

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-016464**Date Inspected:** 24-Aug-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:** SAS OBG**Summary of Items Observed:**

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified 1E and the following observations were made:

Lifting lug hole restoration

1AE5-The QA Inspector Randomly observed the American Bridge/Fluor (ABF) welder identified as James Zhen begin setting up to perform the shielded metal arc welding (SMAW). The QA Inspector randomly observed the ABF welder perform some base metal grinding of the top deck plate insert prior to commencing the SMAW root pass. The QA Inspector randomly observed the ABF welder grind the precut bevels from 30° to 45°, the QA Inspector randomly verified the bevel angles and noted they appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder had previously installed ceramic backing to the underside of the top deck plate and held in place with adhesive (pictured below). The QA Inspector noted the ceramic backing appeared to have a channel or recessed impression in the center of the backing. The QA Inspector noted the channel in the ceramic backing is an attempt to create an area of the backing which is slightly lower than the rest of the backing to aid in minimal back gouging of the weld joint. The QA Inspector randomly observed the ABF welder had set the circular deck insert onto the ceramic backing and held in place utilizing magnets (pictured below). The QA Inspector performed a random visual inspection of the fit up and noted the root opening, bevel angle and planar alignment of the complete joint penetration (CJP) groove weld appeared to meet the general requirements of the contract documents. The QA Inspector noted the access to the root is tight and somewhat limited, the QA Inspector noted inter pass cleaning of the root pass would prove to be difficult due to access. The QA Inspector noted the welder utilized a burr bit grinder to perform the interpass cleaning of SMAW

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root/fill passes.

The QA Inspector randomly observed the ABF welder preheat the area to approximately 100°F prior to performing any SMAW. After the minimum required preheat had been achieved, the QA Inspector randomly observed the ABF welder begin the SMAW root pass. The QA Inspector noted the Smith Emery (SE) Quality Control (QC) Inspector Mike Johnson was on site to monitor and record the in process production welding at the above identified location. The QA Inspector randomly observed the SMAW parameters to be approximately 130 Amps with 5/32" E7018 low hydrogen electrodes. The QA Inspector randomly observed the in process welding parameters and dimensional tolerances appeared to be in general compliance with the approved welding procedure identified as ABF-WPS-D1.5-1050-A. The QA Inspector noted the ABF welder did not complete the SMAW on the QA Inspectors shift.

1E Drip Edge Installation (south side)

Upon the arrival of the QA Inspector, it was observed both of the drip plates had been installed to the directly under the "B" edge plate. The QA Inspector randomly observed the first plate had been installed and tack welded into place. The QA Inspector noted the second plate that was installed and tacked as well. The QA Inspector randomly observed the ABF welder Rick Clayborn begin performing the SMAW 6mm fillet weld attaching the drip plates to the OBG. The QA Inspector randomly observed the welder to be utilizing E7018 low hydrogen electrodes with 135 Amps. The QA Inspector noted the SMAW parameters appeared to be in general compliance with ABF-WPS-D1.5-F1202. The QA Inspector randomly observed the SE QC Inspector Jim Cunningham standing near by and perform a visual inspection of fit up of the drip plates prior to welding them into place. The QA Inspector performed a random visual inspection of the fit up after it was accepted by the QC Inspector. The QA Inspector noted it appeared to be in general compliance with the contract requirements. The QA Inspector noted limited access is available to the QC or QA Inspector due to the welding being performed from a mobile scaffold. The QA Inspector noted only two persons can be on the scaffold at any given time.



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

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Materials for your project.

Inspected By: Bettencourt,Rick

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer