

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-012765**Date Inspected:** 19-Mar-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

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|------------------------------------|---------------------------------|----|-----|----------------------------------|---------------|----|-----|
| 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 1E/2E | | |

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 1E/2E-A, B, D, 2E/3E-B and the following observations were made:

1E/2E-A

Upon the arrival of the QA Inspector it was observed the ABF welding personnel was performing grinding tasks of the weld reinforcement. The QA Inspector randomly observed the ABF personnel performing the grinding tasks for the remainder of the shift. The QA Inspector noted the Ultrasonic Testing (UT) was performed on the QA Inspectors shift.

1E/2E-B

The QA Inspector randomly observed the back weld of the above identified weld joint was completed at the time of the QA Inspectors arrival. The QA Inspector was informed by the QC Inspector Bernard Docena the weld profile was not acceptable in the current condition. Mr. Docena went on to inform the QA Inspector additional grinding would need to be performed prior to acceptance of the weld visually. The QA Inspector randomly observed and noted the weld had unacceptable excessive weld reinforcement. The QA Inspector randomly observed the ABF welder perform grinding tasks for the remainder of the shift.

1E/2E -D

Upon the arrival of the QA Inspector randomly observed the ABF welder Salvador Sandoval assisting the ABF Assistant Welding Superintendent Dan Ieraci set up the plasma arc gouging machine. The QA Inspector randomly

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observed the ABF representatives set up the bug-o track system with the plasma arc gouging machine attached to it, to allow a semi-automated back gouging system to be utilized. The QA Inspector noted the opposite side of the above identified weld joint was previously completed. The QA Inspector noted the plasma arc gouging machine was being set up to remove the steel backing bar from the external surface of the orthotropic box girder (OBG), and perform the back gouge of the weld joint. The QA Inspector randomly observed and noted the back gouging appeared to be a slow process. The QA Inspector randomly observed the steel backing was 90% removed but no back gouging had been performed yet. It was observed the back gouging process started on 3/17/10 and was still in process at 1100 on today's date. The QA Inspector noted the ABF personnel identified above spent the remainder of the QA Inspectors shift attempting to remove the steel backing bar.

2E/3E-B

The QA Inspector randomly observed the QC Inspector Jesus Cayabayab perform visual testing (VT) of the above identified weld joint. The QC Inspector informed the QA Inspector the weld joint was acceptable. The QA Inspector performed random dimensional verifications and VT of the accepted fit up. The QA Inspector noted the fit up and dimensional tolerances appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder Song Tao Huang preheat the weld joint to 150°F prior to performing the flux cored arc welding (FCAW). The QA Inspector randomly verified the minimum required preheat utilizing a 150°F temperature indicating marker. The QA Inspector randomly observed the ABF welder perform the FCAW root pass. The QA Inspector randomly observed the SE QC Inspector Jim Cunningham monitoring and recording the in process welding parameters. The QA Inspector randomly observed and verified the FCAW parameters and they were 226 Amps, 23.2 Volts and a travel speed of 210mm/min. The QA Inspector noted the FCAW parameters appeared to be in general compliance with ABF-WPS-D1.5-3040B-3. The QA Inspector noted the ABF welder was performing the FCAW fill passes for the remainder of the QA Inspectors shift.

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.

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