

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018484**Date Inspected:** 07-Dec-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 6EPP46.5-E2-LS-W, inside the OBG section: ABF welding personnel Hua Qiang Hwang (#2930) was in the process of setting up to start production welding using the Shielded Metal Arc Welding (SMAW) process. QC Inspector John Pagliero was monitoring the work.
- 2) At weld joint 5EPP29.5-E2-LS-W, inside the OBG section: ABF welding personnel Xiao Jian Wan (#9677) was in the process of setting up to start production welding using the Shielded Metal Arc Welding (SMAW) process. QC Inspector John Pagliero was monitoring the work.
- 3) At weld joint 7E/8E – D-1 & 2, outside the OBG section: ABF welding personnel Rory Hogan (#3186) and Jeremy Dolman (#5042) were using a plasma torch to remove the backing bar and back gouge the weld.

At weld joint 6EPP46.5-E2-LS-W, inside the OBG section this QA Inspector observed ABF welding personnel Hua Qiang Hwang (#2930) was in the process of moving equipment and ventilation ducts to start welding at this location. QC Inspector John Pagliero informed this QA Inspector he had performed and accepted the fit up inspection of the weld joint. This QA Inspector performed a random visual verification of the fit up and the work

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observed appeared to comply with the contract requirements. This QA Inspector observed ABF welding personnel Hua Qiang Hwang (#2930) was using ceramic backing material for this weld joint. This QA Inspector did not observe welding at this location. ABF welding personnel Hua Qiang Hwang (#2930) was moving the preheating equipment, running cables and setting up the electric preheat blankets. This QA Inspector informed QA Inspector Bert Madison of the work in progress during verbal turnover.

At weld joint 5EPP29.5-E2-LS-W, inside the OBG section this QA Inspector observed ABF welding personnel Xiao Jian Wan (#9677) was in the process of starting SMAW production welding. This QA Inspector observed as QC Inspector John Pagliero verified the welding parameters on a piece of scrap material to be slightly below the minimum amperage allowed by the applicable Welding Procedure Specification (WPS). This QA Inspector was present when QC Inspector John Pagliero informed ABF welding personnel Xiao Jian Wan (#9677) he needed to raise the amperage approximately 10 amperes on the welding machine. While ABF welding personnel Xiao Jian Wan (#9677) went above to the main deck of the OBG this QA Inspector informed QC Inspector John Pagliero had observed a digital reading of 153° F for one of the two thermocouple readings on the equipment used for preheating and requested QC Inspector John Pagliero to verify the preheat temperature while the welding amperage was being adjusted. QC Inspector John Pagliero used an electric temperature gauge and informed this QA Inspector that the top of the weld joint adjacent to the deck and a transverse bulkhead was approximately 160° F which is below the minimum preheat temperature of 212°F / 100°C. This QA Inspector performed a verification the temperature was less than the minimum preheat temperature at the location noted above using a temperature indicating marker. This QA Inspector observed the 100°C temperature indicating marker did not melt adjacent to the weld joint. This QA Inspector also observed the center of the weld joint was approximately 80 mm from the transverse bulkhead and the preheat blanket was not wrapped around the bulkhead nor the deck above, therefore only allowing approximately a small end section of the preheat blanket to be on the section of the weld joint below the minimum temperature. When ABF welding personnel Xiao Jian Wan (#9677) returned to the work area and QC Inspector John Pagliero informed him of the low preheat temperature and that the issue required correction prior to the start of production welding. This QA Inspector did not observed welding at this location this date and informed QA Inspector Bert Madison of the issue and work in progress during verbal turnover.

At weld joint 7E/8E – D-1 & 2, outside the OBG section this QA Inspector observed ABF welding personnel Rory Hogan (#3186) and Jeremy Dolman (#5042) were using a plasma torch to remove the backing bar and back gouge the weld.

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 Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Hager,Craig	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
