DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-027469
Date Inspected: 18-Apr-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: jobsite

CWI Name:	Steve Jensen			**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 project

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 /or monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

Orthotropic Box Girder (OBG) Access Holes: This QA Inspector observed the following work at the access holes.

6E-PP46.5-E5: This QA Inspector observed ABF welding personnel Salvador Sandoval (#2202) had completed welding from the top deck at this location and was grinding the weld face flush with the deck. This QA Inspector observed ABF welding personnel Todd Jackson (#4639) had completed welding both longitudinal stiffeners and the transverse stiffener for this access hole; 6E-PP46.5-E5-LS-E, 6E-PP46.5-E5-LS-W and 6E-PP46.5-E5-TS. This QA Inspector observed ABF welding personnel Todd Jackson (#4639) using a grinder to grind the weld faces flush and a burr to clean the weld access (rat hole) holes. This QA Inspector did not observed welding at this location this shift. This QA Inspector observed after the grinding appeared to be completed both welding personnel move to the access hole below.

12E-PP109-E5: This QA Inspector observed ABF welding personnel Todd Jackson (#4639) moving equipment and setting up to perform welding on the longitudinal and transverse stiffeners, but did not observe any welding this shift. This QA Inspector did observed the top deck was marked indicating 2 areas had Ultrasonic Testing (UT) performed and area Y-680 and Y-2360 were rejected by QC personnel.

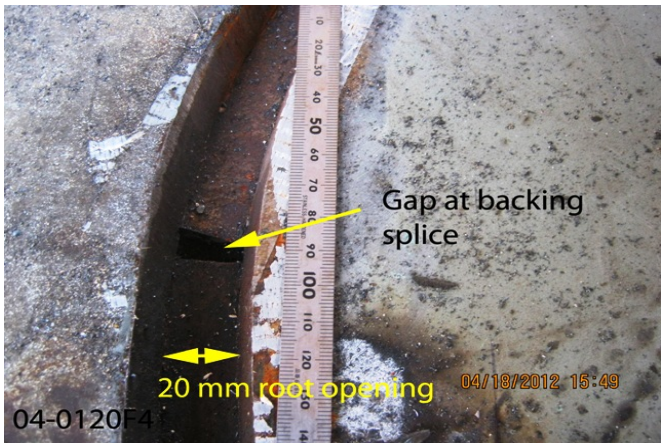
12E-PP109-E2: This QA Inspector observed ABF welding personnel Salvador Sandoval (#2202) moving and setting up equipment to start welding on the top deck of the access hole at this location. This QA Inspector observed ABF welding personnel Salvador Sandoval (#2202) using the Shielded Metal Arc Welding (SMAW) process to weld the root pass. This QA Inspector randomly observed QC Inspector Steve Jensen verifying the following welding parameters; 132 amperes using a 3.2 mm diameter E7018 electrode. The welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-1040C Rev-1, being used by QC personnel. This QA Inspector observed the WPS being used this time for the access hole was for a backing bar. This QA Inspector performed a random visual verification and observed the backing bar had a gap at several what appeared to be splices. This QA Inspector also observed what appeared to be notches cut into the sides of the backing material. This QA Inspector measured several of the gaps; 6-10 mm wide and some were for the full width of the 20 mm wide root opening. See photo below. This QA Inspector brought this to the attention of QC Inspector Steve Jensen covering the work at this location and was informed the fit up had been previously approved by both QC and QA personnel. In addition this QA Inspector was informed the root pass was to welded using the SMAW process and the Flux Cored Arc Welding (FCAW) would be used for the fill and cover passes, the backing was to be removed, the weld back gouged and filled from the bottom using the SMAW process. QC Inspector Steve Jensen informed this QA Inspector the following WPS were to be used; ABF-WPS-D15-1040C Rev-1 (SMAW root), ABF-WPS-D15-3040A Rev-1 (FCAW fill and cover) and ABF-WPS-D15-1110A Rev-0 (SMAW after removal of the backing and back gouging).

This QA Inspector notified Lead QA Inspector Danny Reyes of the observation and the conversation noted above and was informed to document what was being done.

F.W. Spencer: This QA Inspector randomly observed F.W. Spencer welding personnel Damien Llanos using the SMAW process to weld piping bosses to the main branch of piping. This QA Inspector observed QC Inspector Steve Jensen verify the following welding parameters; 94 amperes for the 1/8-inch diameter, E6010 electrode and 90 amperes for the 3/32-inch diameter, E7018 electrode used for the fill and cover passes. The welding observed appeared to comply with WPS 1-12-1 Rev-2, being used by QC. See photo below of weld in progress.

Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) personnel, QC personnel and Caltrans personnel during the shift. Except as described above there were no notable conversations.



WELDING INSPECTION REPORT

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