

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-014663**Date Inspected:** 04-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, Bonifacio Daquinag, Mike Johnson			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/D and the following observations were made:

4W/5W-A

Upon the arrival of the QA Inspector, the Smith Emery (SE) Quality Control (QC) Inspector Bonifacio Daquinag and the QA Inspector performed the final dimensional verification inspection of the above identified weld joint. The QA Inspector noted the SE Lead QC Inspector Mike Johnson was present for the dimensional verification. The QA Inspector measured and recorded the temperature of the steel and time to accurately document the thermal expansion and contraction of the top deck plates. The QA Inspector and the QC Inspector began the dimensional verification at 0930 and the temperature of steel was verified with a calibrated temperature gun and measured at approximately 18°C. The QA Inspector and the QC Inspector worked simultaneously to accurately record the planar misalignment of the top deck plates after the full length tack weld jointing the two top deck plate members were completed. After the dimensional measurements were completed the QC/QA Inspector noted the following locations were recorded as unacceptable planar misalignment:

The unacceptable planar misalignment was located at the following 14 locations:

y=0mm-200mm 5-4-3-2mm misalignment (200mm in length)

y=920mm-1000mm 2-3-4mm misalignment (80mm in length)

y=1000mm-1200mm 4-6-5-4mm misalignment (200mm in length)

y=27205mm-27280mm 5-4-3-2mm misalignment (75mm in length)

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The total planar misalignment was 555mm or 2.03% of the total length of the weld joint

The QA Inspector observed the map of the planar misalignment generated by the QC Inspector Bonifacio Daquinag and signed by the SE Lead QC Inspector Mike John. After the QA Inspector reviewed the document, the QA Inspector determined the readings recorded were accurate and the QA Inspector signed the map concurring with the results. The QA Inspector noted the planar misalignment identified above exceeds that allowed in AWS D1.5-02 section 3.3.3. The QA Inspector issued and submitted an Incident Report regarding the unacceptable planar misalignment.

The QA Inspector randomly observed the ABF welding representatives performing grinding tasks of the shielded metal arc welding (SMAW) full length tack weld for the remainder of the shift. The QA Inspector randomly observed the ANF Welding Superintendent Dan Ieraci and ABF welder James Zhen performing SMAW while attaching the steel weld tabs or runoff tabs to the ends of the weld joint (see summary of conversations).

4W/5W-D

The QA Inspector randomly observed the ABF welder identified as Xiao Jian Wan setting up to perform the flux cored arc welding (FCAW) seal weld or full length tack welding of the above identified weld joint. The QA Inspector noted the induction heating blankets had been previously installed to achieve the minimum required preheat of 150°F. The QA Inspector noted the SE QC Inspector Bernard Docena was on site to monitor and record the in process welding. The QA Inspector performed visual testing of the fit up of the above identified weld joint prior to the FCAW tack welding. The QA Inspector noted the weld joint had been previously accepted by the QC Inspector Bernard Docena. After the random dimensional verification of the weld joint, it was noted the weld joint appeared to be in general compliance with the contract requirements. The QA Inspector noted the ABF welder did not complete any welding on the QA Inspectors shift. The QA Inspector noted the ABF welder was making adjustments and appeared to be having issues with the shielding gas of the FCAW machine.

Summary of Conversations:

The ABF Project Engineer John Callaghan informed the QA Inspector no welding will be performed on Saturday 6/5/10. Mr. Callaghan informed the QA Inspector welding will resume on Monday 6/7/10.

Mr. Ieraci Informed the QA Inspector ABF is not planning to attempt to weld the joint in the same manner the previous weld joint was welded. Mr. Ieraci informed the QA Inspector the previous weld joint was welded with out weld tabs rather the submerged arc welding was cascaded at the ends. Mr. Ieraci informed the QA Inspector weld tabs will be utilized and if the joint cracks, due to the weld tabs ABF will repair it as done previously.

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
