occasions in order to assist in keeping the pre heat in accordance with contract requirements. The QC inspector relayed to the QA inspector the welder was instructed by the foreman to remove a fit-up pin on the backside of the weld once sufficient weld metal was placed in the joint in order to accommodate the heating coils to be placed intimately on the back side of the joint. This item was completed shortly after the additional weld metal was placed and the issue appeared to be resolved. 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.

OBG Field Splice 3E/4E Face E Inside Face (MT)

The QA inspector periodically observed QC inspectors Steve McConnell and Jim Cunningham performing magnetic particle testing (MT) for the completed inside face of welds designated E-1 and E-2. No significant indications were discovered during the testing with only minor areas identified for grinding/blending. Later in the shift QC inspector Steve McConnell relayed to the QA inspector the weld was acceptable and the QA inspector performed an MT review of E-2 for an approximate length of 1.1 Meters which represents approximately 10% of face E. No rejectable indications were discovered at the time of review and a TL-6028 will be generated for this item for this date.

OBG Field Splice 3E/4E Face D Inside Face (MT)

The QA inspector performed an MT review of D-2 for an approximate length of 1.1 Meters which represents approximately 10% of face D. No rejectable indications were discovered at the time of review and a TL-6028 will be generated for this item for this date. It was noted by the QA inspector prior to the review QC inspector Tom Pascaulone had performed MT on this weld the previous day and identified the weld face as acceptable directly on the steel with the exception of the first 700mm which still requires minor pick up work utilizing grinding/blending.

Summary of Conversations:

As noted above in items observed.

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
