

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-015767**Date Inspected:** 21-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 5E/6E-C1, 3W/4W-D, and the following observations were made:

5E/6E-C1

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 was welded on the previous day shift. The QA Inspector performed a random visual inspection of the completed root 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 (pictured below).

3W/4W-D1/D2

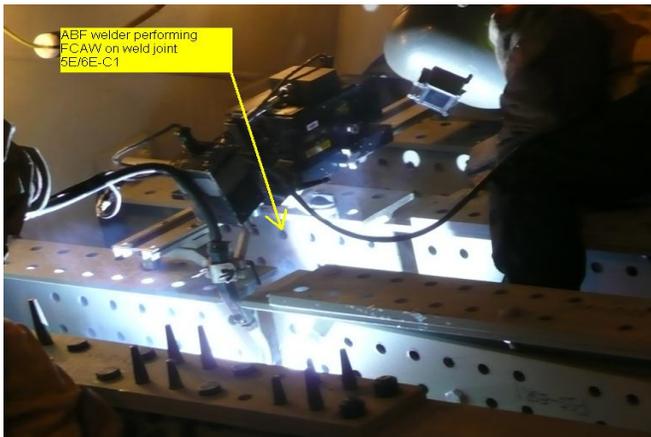
The QA Inspector randomly observed the ABF welders Jeremy Doleman and Rory Hogan performing flux cored

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arc welding the in 4G position at the above identified location. The QA Inspector noted ABF welders were welding the first 3 meters of the FCAW back weld in the above identified weld segment. The QA Inspector randomly observed the ABF welders completed the back gouging on the previous day shift. The QA inspector noted the SE QC Inspector Tony Sherwood performed magnetic particle testing (MT) of the completed back gouge and noted no relevant indications were located at the time of the testing. The QA Inspector randomly observed the induction heating blankets were previously installed and turned on, maintaining the minim required preheat of 150°F. The QA Inspector noted the SE QC inspector Tony Sherwood was on site monitoring and recording the in process production welding. The QA Inspector randomly observed the FCAW parameters and they were 250 Amps, 24.5 Volts and a travel speed of 186mm/min. the QA Inspector noted the FCAW parameters appeared to be in general compliance with ABF-WPS-3042B. The QA Inspector noted the FCAW fill/cover pass was in process at the end of the QA Inspectors shift for the overhead FCAW back weld.

The QA Inspector spend the remainder of the shift walking the job site and updating the Caltrans QA Production/NDT tracking log. The QA Inspector noted, after the information was gathered in the field, the QA Inspector transferred the information to the chart in the Caltrans SAS office on the job site.



Summary of Conversations:

The QA Inspector previously clarified information via email, regarding a missed UT rejection by the SE QC Inspector with the SE Lead Inspector Leonard Cross. Mr. Cross informed the QA Inspector he was misinformed that the QA Inspector rejected a weld defect in the weld joint identified as 3E/4E-D2 for a difference of 1 DB, between the QC and QA Inspectors UT machines. As per the previous email, the QA Inspector reiterated a Caltrans QA Inspector would not make a call or reject a weld defect for the difference of a single DB between UT machines. The QA Inspector informed Mr. Cross again the weld defect located by the QA Inspector was designated a +1 and a single DB difference would have been irrelevant when a +10 was the cut off for a class “A” rejection in AWS D1.5 table 6.3. Mr. Cross informed the QA Inspector he was mistaken and had attained some incorrect information. Mr. Cross did add, it was to his belief the weld joint had not yet been accepted by the SE QC Inspector.

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
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Reviewed By:	Levell,Bill	QA Reviewer
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