

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-017361**Date Inspected:** 08-Oct-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 as 7W/8W-A and hole restoration, and the following observations were made:

2E-pp13.5-E2-SW Access Hole Restoration

The QA Inspector randomly observed the American Bridge/Fluor (ABF) welder Wai Kitlai setting up to continue performing the shielded metal arc welding SMAW cover passes. The QA Inspector previously performed random visual testing and dimensional verification of the bevel angle and root opening of the above identified fit up. The QA Inspector randomly observed the fit up appeared to be in general compliance with ABF-WPS-D1.5-1030. The QA Inspector randomly observed the SE QC Inspector Patrick Swain was on site monitoring the in process welding. The QA Inspector randomly observed the SMAW parameters were 128 Amps while utilizing 1/8" E7018 low hydrogen electrodes. The QA Inspector noted the SMAW parameters appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder continue to perform the SMAW cover pass pick up areas at the above identified location. The QA Inspector noted the SMAW cover pass was completed and the ABF welder was performing additional welding of areas that required additional weld material.

6W/7W-A1-A5

Upon the arrival of the QA Inspector in the am it was observed the above identified weld joint was fit up with the approved temporary attachments or fit up gear in place. Upon the arrival of the QA Inspector, the QC Inspector Tony Sherwood informed the QA Inspector the planar misalignment inspection had been previously performed by

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SE QC and just required QA verification. The QC Inspector presented the QA Inspector with a planar misalignment map of the areas previously located by QC Tony Sherwood. The QA inspector noted the map indicated the only planar off set was located at 4 locations through out the transverse weld joint. The QA Inspector reviewed the document and proceeded to perform the random QA verification of the weld joint. The QA Inspector observed areas indicated and performed QA verifications working together with the QC Inspector. After the inspection was completed the QA Inspector noted a total of 490mm at four separate locations. The QA Inspector asked the ABF Welding Superintendent Dan Ieraci if he intended to correct the unacceptable planar misalignment (see summary of conversations). The QA Inspector randomly observed the ABF welder Eric Sparks make several attempts to correct the off set areas by re-welding the broken fit up gear and driving additional pins to push one side of the deck downward. After several attempts it was observed by the QA Inspector no change in the unacceptable planar off set. The QA Inspector and the QC Inspector recorded the following locations of planar misalignment:

The unacceptable planar misalignment was located at the following 5 locations:

- 1.) y=0mm-180mm (20mm deck section) 0mm-2mm misalignment (80mm in length) 2mm-4mm misalignment (100mm in length).
- 2.) y=23380mm-23465mm (14mm deck section) 0mm-2mm misalignment (85mm in length)
- 3.) y=24565mm-24725mm (14m deck section) 0mm-2mm misalignment (160mm in length)
- 4.) y=25210mm-25275mm (20mm deck section) 0mm-2mm misalignment (65mm in length)

Total planar misalignment 490mm of the total length of the weld joint.

The QA Inspector and the SE QC Inspector Tony Sherwood performed dimensional verification of the gaps at the steel backing. The QA Inspector noted the 15 separate areas where the gap at the steel backing exceeded 2mm. The QA Inspector noted the largest gap was 4mm and no gap exceeded 4mm for the above identified transverse weld splice. The QA Inspector was informed by these Lead QC Leonard Cross the contractor will write and submit and internal non conformance report in addition to a request to weld repair over the excessive gaps at the steel backing.

The QA Inspector noted the above identified locations will require engineering approval prior to performing any weld repairs. The QA Inspector noted the locations were submitted by SE to ABF and the approval was given by the Project Engineer Patrick Lowry (see summary of conversation)

Summary of Conversations:

Mr. Ieraci informed the QA Inspector no additional fitting tasks would be performed due to the fact that ABF was breaking fit up gear. Mr. Ieraci informed the QA Inspector due to the rigidity of the top deck plate closed rib stiffeners, ABF was unable to perform any additional fitting tasks.

The QA Inspector was informed by the QA Task Lead Inspector Bill Levell, ABF was given the verbal approval to weld at 1250 per SMR Patrick Lowry.

Comments

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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
