

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-017897**Date Inspected:** 05-Nov-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 hole restoration 7E/8E-A5, 1E-pp9.5-E3-1, FW Spencer Pipe Support Welding and the following observations were made:

7E/8E-A5

The QA Inspector noted previously an ABF welder was performing an excavation of a weld defect and over ground an area of approximately 235mm. The QA Inspector noted the over grinding had completely blown through the deck plate and exposed the steel backing beneath the deck plate. The QA Inspector noted the top deck plate and some of the weld material was over ground thus making the repair of the over ground area a base material repair which does require engineering approval.

Upon the arrival of the QA Inspector in the AM it was observed the ABF welder Fred Kaddu was setting up to make the SMAW repair of the above identified area. The QA Inspector asked the QC Inspector if he had any documents for the repair including the procedure or approval paperwork (see summary of conversations). The QA Inspector randomly observed the ABF welder insert a piece of bar stock or steel backing bar turned on the side and places in the gap of the through deck grind through to act as a steel backing. The QA Inspector then observed the ABF welder Fred Kaddu move underneath the deck plate and set up to perform the shielded metal arc welding (SMAW). The QA Inspector randomly observed the ABF welder preheat the area to approximately 100°F and begin the SMAW repair. The QA Inspector noted the ABF welder was depositing the SMAW stringer pass to the steel backing placed in the excavation to act as a back weld. The QA Inspector noted the above welder was

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utilizing 1/8" E7018 low hydrogen electrodes with 125 Amps. The QA Inspector noted only one or two passes were deposited prior to the repair being immediately stopped by the ABF Welding Superintendent Dan Ieraci (see summary of conversation).

1E-pp9.5-E3-1

The QA Inspector randomly observed Earl Espinosa performing grinding tasks of ultrasonic testing rejects in the above identified lifting lug deck hole restoration. The QA Inspector randomly observed the ABF welder had previously excavated the 4 UT rejections located in the above identified hole. The QA Inspector randomly observed the Smith Emery (SE) Quality Control (QC) Inspector Pat Swain was on site to monitor and record the in process welding parameters. The QA Inspector noted the ABF welder was utilizing the shielded metal arc welding process with 5/32" E7018 low hydrogen electrodes. The QA Inspector randomly observed the ABF welder was utilizing 180 Amps while performing the SMAW repair. The QA Inspector performed a random visual inspection of the previously excavated areas and noted they had been ground and blended to a boat shaped weldable profile. The QA Inspector randomly observed and noted the ABF welder was preheating the material to approximately 100°F prior to making the SMAW repairs. The QA Inspector noted the SMAW repairs appeared to be in general compliance with ABF-WPS-1001 repair. The QA Inspector noted the repair welding was completed on the QA Inspectors shift. After the ABF welder completed the welding, he performed grinding tasks while removing the weld reinforcement flush with the top deck base material.

FW Spencer Pipe Support Welding

The QA Inspector arrived at W2 and observed the FWS Spencer welder identified as David Garcia performing the SMAW fillet welds attaching the pipe supports identified as PS-17 to the embed plates in the bridge. The QA Inspector randomly observed the approved welding quality control plan (WQCP) on site and noted the documentation appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the SE QC Inspector Tom Pagliero was on site and monitoring the in process welding. The QA Inspector randomly observed the SMAW parameters and they were 1/8" E7018 low hydrogen electrodes with 120 Amps the QA Inspector noted the SMAW parameters appeared to be in general compliance with the WPS identified as FWS Fillets Murex SFOBB. Upon the arrival of the QA Inspector it was observed the welding contractor had completed approximately 17 fillet welds. The QA Inspector noted the slag had not all been removed, but the size appeared to be in general compliance with the contract requirements.



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Summary of Conversations:

The Lead QA Inspector asked the SE QC Inspector Steve McConnell if he the approved repair procedure for the grind through of the top deck plate. Mr. McConnell informed the QA Inspector, Dan Ieraci told him Friday the repair had a verbal approval by Jim Bowers. The QA Inspector informed the QC Inspector no such approval had been granted by the Caltrans METS and the repair should not be performed with engineering approval. Mr. McConnell said he was informed by his superiors the approval had been granted and ABF was moving foreword with the repair.

The Lead QA Inspector contacted the QA Task Lead Inspector Bill Levell and informed him of the repair without approval. Mr. Levell immediately informed the ABF WQCM Jim Bowers of the repair, Mr. Bowers informed Mr. Levell that ABF was not performing the repair. Mr. Levell reiterated the fact that ABF was performing the repair and was doing so with out engineering approval. Mr. Bowers then called the ABF Welding Superintendent Dan Ieraci and instructed him to stop the repair.

Later After the Mr. Ieraci immediately stopped the welding, he approached the QA Inspector. Mr. Ieraci informed the QA Inspector he had misunderstood the WQCM Jim Bowers and moved foreword with the repair prematurely. Mr. Ieraci apologized for beginning the repair prematurely, and he insured the QA Inspector he would report how much of the repair had been completed so engineering could make a decision on how to move foreword.

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 |
