

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-014700**Date Inspected:** 10-Jun-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, Jesse Cayabyab			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 4W/5W-A, 3W/4W-C, 1W/2W-D/S and the following observations were made:

4W/5W-A

The QA Inspector it was randomly observed the ABF welding operators Rory Hogan and Jeremy Doleman were setting up the submerged arc welding (SAW) machines in preparation of performing the SAW fill/cover passes. The QA Inspector noted the weld joint was approximately 80% complete upon the commencement of the SAW.

A3-A5

The QA Inspector randomly observed the ABF welding operator Rory Hogan begin welding the SAW fill pass in the center of A3 and weld to the end of section A5. The QA Inspector noted the weld joint was approximately 80% complete upon the commencement of welding in the am. The QA Inspector randomly observed the SAW parameters and they were 570 Amps, 33 Volts and a travel speed of 381mm/min. The QA Inspector noted the SAW parameters appeared to be in general compliance with ABF-WPS-D1.5-4042B-1. The QA Inspector randomly observed the ABF welding operator Bryce Howell take over the SAW machine and continue performing the SAW cover passes for the remainder of the shift.

A3-A1

The QA Inspector randomly observed the ABF welding operator Jeremy Doleman begin welding the SAW fill pass in the center of A3 and weld to the end of section A1. The QA Inspector randomly observed the SAW

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parameters and they were 575 Amps, 33 Volts and a travel speed of 381mm/min. The QA Inspector noted the SAW parameters appeared to be in general compliance with ABF-WPS-D1.5-4042B-1. The QA Inspector randomly observed the ABF welding operator Mike Maday take over the SAW machine and continue performing the SAW cover passes for the remainder of the shift.

3W/4W-C1

The QA Inspector randomly observed the ABF welder Song Tao Hunag had previously started the induction heating blankets on the inside of OBG 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 flux cored arc welding (FCAW) bug-o track system for the above identified weld joint. The QA Inspector randomly observed the Smith Emery (SE) QC Inspector identified as Bernard Docena set the FCAW machine to the parameters of the approved WPS identified as ABF-WPS-D1.5-3042A. The QA Inspector randomly observed the FCAW parameters were 247 Amps, 23.9 Volts and a travel speed of 320mm/min. The QA Inspector randomly observed the ABF welder identified above start the FCAW fill pass on the beginning of weld segment C1 in the am. The QA Inspector noted the FCAW root pass was completed on the previous day shift. The QA Inspector noted the ABF welder spent the remainder of the QA Inspectors shift performing the FCAW fill passes. The QA Inspector randomly and periodically observed the welding at the above identified location. It was noted by the QA Inspector the ABF welder did not complete the FCAW on the QA Inspectors shift.

1W/2W-D/S

D/S#13

The QA Inspector randomly observed the ABF welder identified as James Zhen excavating a UT rejection. The QA Inspector randomly observed and noted the area was previously indicated with a distinguishing marking directly on the weld which had been ground flush with the base material. The QA Inspector randomly observed the ABF welder excavate the UT rejection utilizing a burr bit grinder. Once the excavation was ground and blended to a weld able profile, the SE QC Inspector Jesse Cayabyab performed magnetic particle testing (MT) of the excavated area. The QA Inspector noted no relevant indications were located at the time of the testing. The QA Inspector randomly observed the ABF welder preheat the isolated area of the excavation utilizing a rosebud torch. After the minimum required preheat was achieved, the QA Inspector noted the ABF welder began the shielded metal arc welding (SMAW) repair. The QA Inspector noted the ABF welder was performing the SMAW repair for the remainder of the QA Inspectors shift.

D/S#8

The QA Inspector noted the ABF welder identified as Chun Fai Tsui was performing grinding in an attempt to excavate and remove the UT rejections previously located and indicated by the SE QC Inspectors. The QA Inspector noted the above identified longitudinal stiffener weld appeared to have two UT rejections. The QA Inspector noted the same excavation and MT inspections were performed as noted above. The QA Inspector noted both of the excavated areas appeared have been ground and blended to a weld able profile. The QA Inspector randomly observed the ABF welder preheat the isolated area of the excavation utilizing a rosebud torch. After the minimum required preheat was achieved, the QA Inspector noted the ABF welder began the shielded metal arc welding (SMAW) repair. The QA Inspector noted the ABF welder was performing the SMAW repair for the remainder of the QA Inspectors shift.

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Summary of Conversations:

The ABF project Engineer John Callaghan informed the QA Inspector the ABF welders identified as Rory Hogan and Jeremy Doleman will perform one SAW fill pass at the top deck weld 4W/5W-A. Mr. Callaghan informed the QA Inspector the ABF welders need to perform SAW to keep the SAW certifications from lapsing.

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
