

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-012637**Date Inspected:** 10-Mar-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:	Mike Johnson, Jesse Cayabayab, JCWI, Prisham	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 1E/2E-A,D,C	

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 1E/2E-A, and 1E/2E-C and 1E/2E-D the following observations were made:

2E/3E-D

Upon the arrival of the QA Inspector it was observed the above identified weld joint was welded with flux cored arc welding (FCAW) from one side of the joint. The QA Inspector noted the FCAW tack weld was joining the steel backing bar to the bevel on one side of the joint only. The QA Inspector randomly observed the ABF welder James Zhen begin performing FCAW in the 2F position tack welding the joint opposite the previously welded side. The QA Inspector noted the ABF welder was joining the two members ("D" plates) by welding. The QA Inspector randomly observed the minimum required preheat of 150°F was achieved utilizing induction heat blankets prior to the ABF welder performing welding. The QA Inspector verified the minimum required preheat utilizing a temperature indicating marker. The QA Inspector observed the Smith Emery (SE) Quality Control (QC) Inspector Bnifacio Daquinag was present at the above identified location to monitor and observed the in process welding. The QA Inspector randomly observed the FCAW parameters being utilized by the ABF welder James Zhen and they were 252 Amps, 23.5 Volts and a travel speed of 260mm/min. The QA Inspector randomly observed the FCAW parameters being utilized by the ABF welder Jin Quan Huang and they were 253 Amps, 23 Volts and a travel speed of 265mm/min. The QA Inspector noted the FCAW parameters were consistent with the approved parameters of the ABF-WPS-D1.5-F3200-2.

1E/2E-D/S-9

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The QA Inspector randomly observed the ABF welder identified as Song Tao Huang performing FCAW in the 3G position at the above identified stiffener plate. The QA Inspector noted the ABF welder was performing the back weld of the previously back gouged and ground weld joint. The QA Inspector noted the QC Inspector Bernard Docena was present to monitor and observe the in process welding. The QA Inspector randomly verified the back gouged area and noted it appeared to had been ground and blended to a weldable profile prior to performing the FCAW vertical back weld. The QA Inspector randomly observed the minimum required preheat of 200°F was achieved utilizing induction heat blankets prior to the ABF welder performing welding. The QA Inspector verified the minimum required preheat utilizing a 200°F temperature indicating marker. The QA Inspector noted the FCAW parameters were 236 Amps, 23.5 Volts and a travel speed of 244mm/min. The QA Inspector noted the FCAW parameters appeared to be in general compliance with ABF-WPS-D1.5-3010-3. The QA Inspector noted the above identified stiffener plate is the last stiffener plate to be completed out of the 19 total stiffener plate compete joint penetration (CJP) groove welds. The QA Inspector randomly observed the ABF welder Mitch Sittinger performing grinding tasks utilizing a burr bit grinder in the weld access holes terminating the previously completed welds. The QA Inspector noted the SE QC Inspector Jim Cunningham had performed some preliminary ultrasonic testing (UT) on stiffeners D/S1-5 prior to any paint removal. Mr. Cunningham informed the QA Inspector no rejectable indications were located at the time of the testing.

1E/2E-C-2

The QA Inspector randomly observed the ABF welders had previously started the induction heating blankets 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 a semi automated FCAW track system for welding the above identified weld joint. The QA Inspector randomly observed the SE QC Inspector identified as Jim Cunningham set the FCAW machine to the parameters of the approved WPS identified as ABF-WPS-D1.5-3042A-1. The QA Inspector randomly observed the FCAW parameters were 274 Amps, 21.7 Volts and a travel speed of 266mm/min. The QA Inspector randomly observed the ABF welder Jeremy Doleman continued the FCAW fill pass, once the semi automated track system reached a certain point the ABF welder Rory Hogan would observe the welding arc for the remainder of the weld. The QA Inspector noted the ABF welders did complete the section of weld in C2 on today's date.

Summary of Conversations:

The QA Task Lead Bill Levell informed the QA Inspector of a verbal approval for ABF welder identified as John Rosas to perform welding on the project. Mr. Levell informed the QA Inspector Mr. Rosas is approved to weld utilizing shielded metal arc welding (SMAW) in the 3G and 4G positions along with the seismic performance critical member (SPCM) endorsement.

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

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Reviewed By: Levell,Bill

QA Reviewer