

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 #: 04-0120F4Cty: 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-027016
Date Inspected: 12-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: 1530
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) CC0-182 Removal
- B) Lifting Lug Holes Repairs
- C) Field Splice 12W-13W

- A). CC0-182 Removal

This QAI observed QC personnel Bernie Docena performing Magnetic particle on Counter Weight (CW) 1, 2 and 3 where the contractor had removed the light bracket angles located on the vertical outward slope of the CW's. This is in conjunction with CCO-182, which is a procedure for the contractor to remove the existing light brackets for aesthetic purposes only as stated in the CCO-182. This QAI noted that all CW's had 7 areas where the welds were removed and ground that required MT to be completed. At CW-1 5 of the 7 areas require grinding and welding due to 1 linear indication and gouges. CW-2 had 2 of the 7 areas that require grinding and welding due to under fill and gouges. CW-3 3 of the 7 areas that require welding and grinding due to under fill and gouges. The QC will notify the contractor of their findings and relayed to this QAI. The QC Inspector stated that they will continue with the MT inspection tomorrow mid-morning for CW4~5.

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B). Lifting Lug Holes

The QAI observed that welder Mike Jimenez, was pre-heating the area to be fit up to a temperature of 20 degrees Celsius (50 degrees F) that was verified using a tempstik and infrared gun by the QC. The welder was preparing the area by using a copper back up bar and placing the 20mm thick deck insert into place. The fit-up was checked by the QC inspector assigned to this location and was found to be within compliance. The welder then proceeded with the Shielded Metal Arc Welding (SMAW) using electrode E7018 under Welding Procedure Specification (WPS) ABF-WPS-D15-1050A-CU for the Complete Joint Penetration weld. The electrode used for the root pass was 3.2mm (1/8") diameter with welding amps verified as 136. The location of the welding was on the west bound lane (WB) at PP114-W4@W1 hole. The QC inspector for this location was Salvador Merino and was observed verifying and documenting the welding parameters for this location, along with overseeing the welding operations. At the time of the observations no issues were noted by the QAI.

The QAI observed that welder Todd Jackson, was observed using a rosebud to pre-heat the weld area to 20 degrees Celsius (50 degrees F) that was verified using a tempstik and infrared gun by the QC. The welder then proceeded in performing the Shielded Metal Arc Welding (SMAW) using electrode E7018 under Welding Procedure Specification (WPS) ABF-WPS-D15-1050A-CU for the Complete Joint Penetration weld. The electrode used for the root pass was 3.2mm (1/8") diameter with welding amps verified as 128 by the QC inspector.

The location of the welding was observed by this QAI at the west bound lane (WB) at PP115-W3-W1 hole. The QC inspector for this location was Salvador Merino and was observed verifying and documenting the welding parameters for this location, along with overseeing the welding operations. At the time of the observations no issues were noted by the QAI.

C). Field Splice 12W-13W

The QAI observed that welder Jeremy Dolman ID-5042, was observed by the QAI as performing the Shielded Metal Arc Welding process (SMAW) using electrode E7018 under Welding Procedure Specification (WPS) ABF-WPS-D15-1001R for the Complete Joint Penetration. The location of this repair was on the bottom plate exterior of transverse weld splice 12W-13W at D2. The Y location was at 5020mm repair #10. The welder was observed as placing the cover passes at this repair which was measured at 210mm in length. The welder had 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 inspector assigned to this location. The electrode used for the root pass was 3.2mm (1/8") diameter with welding amps verified as 126. The QC inspector for this location was Salvador Merino and was observed verifying and documenting the welding parameters for this location, along with overseeing the welding operations. At the time of the observations no issues were noted by the QAI.

Also noted was that QC Inspectors Joe Pagliero and Jesse Cayabyab were performing Ultrasonic Testing (UT) at the D1 and D3 locations for compliance. It was relayed that the QC inspectors would complete the UT examination tomorrow along with location D2.

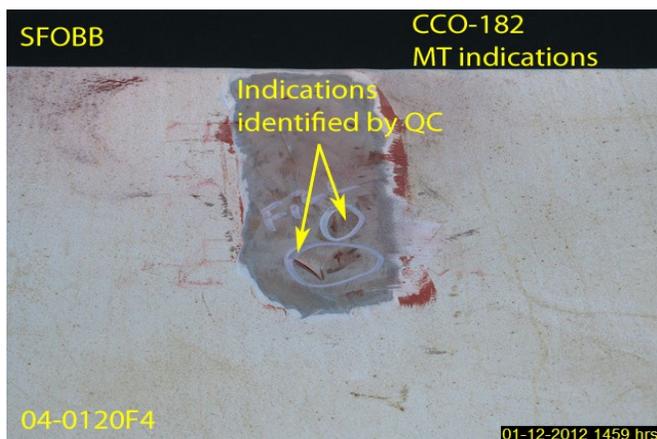
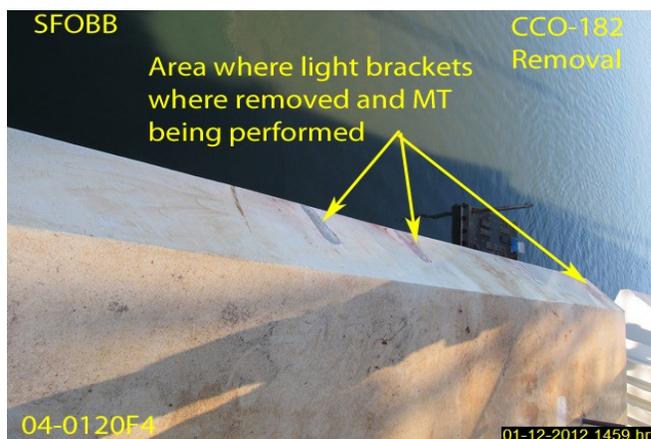
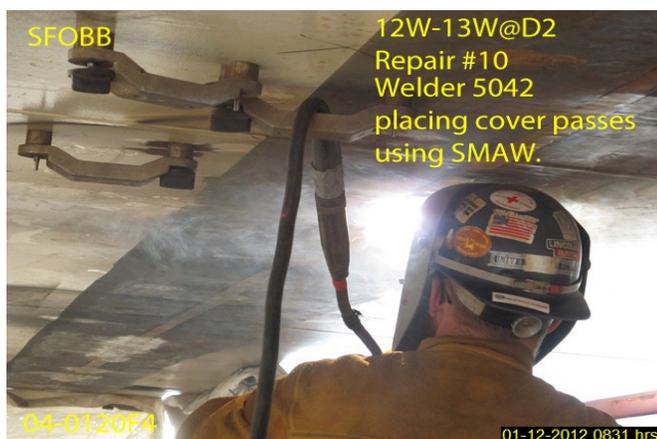
QA Observation and Verification Summary

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

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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 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
