DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-027007
Date Inspected: 05-Jan-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1750
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) NDT
B) Repair welding Field Splice
C) Lifting Lug Holes Repairs

A). NDT

This QAI received notification from Lead QAI Daniel Reyes, to perform a random verification utilizing Magnetic particle (MT) and Ultrasonic Testing (UT) for lifting lug holes. This QAI selected a random area of the welds and performed the verifications. The areas tested were as follows.

Lifting Lug holes
11E-PP102-E3-Weld 4
11E-PP103-E3-Weld 1~4 (See comments below for weld 1)
11E-PP104-E3-Weld 1 (UT only)
12E-PP111-E4-Welds 1-4

This QAI discovered a rejectable indication for weld 1 at 11E-PP103-E3, QC inspector John Pagliero and this QAI verified the findings jointly and confirmed the presents of the indication. The QC documented this location as an R2, and informed the contractor for the repair. The QC stated that this would be documented in his report as a rejectable indication. See TL-6028 and TL-6027 for additional information on this date.

B). Field Splice Repairs for D2

D2
The QAI observed that welder Jeremy Dolman ID-5042, had performed Carbon Arc Cutting (CAC) for rejectable indications found by the QC using the UT method. After the areas were excavated the welder ground the cavity to a bright finish and the QC inspector performed MT in the cavity to ensure the welder had sound metal to start his repair. The excavated dimensions were, Y=8140mm, length-420mm, depth- 20mm, and width-35mm. The welder then used a rosebud to pre-heat the repair area to 65 degrees Celsius (150 degrees F) that was verified using a tempstik and infrared gun by the QC. The welder was then observed by the QAI performing Shielded Metal Arc Welding (SMAW) using electrode E7018 under Welding Procedure Specification (WPS) ABF-WPS-D15-1001R for the Complete Joint Penetration weld repair with the welding current observed at 127 amps. The electrode being used was 3.2mm diameter for this repair. The location of the repair welding was on the west bound lane (WB) at the field splice for the bottom plate of joint 12w/13w. QC inspector Bernie Docena was observed onsite overseeing the welding operations for this location. Mr. Docena was observed verifying and documenting the welding parameters for this location.

Also observed at this location is welder Fred Kaddu 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 repair. The preheat was observed as being a minimum of 65 degrees Celsius (150 Degrees Fahrenheit) with the welding current observed at 129 amps for welder 2188. The welder was observed using the 3. 2mm electrode for this repair. The location of the welding was on the west bound lane (WB) at field splice bottom plate 12w/13w located at D2. The welder was observed as placing the intermediate passes for this location. QC inspector Bernie Docena was observed onsite overseeing the welding operations for this location. Mr. Docena was observed verifying and documenting the welding parameters for this location.

C). Lifting Lug Holes
The QAI observed that welder Mike Jimenez was observed doing repair excavations using Carbon Arc Cutting (CAC) process. Once the excavations were performed the cavities were ground to a bright finish and the QC inspector performed MT inspection to ensure the removals were to sound metal. The excavations at 11W-PP101-W1 at W3 line are as follows;

#1) Y=78mm, depth-10mm, length-70mm and width 20mm
#2) Y=180mm, depth-8mm, length-35mm and width 15mm
#3) Y=256mm, depth-6mm, length-35mm and width 15mm
#4) Y=367mm, depth-6mm, length-50mm and width 15mm

The QC inspector was observed onsite overseeing the operations, along with verifying, and documenting the welding parameters for this location. At the time of the observations no issues were noted by the QAI.

WELDING INSPECTION REPORT

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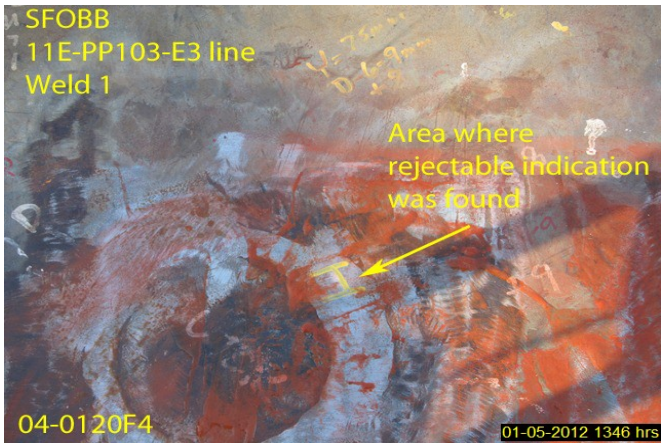
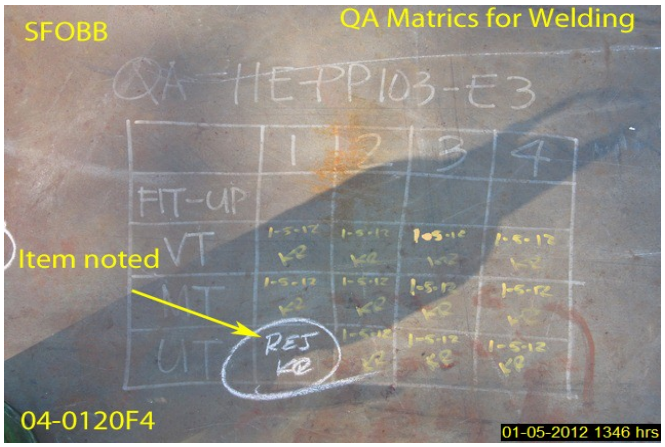
QA Observation and Verification Summary

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. Unless noted otherwise, all work observed on this date appeared to be in general compliance with the contract documents at the time of observations.





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