

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016867**Date Inspected:** 20-Sep-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:** See below**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 lifting lug hole restoration, Access Hole restoration and 6E/7E-E the following observations were made:

Deck Plate Access Hole 3E North (L3E-NW)

The QA Inspector randomly observed the American Bridge/Fluor (ABF) welder Wai Kitlai performing grinding tasks of the bevel preparation for the above identified access hole restoration. The QA Inspector randomly observed the ABF welder had not yet installed the access hole insert plate. The QA Inspector noted the bevel preparation of the insert plate had been previously ground and beveled. The QA Inspector randomly observed and verified the bevel angle of the insert plate as well as the bevel on the top deck plate of lift 3E. The QA Inspector noted both the insert plate and the top deck plate of lift 3E were beveled to approximately 35° with a total included angle of approximately 70°. The QA Inspector noted the total included bevel angle did appear to be within the tolerances of ABF-WPS-D1.5-1030R1.

1E-pp8.5-E4-1

The QA Inspector randomly observed the American Bridge/Fluor (ABF) welder identified as Jin Pei Wang begin setting up to perform the SMAW root pass. The QA Inspector randomly observed the ABF welder perform some base metal grinding of the top deck plate insert prior to commencing the SMAW root pass. The QA Inspector randomly verified the bevel angles and noted they appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder had previously installed ceramic backing to

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the underside of the top deck plate and held in place with adhesive. The QA Inspector randomly observed the ABF welder had set the circular deck insert onto the ceramic backing and held in place utilizing magnets. The QA Inspector performed a random visual inspection of the fit up and noted the root opening, bevel angle and planar alignment of the complete joint penetration (CJP) groove weld appeared to meet the general requirements of the contract documents.

The QA Inspector randomly observed the ABF welder preheat the area to approximately 100°F prior to performing any SMAW. After the minimum required preheat had been achieved, the QA Inspector randomly observed the ABF welder begin the SMAW root pass. The QA Inspector noted the SE QC Inspector Steve McConnell was on site to monitor and record the in process production welding at the above identified location. The QA Inspector randomly observed the SMAW parameters to be approximately 130 Amps with 5/32" E7018 low hydrogen electrodes. The QA Inspector randomly observed the in process welding parameters and dimensional tolerances appeared to be in general compliance with the approved welding procedure identified as ABF-WPS-D1.5-1050-A. The QA Inspector noted the ABF welder did complete the SMAW on the QA Inspectors shift.

1E-pp9.5-E4-4

The QA Inspector randomly observed the ABF welder Hua Quang Hunag begin performing SMAW of the above identified deck insert hole. The QA Inspector noted the Same QC Inspector and the same welding process was performed as described above at

1E-pp8.5-E4-1. The QA Inspector noted 1E-pp9.5-E4-4 deck plate was not completed on this date.

6E/7E-E2

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 the 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 Tom Pasqualone set the FCAW machine to the parameters of the approved WPS identified as ABF-WPS-D1.5-3042-B-1 The QA Inspector randomly observed the FCAW parameters were 265 Amps, 24 Volts and a travel speed of 300mm/min. The QA Inspector noted the ABF welder continued welding the FCAW cover passes for the remainder of the shift. The QA Inspector noted the fit up in the areas being welded were in compliance with the contract requirements.

Summary of Conversations:

As noted above.

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.

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Inspected By:	Bettencourt,Rick	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
