

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-013983**Date Inspected:** 07-May-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Bernard Docena, Steve McConnell			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 1W/2W-C, 1W/2W-D/S, 4E/5E**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 1W/2W- C, 1W/2W-D/S, 3E/4E-E/F and 4E/5E and the following observations were made:

1W/2W-C2

The QA Inspector randomly observed the ABF welders had previously started the induction heating blankets to ensure the minimum required preheat of 150°F was achieved prior to welding. The QA Inspector randomly verified utilizing a 150°F temperature indicating marker and noted the minimum required preheat had been achieved. Upon the arrival of the QA Inspector it was observed the root and hot pass had been completed on the previous day shift except for the bottom 600mm ending at the full height longitudinal diaphragm. The QA Inspector randomly observed the American Bridge/Fluor (ABF) welder Song Toa Huang begin performing shielded metal arc welding (SMAW) root pass in the 600mm portion of the weld segment identified. After the root pass was completed the QA Inspector randomly observed the ABF welder begin performing the SMAW fill passes and continued to do so form the remainder of the QA Inspectors shift. The QA Inspector randomly observed the Smith Emery (SE) Quality Control (QC) Inspector Bernard Docena was on site monitoring and recording the in process production welding. The QA Inspector randomly observed and noted the ABF welder utilizing 1/8" E7018 low hydrogen electrodes with 125 Amps, the QA Inspector noted the SMAW parameters appeared to be in general compliance with ABF-WPS-D1.5-02-1040-B. The QA Inspector noted the ABF welder spent the remainder of the shift performing the SMAW fill passes.

4E/5E-A

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

The QA Inspector randomly observed the ABF welder Rick Clayborn and ABF helper/apprentice welder begin performing fit tasks and installing the steel backing bar in the above identified weld joint. The QA Inspector randomly observed the ABF welder fit the steel backing bar in place utilizing wedges under the top deck and between the “U” ribs. After the steel backing bar was wedged in place the QA Inspector randomly observed significant gaps between the steel backing and the areas where the transition of the top deck plate intersect. The QA Inspector randomly observed the top deck plate transition in weld segment A5 at the south end of the top deck appeared to have a 5mm gap between the steel backing and bevel. The QA Inspector randomly observed the ABF welder and helper perform fitting tasks to reduce the 5mm gap to within the allowable tolerance of 2mm. The QA Inspector randomly observed Mr. Clayborn and helper preheat the steel bar with a rosebud torch and conform the bar to the transition area with applied force in the form of steel wedge and hammer. After several attempts the QA Inspector randomly observed the steel backing bar appeared to be bent or conformed to the area where the steel backing intersects with the top deck transition weld. The QA Inspector randomly performed a dimensional measurement of the gap between the steel backing and bevel after the fitting tasks were completed. The QA Inspector noted the gap appeared to have been closed to approximately 2mm. The QA Inspector noted the opposite end of the weld joint in weld segment A1 the gap at the steel backing and transition appeared to be approximately 6mm. The QA Inspector noted the fit up was still in process at the end of the QA Inspectors shift.

1W/2W-D/S

D/S-17

The QA Inspector randomly observed the ABF welder James Zhen performing shielded metal arc welding (SMAW) root/fill passes at the above identified stiffener plates. The QA Inspector noted the ABF welder was utilizing 5/32” E7018 low hydrogen electrodes with 125 Amps. The QA Inspector noted the SMAW parameters appeared to be in general compliance with ABF-WPS-D1.5-1010. The QA Inspector randomly observed the above identified stiffener plate had been previously restored by welding, and the round bar stock removed. The SMAW was in process for the remainder of the QA Inspectors shift.

D/S-7

The QA Inspector randomly observed the ABF welder Chin Fai Tsui had installed round bar stock in the double V-groove opposite the side where joint restoration is being performed. The QA Inspector noted the round bar stock is in place in the groove vertically and SMAW butter passes are performed on the opposite side. The QA Inspector noted once the weld joint has been restored to the original joint configuration, the round bar stock will be removed and welding can be performed as described in the approved WPS identified as ABF-WPS-D1.5-2010-C. The QA Inspector randomly observed the above identified welder was performing SMAW butter passes on all three of the above identified weld joints during the QA Inspectors shift. The QA Inspector randomly observed the ABF welder to be utilizing 1/8” E7018 low hydrogen electrodes with 135 Amps. The QA Inspector noted the SMAW parameters appeared to be in general compliance with the contract requirements.

3E/4E-E/F

The QA Inspector was informed by the ABF representative John Callaghan the scaffold at the above identified location will be removed on today’s shift (see summary of conversations). The QA Inspector randomly observed the 3E/4E-E plate and noted several ultrasonic testing rejections remained to be repaired. The QA Inspector informed Mr. Callaghan of the issue (see summary of conversations). The QA Inspector randomly observed the drip plate at the above identified location appeared to have been flame cut and would require additional grinding and welding prior to being accepted visually. The QA Inspector noted if the scaffold is removed no access would be

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

available to perform any such repair.

Summary of Conversations:

The QA Inspector informed the SE QC Inspector Mike Johnson of the flame cut edge and gouges which would require additional grinding prior the scaffold being moved form the location. Mr. Johnson’s response was “they will fix it when they fix it”. The QA Inspector informed Mr. Johnson he had been officially informed and it would documented that he has knowledge of the areas that require additional information. Mr. Johnson acknowledged he had been officially informed.

In a separate conversation with the ABF representative John Callaghan the QA Inspector informed Mr. Callaghan of two issues. The first issue the QA Inspector informed Mr. Callaghan of the flame cut edges of the drip plate which required grinding. Mr. Callaghan informed the QA Inspector at a later date ABF will utilize the mobile scaffold and correct the drip plate at all transverse field splices. Mr. Callaghan went on to inform the QA Inspector no repairs would be performed at the current time.

The second issue the QA Inspector informed Mr. Callaghan there are still UT rejections to be repaired at the 3E/4E-E side plate, and if the scaffold is removed no access to the external surface of the transverse weld joint could be reached. Mr. Callaghan informed the QA Inspector all repairs could be repaired from the inside, so the scaffold could be removed.

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
