

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-016161**Date Inspected:** 11-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1100**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** John Pagliero**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:** OBG Section**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and to monitor American Bridge/Fluor (ABF) welding operations.

The following observations were made:

- 1) At weld joint 1E/2E (B side) LS-2, inside the OBG section: ABF welding personnel James Zhen (#6001) was performing Shielded Metal Arc Welding (SMAW). QC Inspector John Pagliero was present.
- 2) At weld joint 1E/2E (F side) LS-6, inside the OBG section: ABF welding personnel Xiao Jian Wan (#9677) was performing Shielded Metal Arc Welding (SMAW). QC Inspector John Pagliero was present.
- 3) At weld joint E5/E6-C1, outside the OBG section: ABF welding personnel Rory Hogan (#3186) and Jeremy Dolman (#5042) were setting up the track system for Flux Cored Arc Welding (FCAW).
- 4) At weld joint E5/E6-E1 and E2, outside the OBG section: ABF welding personnel Bryce Howell (#5591) and a helper were back gouging and grinding the weld joint.

At weld joint 1E/2E (B side) LS-2, inside the OBG section this QA Inspector observed ABF welding personnel James Zhen (#6001) using the SMAW process to build up (butter) the W2 side of the Longitudinal Stiffener (LS) to form the required weld joint configuration. This QA Inspector observed QC Inspector John Pagliero verify the

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following welding parameters: 125 amperes using a 9018H4R electrode. This QA Inspector performed a verification on the preheat and observed it was greater than 100° C using a temperature indicating marker. The welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-1012-3. This QA Inspector observed ABF welding personnel James Zhen (#6001) removed only a few welding electrodes from the heated storage container. This QA Inspector also observed QC Inspector John Pagliero document the time the electrodes were removed to monitor the 1-hour exposure limit for the electrodes. This QA Inspector observed ABF welding personnel James Zhen (#6001) remove the welding slag with a chipping hammer, power wire brush and grind as necessary to facilitate the next weld pass.

At weld joint 1E/2E (F side) LS-6, inside the OBG section this QA Inspector observed ABF welding personnel Xiao Jian Wan (#9677) using the SMAW process to perform production welding in the groove of the butt joint on the outboard side of the weld joint. This QA Inspector observed QC Inspector John Pagliero verify the following welding parameters: 125 amperes using a 9018H4R electrode. This QA Inspector observed the outboard side of the weld joint was approximately 90 percent welded. This QA Inspector performed a verification of the preheat and observed it was greater than 100° C using a temperature indicating marker. Later in the shift this QA Inspector was present when ABF welding personnel Xiao Jian Wan (#9677) requested a visual inspection on the outboard side of the weld indicating that it was completed. This QA Inspector observed QC Inspector John Pagliero perform the visual in process inspection and marking several areas of excess weld reinforcement for grinding and several areas at the bottom that appeared to be under filled for additional welding. After grinding and welding this QA Inspector observed QC Inspector John Pagliero perform and accept an in process visual inspection on the outboard face of the weld joint. This QA Inspector performed a random visual verification and observed the work so far appeared to comply with the contract requirements. This QA Inspector also observed the inboard side of the weld joint had not been back gouged. This QA Inspector observed ABF welding personnel Xiao Jian Wan (#9677) start grinding the inboard side of the weld joint prior to the end of this QA Inspectors' shift.

At weld joint E5/E6-C1, outside the OBG section this QA Inspector observed ABF welding personnel Rory Hogan (#3186) and Jeremy Dolman (#5042) setting up the track system for Flux Cored Arc Welding (FCAW). Welding at this location was not observed this date.

At weld joint E5/E6-E1 and E2, outside the OBG section this QA Inspector observed ABF welding personnel Bryce Howell (#5591) and a helper back gouging and grinding the weld joint.

In general the work observed appeared to comply with the contract requirements.

Summary of Conversations:

As noted above.

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.

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Inspected By: Hager, Craig

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer