

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-015542**Date Inspected:** 07-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 by:	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, 5W/6W, 3E/4E, and the following observations were made:

4E/5E-C

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 semi automated flux cored arc welding (FCAW) 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 245 Amps, 23.5 Volts and a travel speed of 310mm/min. The QA Inspector randomly observed the ABF welder identified above continue the FCAW fill passes on approximately 4700mm of weld segment C2 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.

3E/4E-D

Upon the arrival of the QA Inspector it was noted the ABF welder Fred Kaddu was continuing to perform

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excavations and weld repairs from previously rejected and indicated weld defects. The QA Inspector randomly observed the SE QC Inspector Jesse Cayabyab was present at the time of the excavations. The QA Inspector randomly observed the ABF welder Fred Kaddu 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 Y dimension of the excavation was Y=3325mm-3435mm. The QA Inspector noted the dimensions of the excavations were 110mm X 26mm X 15mm 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, once the repair was complete the ABF welder and helper went to the external surface of the transverse weld splice (pictured below). The QA Inspector noted the ABF welders continued to excavate the UT rejections.

5W/6W-A

The QA Inspector randomly observed the ABF welder Rick Clayborn begin performing fitting tasks of the top deck plates identified above. The QA Inspector randomly observed the ABF welder install the fit up gear or temporary attachments on the top deck plate utilizing the SMAW process. The QA Inspector noted the fit up gear appeared to be installed to the top deck plate between the closed rib stiffeners (pictured below). After the fitting aids were installed the QA Inspector noted minimal planar misalignment was present at the ends of the A1 and A5 weld segments. The QA Inspector noted the steel backing bar had not been installed or fit up under the weld joint. The QA Inspector randomly observed the ABF welder Rick Clayborn begin fitting up the steel backing bar utilizing wedges. The QA Inspector randomly observed the ABF erection personnel installing permanent bolts to the splice plates simultaneously. The QA Inspector noted no measurements were taken of the gaps between the steel backing and bevel due to fit up was not completed on the QA Inspectors shift. The QA Inspector noted no production welding was completed on this date at the above identified location.



Summary of Conversations:

The ABF Welding Superintendent Dan Ieraci Informed the QA Inspector the weld joint identified as 5W/6W-A will be welded a little different from the last splice. Mr. Ieraci did not elaborate other than he did inform the QA Inspector, no run off tabs will be used in an attempt to reduce the risk of cracking.

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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
