

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-015866**Date Inspected:** 27-Jul-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 5W/6W, 5E/6E, and the following observations were made:

5W/6W-B

The QA Inspector randomly observed the QC Inspector Tony Sherwood perform visual testing (VT) of the above identified weld joint. The QC Inspector informed the QA Inspector the weld joint was acceptable. The QA Inspector performed random dimensional verifications and VT of the accepted fit up. The QA Inspector noted the fit up and dimensional tolerances appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder Xiao Jian Wan preheat the weld joint to 200°F prior to performing the flux cored arc welding (FCAW) utilizing the induction heating blankets.. The QA Inspector randomly verified the minimum required preheat utilizing a 200°F temperature indicating marker. The QA Inspector noted the weld was started on the previous day shift. The QA Inspector noted the material was maintained over night at the minimum required 200°F due to the thickness of the base material. The QA Inspector randomly observed the ABF welder continue to perform the FCAW fill pass. The QA Inspector randomly observed the SE QC Inspector Tony Sherwood monitoring and recording the in process welding parameters. The QA Inspector randomly observed and verified the FCAW parameters and they were 244 Amps, 21.5 Volts and a travel speed of 200mm/min. The QA Inspector noted the FCAW parameters appeared to be in general compliance with ABF-WPS-D1.5-3040B-3. The QA Inspector noted the ABF welder was performing the FCAW fill passes for the remainder of the QA Inspectors shift.

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5E/6E-C2

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 Bonifacio Daquinag 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 236 Amps, 24.1 Volts and a travel speed of 250mm/min. The QA Inspector noted the FCAW root pass/fill passes were welded on the previously on 7/26/10. The QA Inspector performed a random visual inspection of the in process fill pass in weld segment C1 and noted it did appear to meet the general requirements of the contract documents. The QA Inspector randomly observed the ABF welder identified above continue the FCAW fill passes on C1. The QA Inspector noted the ABF welders spent the remainder of the shift performing the FCAW fill passes.

4W/5W-F

Upon the arrival of the QA Inspector at the above identified location

It was observed the ABF welder identified as Hua Qiang Huang had previously completed the back gouging of the above identified weld joint. The QA Inspector randomly observed the Smith Emery Quality Control (QC) Inspector identified as John Pagilero was on site and performing visual testing of the completed back gouge. The QA Inspector randomly observed the ABF welder perform grinding tasks of the areas indicated by the QC Inspector. The QA Inspector noted no production welding was completed on the QA Inspectors shift.

Tower Erection

The QA Inspector randomly observed the ABF erection personnel pick and set the South East and South West Shear plates. The QA Inspector randomly observed ABF set the Shear Plates on the T1 foundation over the anchor rods and snug the bolts. The QA Inspector noted the bolts were only snug tight not tensioned. The ABF Engineer John Callaghan informed the QA Inspector the South Tower Shaft will be installed tomorrow 7-28-10.



Summary of Conversations:

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The QA Inspector was informed by the Smith Emery Lead Inspector Leonard Cross, he has developed a system to track all of the production and NDT involved with any specific transverse weld joint. In addition the QA Inspector was informed by the QA Lead Inspector Bill Levell, all QA NDT will be done after verifying the Smith Emery Quality Control department has completed and accepted the weld joint. Mr. Levell informed the QA Inspector to get the verbal conformation from Mr. Leonard Cross prior to performing any NDT.

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
