

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-013569**Date Inspected:** 30-Apr-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:	Bernard Docena, Steve McConnell, CWI Present	CWI Present:	Quinag	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 3W/4W-A, 1W/2W-E,			

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 1W/2W-E & D, 3W/4W-A and the following observations were made:

3W/4W-A

Upon the arrival of the QA Inspector it was observed the above identified weld joint had been previously completed. The QA Inspector noted the Smith Emery (SE) Quality Control (QC) Inspector Steve McConnell had performed magnetic particle testing (MT) of 100% of the total weld length. The QA Inspector performed random MT in the weld segment identified as A3. The QA Inspector noted no relevant indications were located at the time of the testing (see TL-6028 for additional information). The QA Inspector randomly observed the SE QC Inspectors Steve McConnell and Tom Pasqualone begin performing the ultrasonic testing of the above identified weld joint. The QA Inspector noted the UT was just begun and not completed on the QA Inspectors shift.

1W/2W-C1

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 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 Tom Pasqualone set the FCAW machine to the parameters of the approved WPS.

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The QA Inspector randomly observed the FCAW parameters were 247Amps, 23.1 Volts and a travel speed of 260mm/min. The QA Inspector randomly observed the ABF welder Song Toa Huang begin the FCAW fill pass, once the semi automated track system reached a certain point the ABF welder Huang Jin Quan would observe the welding arc for the remainder of the weld. The QA Inspector noted the ABF welders did not complete the weld segment C1 on the QA Inspectors shift.

The QA Inspector performed visual testing of the entire weld joint of plate C prior to production welding. The QA Inspector randomly observed one area in weld segment C2 which appeared to have 3-4mm of planar misalignment. Due to access issues with the splice plates the QA Inspector was not able to accurately measure the Y location of the planar misalignment. The QA Inspector informed the QC Inspector Bernard Docena of the issue. Mr. Docena informed the QA Inspector he would address the misalignment issue when the ABF welds begin to weld in weld segment C2 next week.

1W/2W-D/S (stiffeners)

The QA Inspector randomly observed the ABF welders James Zhen and Song Tao Huang removing the round bar stock from the previously restored vertical weld joints. The QA Inspector previously noted the vertical double V weld joints were buttered or restored to the original joint configuration by welding. The QA Inspector noted the buttering process appeared to have been completed. The QA Inspector performed a random visual inspection of the completed groove welds and noted they appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder James Zhen was removing the round bar stock by welding at locations where weld joint restoration was completed. The QA Inspector randomly observed the stiffener plates identified as D/S-3 and D/S-5 were previously completed. The QA Inspector noted both of the above identified stiffeners had been welded from both sides and the weld tabs or runoff tabs were still in place. The QA Inspector noted no production welding was completed at the above identified location on this date. The QA Inspector noted the ABF welder was utilizing a plasma arc to remove the round bar stock from the buttered weld joints. The QA Inspector noted additional grinding would be required prior to performing the flux cored arc welding (FCAW) of the vertical weld joints.

Summary of Conversations:

The QA Task Lead Bill Levell informed the QA Inspector the ABF erection and welding crew will begin to perform grinding tasks of the transition from 20mm-14mm on the top deck plates of all remaining lifts. Mr. Levell was relaying the information from the Welding Quality Control Manager (WQCM) Jim Bowers. Mr. Bowers informed Mr. Levell, once the lifts are approximately 4' away from each other the ABF welding personnel will begin grinding the transitions 2:1 to allow a tight fit up or intimate contact of the steel backing and beveled edge of the complete joint penetration groove weld identified as "A".

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