

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-015201**Date Inspected:** 22-Jun-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, Jesse Cayabyab			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 4W/5W-A, 1W/2W-D/S 3W/4W-E and the following observations were made:

4W/5W-A

Upon the arrival of the QA Inspector it was observed the ABF welders Kenneth Chappell and Xiao Jian Wan were performing the FCAW repair on the above identified weld joint. The QA Inspector randomly observed the excavation was previously completed prior to the QA Inspectors arrival. The QA Inspector performed random dimensional measurements of the excavation and noted it appeared to be 850mm x 25mm x 14mm deep. The QA Inspector noted the SE QC Inspector Steve McConnell was on site to observe the in process welding of the excavation. Upon the arrival of the QA Inspector it was observed the excavation had approximately two passes. The QA Inspector noted the second pass appeared to be 25mm wide which exceed the maximum allowable width per layer in AWS D1.5-02. The QC Inspector Steve McConnell informed the QA Inspector the weld pass was too wide and would require removal (see summary of conversation). The QA Inspector observed the above identified welder continue the FCAW and deposit multiple passes over the weld pass which was rejected by QC for width. The QA Inspector noted the welder was instructed to do so by the Welding Superintendent according to the QC Inspector Steve McConnell.

After the QA Inspector asked the Welding Superintendent if he would what his intentions were with the above described issue, the Welding Superintendent elected to remove the weld by grinding. The QA Inspector noted the Welding Superintendent Stopped the work in the am, and no additional work was performed on the QA Inspectors

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shift on this date.

1W/2W-D/S

Upon the arrival of the QA Inspector, it was observed all of the production welding and repair welding had been completed. The QA Inspector noted ABF welder identified as James Zhen was performing grinding tasks of the previously completed welds and the weld access holes on the bottom of the longitudinal stiffeners. The QA Inspectors noted no welding was performed on the QA inspectors shift. The QC Inspector Tom Pasqualone informed the QA Inspector he would likely begin the ultrasonic testing (UT) of the repair areas after lunch.

1W/2W-F

Upon the arrival of the QA Inspector at the above identified location the QA Inspector noted the back gouge had been previously completed. The QA Inspector noted the SE QC Inspector Tom Pasqualone was present. The QA Inspector noted the QC Inspector had previously performed magnetic particle testing (MT) of the back gouged weld joint. The QA Inspector noted the MT powder was still holding on several linear indications indicative of slag and lack of fusion. The QA Inspector noted additional grinding tasks would be performed to remove the MT indications. The QA Inspector noted the ABF welder James Zhen spent the remainder of the shift performing the grinding tasks. No welding was performed on the QA Inspectors shift.

3W/4W-E

The QA Inspector randomly observed the ABF welder Rory Hogan and Jeremy Doleman had previously started the induction heating blankets on the outside 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 flux cored arc welding (FCAW) with the semi-automated bug-o track system for the above identified weld joint. The QA Inspector randomly observed the Smith Emery (SE) QC Inspector identified as Tony Sherwood 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 247 Amps, 23.9 Volts and a travel speed of 320mm/min. The QA Inspector noted the ABF welder spent the remainder of the QA Inspectors shift performing the FCAW fill passes of the back weld. 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. The QA Inspector noted the weld joint appeared to be approximately 90% complete at the end of the QA Inspectors shift.

Summary of Conversations:

The SE QC Inspector Steve McConnell informed the QA Inspector the weld pass was too wide at the above identified location. The QC Inspector informed the QA inspector he informed the ABF Welding Superintendent Dan Ieraci of the issue, and informed him the weld pass exceeded the maximum allowed by AWS D1.5 and must be removed. The QC Inspector informed the QA Inspector the Welding Superintendent instructed the ABF welder to keep welding over the pass that was not acceptable. The SE QC Inspector expressed his frustrations with the lack of any concern for Quality Control by the Welding Superintendent.

Later the QA Inspector spoke with the Welding Superintendent and asked him if he were planning to remove the FCAW weld pass previously indicated and rejected by the QC Inspector. The Welding Superintendent informed the QA Inspector he would remove the weld pass by grinding. The QA Inspector noted the Welding

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Superintendent expressed reluctance and defiance in removing the weld pass. The Welding Superintendent informed the QA Inspector, “Yea I will have the grind it out, I don’t know why! It will probably do more damage than good, this is really splitting hairs”.

Later in the shift the QA Task Lead Inspector Bill Levell informed the QA Inspector the ABF Welding Quality Control Manager (WQCM) Jim Bowers has written and submitted an internal non conformance report (NCR) for ABF welding over the FCAW pass that exceed the maximum allowable width per layer.

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
