

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-020576**Date Inspected:** 10-Feb-2011**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 as 8W/9W-C, 8W/9W-E and the following observations were made:

8W/9W-C

The QA Inspector randomly observed the ABF welders Rory Hogan and Jeremy Doleman setting up the flux cored arc welding (FCAW) machines at the above identified weld joint. The QA Inspector was informed by the QC Inspector Scott Alder the back gouged weld joint was previously accepted by the SE QC. The QA Inspector performed a random visual and dimensional inspection of the back gouged weld joint and noted it appeared to meet the general requirements of the contract documents. 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 Scott Alder 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 270 Amps, 21.9 Volts and a travel speed of 254mm/min. The QA Inspector randomly observed the ABF welder Jeremy Doleman begin the FCAW root 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 not complete the weld joint on the QA Inspectors shift.

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8W/9W-E

The QA Inspector randomly observed the ABF welder identified as Kenneth Chapel performing shielded metal arc welding (SMAW) of the above identified weld joint. After a closer look the QA Inspector noted the weld joint had not been back gouged completely at the time of the welding. The QA Inspector randomly observed the steel backing bar had been scarfed off and the weld was exposed. The QA Inspector randomly observed the weld joint to have numerous gouges in the weld material which appeared to be caused by the plasma arc gouging. The QA Inspector asked the ABF welder why he was performing welding when the weld had not yet been completely back gouged. The welder informed the QA Inspector that ABF deposits additional weld material after the bar is removed to eliminate the gouges caused during the removal of the steel backing bar. The welder went on to explain that if they deposit additional weld in the gouged areas prior to performing the back gouge with the plasma arc, it scarf's the weld much cleaner. The QA Inspector was informed by the ABF welder when the surface to be scarfed is smooth or free of any deep gouges the semi automated plasma arc gouging system runs much more smoothly and requires less grinding in the back gouged weld.

The QA Inspector spent the remainder of the shift walking the top deck inside and out of the East and West bridge decks. The QA Inspector took field notes of the status of the production welding, and or NDT of the lifting lug deck hole restorations. The QA Inspector later transferred the data collected in the field to on site excel spread sheets or tracking logs for future references.

Summary of Conversations:

The Lead QA Inspector Rick Bettencourt asked the Lead QC Inspector Bonifacio Daquinag if SE QC was aware of the outstanding UT rejections located by METS QA. The QA Inspector reiterated the locations including 3E-pp19.5-E5-NW and 5E/6E-D1. The QC Inspector informed the QA Inspector SE was aware of the areas, but he was unsure if they had agreed with the results. The QC Inspector went on to inform the QA Inspector he was not sure if SE QC had a chance to re-evaluate the areas identified above that had been rejected by METS QA. The QC Inspector added the 5E/6E-D1 location had been painted on the external surface of the skin plate, but ABF is aware that an outstanding UT rejection remained at the location.

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 Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Bettencourt,Rick	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
