

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-013989**Date Inspected:** 13-May-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**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 3E/4E Face C (Inside)
2. OBG Field Splice 3E/4E Face C (Outside)
3. OBG Field Splice 5E/6E Face A (Outside)
4. OBG Field Splice 5E/6E Face D (Inside)

Field Splice 3E/4E Face C (Inside)

The QA inspector noted QC inspector Steve McConnell performing ultrasonic testing (UT) for this location from the inside at the side plate to bottom plate transition area for approximately 1 meter. The QC inspector was observed performing the scan utilizing a 70 degree transducer and wedge combination for the shear wave examination. The QC inspector relayed to the QA inspector he was performing the scan from the inside face in addition to the outside for location and clarification of the rejectable indications in order ascertain which side to excavate from. It was noted a significant amount of rejectable indication locations have been marked for repair. The QC inspector did not have the amount of indications readily available at the time of inquiry but relayed there were approximately 20 areas between the outside and inside faces.

Field Splice 3E/4E Face C (Outside)

The QA inspector periodically observed ABF welding personnel Mitch Sittinger performing grinding operations in

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order to excavate and remove the rejectable indications previously identified by QC utilizing Ultrasonic Testing (UT). QC inspector Tony Sherwood was noted to be present in order to monitor the progress and adherence to the welding procedure specification designated as ABF-WPS-D1.5-1001 Repair. The excavation at approximate Y location designated 5055mm was reviewed by the QC inspector and the welder performed the repair utilizing the shielded metal arc welding (SMAW) process and the amps were verified to be 120. The welder completed the repair at this location and proceeded to excavate and repair two additional adjacent areas which were completed later in the shift. The work appeared to be in general conformance with the contract documents.

Field Splice 5E/6E Face A (Outside)

The QA inspector periodically observed ABF personnel Rick Clayborn performing SMAW in order to place temporary attachments to the deck plate for fit up purposes. QC inspector Bonafacio Daquinag was noted to be present in order to monitor the progression and adherence to the WPS designated as ABF-WPS-D1.5-1040-A. The welder was observed attempting to bring the previously identified areas of misalignment into conformance by the use of these attachments. Several areas ranging from 3-6mm for lengths of up to approximately 3 meters were identified by the QC inspector in which the welder was attempting to mitigate. The work progressed throughout the QA inspectors shift with minimal resolution in the areas and the QC inspector and the fit up welder relayed to the QA inspector it was unlikely any additional movement would be gained. The QA inspector relayed this information to QA inspector Rick Bettencourt and Dan Reyes for tracking purposes. See digital photos included in the body of this report for general information.

Field Splice 5E/6E Face D (Inside)

The QA inspector periodically observed ABF welding personnel Jordan Hazalaar performing shielded metal arc welding (SMAW) attaching the backing bar to the bevel edge for face D on the inside face. It was noted the opposite side of the included bevel has been previously attached by welding. QC inspector Jim Cunningham was noted to be present in order to monitor the progress and adherence to the established WPS noted as ABF-WPS-D1.5-1040-A. An ABF helper was present in order to verify and maintain the pre heat and interpass temperature requirements with a temperature indicating gun and a portable torch. The welding amperage was measured to be 120 which appeared to be in general conformance with the contract documents. The welder proceeded across the width of the weld joint and was completed with this item during the morning shift. The QC inspector reviewed the area with the welder and the welder and helper performed minor grinding and blending with equipment set also being performed for the balance of the QA inspector's shift. The items observed appeared to be in general conformance with the contract documents.



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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
