

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:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026969**Date Inspected:** 29-Dec-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Bernie Docena**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:** OBG Components**Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Kenneth Riley was present at the San Francisco Oakland Bay Bridge job site at Yerba Buena Island to observe erection and welding activities for the San Francisco Oakland Bay Bridge (SFOBB) project. This Quality Assurance Inspector (QAI) observed the following work performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below:

A) Repair welding Field Splice

B) Field Splice

A). Field Splice Repairs

This QAI arrived observed welder Jeremy Dolman ID-5042 and Fred Kadu ID 2188, performing Shielded Metal Arc Welding (SMAW) using electrode E7018 under Welding Procedure Specification (WPS)

ABF-WPS-D15-1001R for the Complete Joint Penetration weld repairs. The preheat was observed as being a minimum of 60 degrees Celsius (125 Degrees Fahrenheit) with the welding current observed at 134 amps for welder 5042 and 128 amps for welder 2188. Both welders were using the 3.2mm electrode. The location of the welding was on the west bound lane (WB) at field splice bottom plate's 12w/13w. Welder 5042 was located at D3 with the repair location being Y=485 (length 940mm). Welder 2188 was at location D1 with repair #4, location Y=1940, Length 450mm. Weld repair location #3 at Y- 1750mm (length 160mm) had been completed. Both welders were observed as placing intermediate weld passes at their locations. QC inspector Bernie Docena was observed onsite overseeing the welding operations for this location. Mr. Dacena was verifying and documenting the welding parameters for this location.

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Later in the shift welder 2188 had completed the weld repair #4. The welder then proceeded to grind he welds flush as required prior to the Non Destructive Testing (NDT) to be performed. Welder 2188 was observed as continuing this procedure for the remainder of his shift. The QC stated that he would perform the MT testing the following day. At the time of the observations no issues were noted by the QAI. Welder 5042 was observed as continue with weld repair Y-485 placing intermediate weld passes. The QC was observed onsite documenting and recording the welding parameters. At the time of the observations no issues were noted by the QAI.

B). Field Splices

This QAI arrived observed welder Rich Garcia ID-5892, performing Flux Cored Arc Welding (FCAW) using electrode E71T-1M under Welding Procedure Specification (WPS) ABF-WPS-D15-3110-4 for the Complete Joint Penetration weld. The pre-heat was observed as being a minimum of 65 degrees Celsius (150 Degrees Fahrenheit). The amperage was recorded as 256 amps and 23.2 for welder 5892. The location of the welding was on the west bound lane (WB) at field splice deck plates at 13w/14w-A3 (Y-0 ~ Y-2750) in the overhead (4G) position. QC inspector Bernie Docena was observed onsite overseeing the welding operations for this location. Mr. Dacena was verifying and documenting the welding parameters for this location.

Later in the shift welder 5892 completed the 4G weld at splice 13w/14w-A3 and moved to field splice 13w/14w-A5 where he continued using the Flux Cored Arc Welding (FCAW) using electrode E71T-1M under Welding Procedure Specification (WPS) ABF-WPS-D15-3110-4 for the Complete Joint Penetration weld. The preheat was observed as being a minimum of 120 degrees Celsius (225 Degrees Fahrenheit). The welders parameters for this location was documented as 254 amps and 23 volts. The QC was observed onsite documenting and recording the welding parameters. At the time of the observations no issues were noted by the QAI.

QA Observation and Verification Summary

The QA inspector observed the QC activities and the welding utilizing the WPS's as noted above, which appeared to be posted at the weld station. The welding parameters and surface temperatures were verified by the QC inspectors utilizing a Fluke 337 clamp meter for the electrical welding parameters and a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. The consumables utilized for the welding process stated appeared to comply with the AWS Specification and AWS Classification. The QC inspection, testing and welding performed on this shift appeared to be in general compliance with the contract documents. At random intervals, the QAI verified the QC inspection, testing, welding parameters and the surface temperatures utilizing various inspection equipment and gages which included a Fluke 337 Clamp Meter and Tempilstik Temperature indicators.

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Summary of Conversations:

Basic conservation, fundamental to completion of the tasks at hand, occurred between this QAI and ABF QC personnel.

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 Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Riley, Ken	Quality Assurance Inspector
Reviewed By:	Levell, Bill	QA Reviewer
