

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-012487**Date Inspected:** 10-Mar-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1200**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2030**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See below for names.**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:** Orthotropic Box Girders (OBG)**Summary of Items Observed:**

The Quality Assurance Inspector (QAI), Scott Croff, was present at the Self Anchored Span (SAS) job site to observe the scheduled fabrication and welding of components for the SFOBB project. The following observations were made:

- 1) OBG L1E/L2E plate D stiffener splices
- 2) OBG L2E/L3E plate D splice welding
- 3) OBG L2E/L3E plate A splice fit-up

1) The QAI observed ABF personnel grinding the L1E/L2E plate D stiffener splice welds. The QAI noted that the Quality Control (QC) Inspector Bernie Docena is conducting visual inspection of the welds. The QAI was informed that the welds are not visually accepted yet. The QAI was also informed that after the welds are visually acceptable, there will be Magnetic Particle Testing (MT) and Ultrasonic Testing (UT) performed.

2) The QAI arrived at the L2E/L3E plate D field splice and noted that ABF personnel are preparing to make submerged arc welds (SAW). The QAI noted that the QC Inspectors Bonifacio Daquinag Jr. and James Cunningham are monitoring the work / welding at this location. The QAI was informed that gas shielded flux cored arc welding (FCAW-G) welds have been finished, tying in the backing bar to the OBG plate bevels. The QAI made random observations of the FCAW-G welds and noted that they appeared to be visually conforming to the contract requirements at this time. As the SAW equipment was positioned and set up, the QAI was informed that the first weld pass can not be made the full length of the joint due to stiffener plate connections. The QAI noted that the weld will be made from approximately 780mm to 6800mm. The QAI was informed that the SAW

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will be performed to ABF-WPS-D15-4042B-1 requirements. The QAI made random observations of the welding parameters and preheat temperatures of the 1st weld pass and noted that they appeared to be within the WPS and contract requirements. The QAI noted that after the 1st weld pass, cleaning and grinding the weld was in progress and no additional welding was performed during this shift. See the attached photos.

3) The QAI observed the installation and fillet welding of temporary fit up aids on the bottom of deck plate A at OBG lifts 2E/3E field splice. The temporary fillet welding was performed by ABF welder Rick Clayborn, ID 2273. The QAI observed the QC Inspector Jesse Cayabyab monitoring the welding of the fit up aids at this location. The QAI was informed that shielded metal arc welding (SMAW) with 1/8" E7018 electrodes and ABF-WPS-D15-F1200A-1 is being used for the temporary fillet welds. The QAI made random observations of welding parameters and preheat temperature which were noted as 135 DC amps and a minimum temperature of 150°F. The QAI noted that the workmanship appeared to be generally conforming to the contract requirements. The QAI was informed that additional fit-up is needed and the joint fit-up has not been accepted at this time. The QAI inquired as to how the backing bar will be installed across the deck plate transition (2 locations). The ABF foreman / welder Rick Clayborn informed the QAI that ABF will use an oxygen/fuel torch (rosebud) to heat the backing bar and then wedges will be used to force the backing bar into contact with the deck plates. The QAI was informed that this work will be performed at a later time.



Summary of Conversations:

As noted above, the QAI had conversations with the QC Inspectors regarding the visual inspection of stiffener splice welds, the set up of SAW and welding requirements and the backing bar fit-up on L2E/L3E deck plate A. There were also general conversations regarding the status of the work in progress. The QAI relayed the observations of OBG splices fit-up and welding QAI Danny Reyes. There were no other notable observations or conversations during this shift.

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: Croff, Scott

Quality Assurance Inspector

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Reviewed By: Levell,Bill

QA Reviewer