

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

Report No: WIR-026968
Date Inspected: 28-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 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) Lifting Lug Holes
- B) Repair welding Field Splice
- C) Field Splice

- A). Lifting Lug Holes

The QAI observed welder Mike Jimenez was performing carbon Arc Cutting (CAC) at 11W-PP101-W1 & W3-W3. The back gouging was being performed prior to the continued welding. QC Jessie Cayabyab had performed Magnetic Particle inspection (MT) after the completion of the back gouge and prior to the continuing of the welding process, the results relayed to this QAI was acceptable. Mr. Jimenez then continued with the Shielded Metal Arc Welding (SMAW) using electrode E7018 under Welding Procedure Specification (WPS) ABF-WPS-D15-1110A for the Complete Joint Penetration weld at this location for the after the back gouging had been completed. The pre-heat was observed as being a minimum of 40 degrees Celsius with the welding current observed at; 134 amps for the 3.2mm electrode. The location of the welding was on the west bound lane (WB) at Panel Point (PP) 101 for lifting lug holes W1 and W3. The remaining welding observation for this location was

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turned over to QAI Doug Frey.

B). 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 124 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 location Y=300, Length 160mm. Both welders were observed as placing intermediate weld passes at their locations. QC inspector Bernie Dacena and Harry Scharein 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 2188 had completed the weld repair at Y=300. The welder then proceeded to perform CAC excavation for weld repairs at D1. The excavated dimension were 3) Y=1750mm (length 160mm) Depth 15mm for location 4) Y=1940mm (length 450mm) Depth 17mm width 15mm. Upon completion of the CAC removal the contractor's laborer used a flat grinding disk to remove the remaining weld metal to a bright finish. The QC then proceeded to perform MT at this location with acceptable results. Welder 2188 then continued performing weld repairs under the above WPS. At the time of the observations no issues were noted by the QAI.

C). 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 246 amps and 23 for welder 5892. The location of the welding was on the west bound lane (WB) at field splice deck plates at 12w/13w- A5 in the overhead (4G) position. QC inspector Bernie Dacena and Harry Scharein 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 and moved to field splice 13w/14w-A3 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 260 amps and 23.3 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.

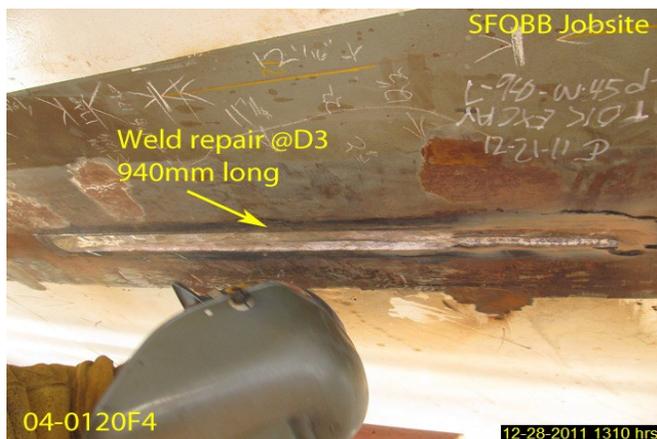
QA Observation and Verification Summary

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

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inspection equipment and gages which included a Fluke 337 Clamp Meter and Tempilstik Temperature indicators.



Summary of Conversations:

Basic conversation, 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
