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

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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: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-012800
Date Inspected: 24-Mar-2010

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

OSM Arrival Time: 600
OSM Departure Time: 1500
Location: Job Site

CWI Name: Bernard Docena, Jesse Cayabayab, Will Cressingham

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 2E/3E-A 3E/4E-A 1W/2W

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 as 2E/3E-A, 3E/4E-A and the following observations were made:

3E/4E-A

On the previous day shift, the QA Inspector noted the American Bridge/Fluor (ABF) welders had performed shielded metal arc welding (SMAW) tack weld full length of the weld joint on one side only. Upon the arrival of the QA Inspector randomly observed the Smith Emery (SE) Quality Control (QC) Inspectors Jesus Cayabayab and Bnifacio Daquinag performing fit up and dimensional inspections of the above identified weld joint. The QA Inspector randomly observed the SE QC Inspectors indicating and mapping the areas where the gap between the steel backing bar and the bevel exceed 2mm. The QA Inspector performed random dimensional verifications of the fit up of the steel backing in section A2 and A5. The QA Inspector noted a 3mm-3.5mm gap between the steel backing and the bevel between 3500mm-3700mm in section A2. In addition the QA Inspector noted a 3mm-3. 5mm gap between the steel backing and the bevel between 700mm-900mm in section A5 (pictured below). The QC Inspector Jesse Cayabayab informed the QA Inspector, all of the areas of the steel backing that exceeded 2mm are being recorded and mapped out for information when ultrasonic testing is performed. The QC Inspector went on to inform the QA Inspector that QC will provide the dimensions and locations on the map to the QA Inspector for future use. The QA Inspector performed a random visual inspection of the steel backing bar from underneath the top deck plate “A”. The QA Inspector randomly observed and noted a significant gap between the steel backing bar and the top deck plate at the transition of the deck plates with different thicknesses (pictured below). The QA Inspector was not able to perform a dimensional measurement of the gap due to limited access to the steel

backing. The QA Inspector was not able to reach up and measure between the closed ribs.

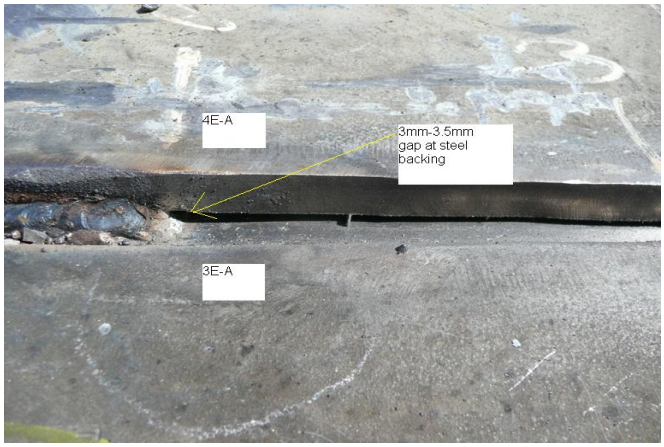
The QA Inspector randomly observed the ABF welders Jordan Hazelaar and James Zhen begin performing SMAW tack welding of the above identified complete joint penetration (CJP) weld joint. The QA Inspector randomly observed and ABF apprentice welder performing preheating tasks utilizing a rose bud torch, heating the base material and steel backing to the minimum required preheat of 150°F. The QA Inspector randomly observed the ABF welders performing the SMAW tack welding through out the duration of the shift. The QA Inspector noted the weld joint was only tacked on both sides of the joint, the QA Inspector noted the two members were joined by welding on this date.

2E/3E-A
Upon the arrival of the QA Inspector, it was observed 27 total ultrasonic testing (UT) rejections had been located and indicated by the SE QC Inspectors. The QA Inspector noted approximately 18 had been repaired by welding. The QA Inspector noted to SE QC was performed on the QA Inspectors shift. The QA Inspector randomly observed and noted the rejected areas of weld had been indicated with a distinguishing marking directly on the weld. The QA Inspector randomly observed the ABF welder identified as Mitch Sittinger was setting up to begin excavating the previously rejected areas of weld. The QA Inspector randomly observed the ABF welder excavate and repair 1 total rejected area on the QA Inspectors shift (listed below).

A4
The QA Inspector randomly observed the ABF welder begin excavating the UT rejection in A4. The QA Inspector randomly observed the excavation was being performed with a burr bit grinder. After the exaction was complete the QA Inspector randomly observed the SE QC Inspector Tom Pasqualone perform magnetic particle testing of the excavation prior to the repair welding. The QA Inspector noted no relevant indications where located at the time of the testing. The QA Inspector randomly observed the QC Inspector perform the MT and the QA Inspector concurred, no relevant indications appeared to be present at the time of the testing. The QA Inspector noted the excavation was ground to a weldable profile prior to the repair welding. The QA Inspector performed dimensional measurements of the excavation and noted it appeared to be 143mm x 30mm x 14mm. The QA Inspector observed an ABF apprentice welder preheat the isolated area to be welded to the minimum required preheat of 150°F. After the minimum required preheat was achieved, the QA Inspector randomly observed the ABF welder begin the weld repair utilizing the shielded metal arc welding (SMAW) process. The QA Inspector randomly observed the ABF welder utilizing 1/8” E7018 low hydrogen electrodes with 125 Amps. The QA Inspector noted the SMAW parameters and minimum required preheat appeared to be in general compliance with ABF-WPS-D1.5-1000-repair.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



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.

Inspected By:	Bettencourt,Rick	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer