

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-012851**Date Inspected:** 30-Mar-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 Cayabayab	CWI Presentation:	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 2E/3E, 3E/4E, 1W/2W	

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

1W/2W-A

A4/A5-

Upon the arrival of the QA Inspector at the above identified location the QA Inspector randomly observed and noted the steel backing bar was installed and had been tack welded full length on one side. The QA Inspector performed a random visual and dimensional inspection of the fit up, the QA Inspector noted the weld joint has not been joined by welding. The QA Inspector randomly observed temporary attachments had been installed to aid in the fit up at various locations across the top deck plate or "A" plate. Upon the dimensional verification the QA inspector located planar misalignment which exceeds the maximum allowable in AWS D1.5-02 in weld segment A5 the planar misalignment is as follows:

A5- 40mm in length from the end of the joint appeared to have a maximum misalignment of 3.5mm-3mm.

A5-410mm in length from 2270mm-2680mm from the beginning of weld segment A4, appeared to have a maximum misalignment of 3mm

A4-1285mm in length from the beginning of weld segment A4, appeared to have a maximum misalignment of 6mm-3mm.

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The QA Inspector noted the above identified dimensions are for information only, due to the fact the weld joint has not yet been joined by welding. The QA Inspector noted the ABF welding and fit up personnel may still perform additional fitting tasks to correct the planar misalignment. The QA Inspector noted the planar misalignment was indicated with a distinguishing marking by the QA Inspector directly on the base material adjacent to the weld joint. The QA Inspector noted no additional dimensional verification could be performed due to ABF setting up the induction heating blankets on the remainder of the weld joint.

1W/2W-C1/C2

The QA Inspector randomly observed the ABF welder Rick Clayborn installing the temporary attachments on the external surface of the above identified weld joint. The QA Inspector randomly observed the ABF welder install the steel backing bar utilizing temporary attachments and fitting aids to perform the fit up. The QA Inspector randomly observed the SE QC Inspector Bnifacio Daquinag on site to monitor and record the shielded metal arc welding (SMAW) preheating and parameters. The QA Inspector randomly observed the ABF apprentice welder preheating the areas where the temporary attachments were to be welded. The QA Inspector noted the ABF welder was utilizing SMAW 1/8" E7018 low hydrogen electrodes with 145 Amps. The QA Inspector noted the SMAW parameters appeared to be in general compliance with ABF-WPS-D1.5-F1200A. The QA Inspector noted the fit up was completed on this date. The QA Inspector randomly observed and noted the ABF welder was welding the temporary attachments on three sides and appeared to be direct non conformance with American Bridge/Fluor Submittal 001361R03. The QA Inspector noted an Incident Report will be written and submitted for review.

3E/4E-D1/D2

The QA Inspector was asked by the QA Task Lead Bill Levell to perform visual testing (VT) of the above identified weld joint. Mr. Levell informed the QA Inspector that American Bridge/Fluor (ABF) would like to begin performing production welding at the above identified location. The QA Inspector immediately performed a random visual inspection of the completed fit up. The QA Inspector observed the Smith Emery (SE) Quality Control (QC) department had previously inspected and accepted the fit up for the above identified weld joint. After the QA Inspector completed the VT of the weld joint it was noted the weld joint identified as 3E/4E-D1/D2 appeared to meet the general requirements of the contract documents. The ABF Welding Quality Control Manager (WQCM) Jim Bowers asked the QA Inspector via phone conversation if the weld joint was acceptable. The QA Inspector informed Mr. Bowers the fit up appeared to be in general compliance and no issues were observed.

3E/4E-A4

The QA Inspector randomly observed the SE QC Inspectors had completed the magnetic particle testing (MT) of the above identified completed cover pass. The QA Inspector performed MT verification of the accepted weld and noted no rejectable indications were located at the time of the testing (see TL-6028 for today's date).

2E/3E-D1/D2

The QA Inspector randomly observed the ABF welders Jeremy Doleman and Rory Hogan setting up to perform flux cored arc welding (FCAW) in the 4G position. The QA Inspector noted the no welding was performed on the QA Inspectors shift.

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Summary of Conversations:

as noted above.

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
