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

Bay Area Branch
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Contract #: 04-0120F4
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-026960
Date Inspected: 27-Dec-2011

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: 1730
Location: Job Site

CWI Name: Bernie Dacena , Bonifacio Daquinag

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) Lifting Lug Holes
B) Pipe Welding
C) Repair welding Field Splice

A). Lifting Lug Holes

The QAI observed welder Mike Jimenez performing Shielded Metal Arc Welding (SMAW) using electrode E7018 under Welding Procedure Specification (WPS) ABF-WPS-D15-1110A for the Complete Joint Penetration weld after the back gouging had been completed. The preheat was observed as being a minimum of 40 degrees Celsius with the welding current observed at 122 amps for the 3.2mm electrode. The location of the welding was on the west bound lane (WB) at Panel Point (PP) 100 for lifting lug holes W2 and W4. During the course of the morning Mr. Jimenez had completed the welding process for lifting lug holes W1 and W3. This QAI observed that Mr. Jimenez had ground the welds flush and had moved to the location above (W2 and W4). Later in the shift Mr. Jimenez was observed using the SMAW process in the 4G (overhead) position under the same WPS as stated above. Lifting lug hole W2 was completed and W4 was in process. The contractor had a laborer at this location to

perform the grind flush of the weld and required by the contract documents.

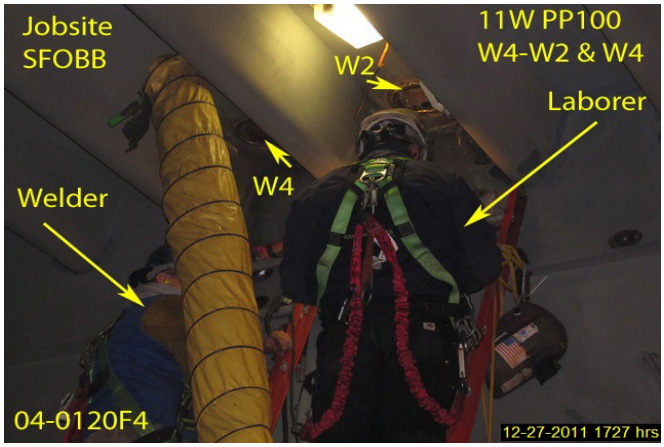
B). Pipe Welding
The QAI observed the welder, Damien Llanos, perform the Complete Joint Penetration (CJP) groove welding of the field pipe splices for the 2" utility water lines located at the south tower 57m elevation. The welding was performed utilizing the Weld Procedure Specification (WPS) identified as 1-12-1 which was also utilized by the QC inspector, Bonifacio Daquinag, the QC inspector performed a visual inspection of the Complete Joint Penetration (CJP) welding of 56/2/T/27 and was noted to be acceptable. The QAI verification was performed as requested to verify that the welding and the visual weld inspection performed by the QC inspector meet the requirements of the contract documents. At the conclusion of the QAI verification it appeared at the time of verification that the weld complies with the contract documents. Later in the shift it was observed that Spencer Mechanical was positioning the 2” water line in place to fit the weld joint in place.
C). Repair welding Field Splice

This QAI arrived observed welder Jeremy Dolman ID-5042, 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 60 degrees Celsius (125 Degrees Fahrenheit) with the welding current observed at 135 amps for the 3.2mm electrode. The location of the welding was on the west bound lane (WB) at field splice 12w/13w at D3. QC inspector Bernie Dacena was observed onsite overseeing the welding operations for this location. Mr. Dacena was verifying and documenting the welding parameters for this location.
Also noted was welder Fred Kadu ID 2188 was performing excavation at 12w/13w weld joint D1 using Carbon Arc Cutting (CAC) Method. The QC was observing and taking dimensional checks of the excavation areas. These areas are R1 Repairs from Ultrasonic Testing by the contractors QC. Later in the shift it was observed that Mr. Kadu had excavated two (2) locations. 1) Y=300~460 (160mm long), Depth of 20mm. 2) Y= 640~910 (270mm long), Depth 15mm both locations are R1.

QA Observation and Verification Summary
The QA inspector observed the QC activities and the welding utilizing the WPS 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 SMAW welding process 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.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



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