

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-013987**Date Inspected:** 11-May-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:	Bernard Docena, Bnifacio Daquino, Tom Pasqualone			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 as 2W/3W-E, 1W/2W-C/E/D 5E/6E and the following observations were made:

2W/3W-E1

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. The SE QC Inspector Bernard Docena and the QA Inspector performed visual testing of the fit up of the above identified weld joint. It was observed by both Inspectors the fit up of the above identified weld joint appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the SE QC Inspector identified as Bernard Docena set the FCAW machine to the parameters of the approved WPS. The QA Inspector randomly observed the FCAW parameters were 252Amps 22.8Volts and a travel speed of 195mm/min. The QA Inspector randomly observed the ABF welder Song Toa Huang begin the FCAW root/fill pass. The QA Inspector noted the ABF welder was performing the FCAW fill passes for the remainder of the QA Inspectors shift. The QA Inspector noted the ABF welder will completed the weld segment E1 by the end of the ABF day shift on this date.

1W/2W-C1/C2

The QA Inspector was informed by the SE QC Inspector Tom Pasqualone, he had completed the magnetic particle testing (MT) of the above identified weld joint. The QA Inspector randomly observed the QC Inspector perform

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MT of 100% of the above identified weld joint. After the QC Inspector completed the MT he informed the QA Inspector no relevant indications were located at the time of the testing. The QA Inspector randomly performed MT verification of approximately 10% of the total weld length of both of the above identified weld segments. The QA Inspector noted no relevant indications were located at the time of the testing. See TI-6028 for additional information.

1W/2W-E2

The QA Inspector randomly observed the ABF welders Rory Hogan and Jeremy Doleman setting up the FCAW machine at the above identified weld joint. The QA Inspector was informed by the QC Inspector Tony Sherwood the back gouge was previously accepted by the SE QC. The QA Inspector performed a random visual and dimensional inspection of the back gouged joint and noted it appeared to meet the general requirements of the contract documents. 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. The QA Inspector observed the ABF welder to be utilizing a semi automated FCAW track system for welding the above identified weld joint. The QA Inspector randomly observed the SE QC Inspector identified as Tony Sherwood set the FCAW machine to the parameters of the approved WPS. The QA Inspector randomly observed the FCAW parameters were 230 Amps, 23.3 Volts and a travel speed of 165m/min. The QA Inspector randomly observed the ABF welder Jeremy Doleman begin the FCAW fill pass, once the semi automated track system reached a certain point the ABF welder Rory Hogan would observe the welding arc for the remainder of the weld. The QA Inspector noted the ABF welder's completed the weld segment E2 on the QA Inspectors shift. The QA Inspector noted the back weld for the above identified weld joint was completed on this date. The QA Inspector noted no grinding or NDT was performed on this date for the above identified weld joint.

5E/6E-A

The QA Inspector randomly observed the ABF erection personnel fitting up and installing a combination of the temporary drift pins and permanent bolts the splices plates and "U" ribs. The QA Inspector noted no fit up of steel backing bar had been completed by this date. The QA Inspector randomly observed the transitions on the top deck plate "A" had been ground and blended on both sides of the weld joint in an attempt to create more of an intimate contact of the steel backing bar. In addition the QA Inspector randomly observed the longitudinal deck welds on the top deck had been ground flush in the areas where the steel backing bar with intersect the welds. No welding or fit up of the steel backing bar was performed on this date.

1W/2W-D/S

D/S-12

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-8/9

The QA Inspector randomly observed the ABF welder Chin Fai Tsui had installed round bar stock in the double

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V-groove opposite the side where joint restoration is being performed. The QA Inspector noted the round bar stock is placed 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.



Summary of Conversations:

The QA Inspector spoke with SE QC Inspector Bill Norris about what weld joints had been completed as far as QC non destructive testing (NDT). The QA Inspector informed Mr. Norris; the QA Inspector Rick Bettencourt had compiled a list of areas which appeared to remain outstanding with repairs or needed QA NDT verification. The QA Inspector asked the QC Inspector if the QA Inspector gave him a list of weld joints, if Mr. Norris could provide information whether or not the QC NDT had been completed. Mr. Norris informed the QA Inspector it would take the QC Inspector (Bill Norris) an entire day to provide that information. The QA Inspector added if it takes a day to provide that type of information, it appears there is a problem in tracking the QC NDT. The QA Inspector noted Mr. Norris appeared to become irritated with the comment. The QA Inspector informed the QC Inspector Tom Pasqualone and Steve McConnell it was very important for SE QC personnel to be able to provide information on the status of the QC NDT of the completed weld joints. The QA Inspector informed Mr. McConnell, the QA Inspector would give the SE QC til the end of the week to be able to provide the NDT status or additional measures would be taken with the ABF WQCM Jim Bowers to ensure the NDT status and in process repairs are being tracked properly.

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

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Reviewed By: Levell,Bill

QA Reviewer