

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-015462**Date Inspected:** 02-Jul-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		

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 4E/5E-E2, 5W/6W, 2W/3W, 3W/4W and the following observations were made:

4E/5E-E1

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) manually 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 250 Amps, 23.8 Volts and a travel speed of 290mm/min. The QA Inspector randomly observed the ABF welder identified above continue the FCAW fill passes on approximately 4700mm of weld segment E1 in the am. 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.

5W/6W-A

The QA Inspector randomly observed the ABF erection personnel performing bolting of the splice plates under the top deck plate and on the side plates. The QA Inspector randomly observed and noted a combination of permanent

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bolts and drift pins were being used to erect OBG segment 6W. The QA Inspector was informed by the ABF project Engineer John Callaghan (see summary of conversation). The QA Inspector performed a random visual inspection of the bevel angle and root opening of the above identified weld joint. The QA Inspector randomly observed the bevel angle did appear to meet the general requirements of the contract documents. In addition the QA Inspector randomly observed the root opening appeared to be in general compliance with ABF-WPS-D1. 5-4042-B. The QA Inspector randomly observed the bevel and steel backing bar had been previously ground to bright shiny metal. The QA Inspector noted all of the longitudinal deck welds including the transition welds appeared to have been ground. The QA Inspector noted the longitudinal welds had been ground in the area where they intersect with the transverse splice weld, to allow intimate contact with the steel backing bar and the based material. The QA Inspector noted additional jacking would be completed prior to the weld joint being fit up. The QA Inspector noted significant planar misalignment appeared to be present in weld segment A2. The ABF Welding Superintendent Dan Ieraci informed the QA Inspector that additional jacking will be completed and the alignment will be adjusted.

2W/3W-F

The QA Inspector randomly observed the ABF welder James Zhen performing plasma arc gouging at the above identified location. The QA Inspector noted the ABF welder was removing the steel backing bar in order to prepare the weld joint for the back welding. The QA Inspector noted the back gouging or the removal of the steel backing bar was completed on this date.

3W/4W-E2

Upon the arrival of the QA Inspector it was noted the ABF welder James Rory Hogan was on site to perform excavations and weld repairs from previously rejected and indicated weld defects. The QA Inspector randomly observed the SE QC Inspector Steve McConnell was present at the time of the excavations. The QA Inspector randomly observed the ABF welder Rory Hogan begin excavating the ultrasonic testing (UT) reject. The QA Inspector randomly observed the QC Inspector performed magnetic particle testing of the excavated area. The QA Inspector noted no relevant indications were located at the time of the testing. The QA Inspector noted the dimensions of the excavations were 120mm X 30mm X 8mm deep. The QA Inspector randomly observed the ABF welder begin welding the shielded metal arc welding (SMAW) repair of the excavation identified above. The QA Inspector randomly observed the ABF welder utilizing 1/8" E7018 Low Hydrogen electrodes with 128 Amps. The QA Inspector noted the SMAW parameters appeared to be in general compliance with ABF-WPS-D1. 5-1000-Repair. The QA Inspector noted the SMAW repairs were completed on this date at the two UT rejections in the weld joint. The QA Inspector noted the UT verification will be completed on 7/6/10.

Summary of Conversations:

Mr. Callaghan informed the QA Inspector ABF erection personnel stayed late yesterday evening to complete the seismic requirements of the erection plan. Mr. Callaghan informed the QA Inspector the minimum requirements for bolting have been satisfied, now ABF is beginning to install the permanent bolts. Mr. Callaghan went on to inform the QA Inspector no bolts will be tensioned, rather just hand tight.

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

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Materials for your project.

Inspected By: Bettencourt,Rick

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer