

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-027065
Date Inspected: 13-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: 1730
Location: Job Site

CWI Name: Salvador Merino
Inspected CWI report: Yes No N/A
Electrode to specification: Yes No N/A
Qualified Welders: Yes No N/A
Approved Drawings: Yes No N/A

CWI Present: Yes No
Rod Oven in Use: Yes No N/A
Weld Procedures Followed: Yes No N/A
Verified Joint Fit-up: 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) Temporary Attachments, Jacking Frames
- B) Lifting Lug Holes Repairs

- A). Temporary Attachments, Jacking Frames

This QAI observed QC personnel Salvador Merino performing Magnetic particle on the top deck of CB19 and OBG lift 14 between Panel Points PP125~126 at the W6 line. At these locations the contractor had removed the temporary attachments of the jacking frames (See photo below) used to align the crossbeam with the OBG, FL3 area. The QC inspector Salvador Merino was observed using Magnetic Particle (MT) inspection at these locations. It was relayed that the 4 of the areas were ready for QAI review. One area needed to have weld repairs performed as noted by the QC inspector. Each area had 5 locations where the jacking frames had been removed by the contractor. This QAI performed 10% verification on the temporary attachments located at PP125 and PP126 north of W6 line. These locations at the time of the verification appeared to be within compliance of the contract documents. The location south of the W6 line at PP125 (jacking frame #3 from the west) this QAI discovered a linear indication. This information was relayed to the QC inspector who verified these findings. The linear

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indication found appeared to be 30mm in length and was located approximately at the toe of the weld zone. The QC inspector stated that the contractor would have to excavate the location and perform a weld repair. This location is Seismic Performance Critical member (SPCM). The QC inspector stated this location would be documented in his report. This QAI spoke with Lead Inspector Danny Reyes who concurred with this course of action and no incident would be generated for (1) isolated location.

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 observed as using 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 132. The location of the welding was on the west bound lane (WB) at PP114-W4@W3 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.

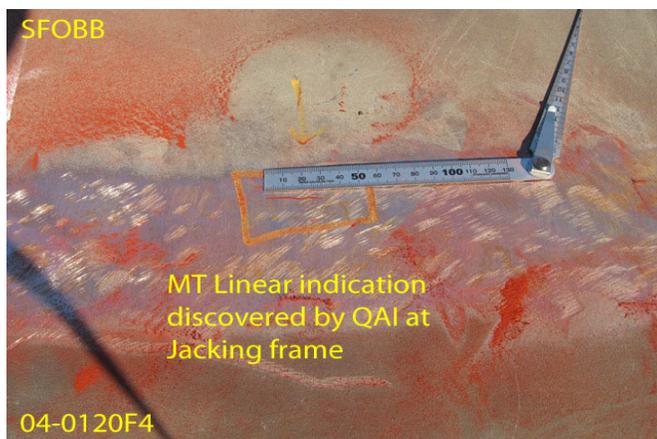
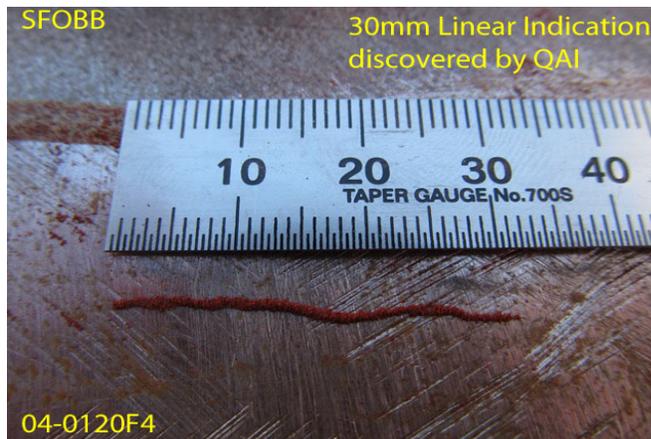
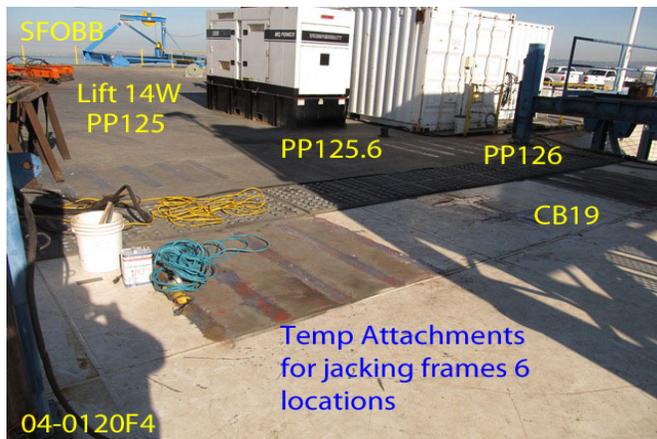
The QAI observed that welder Todd Jackson, was observed using a rosebud to pre-heat the weld area to 20 degrees Celsius (50 degrees F) that was verified using a tempstik and infrared gun by the QC. The welder was performing the Shielded Metal Arc Welding (SMAW) using electrode E7018 under Welding Procedure 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 126 by the QC inspector. The location of the welding was observed by this QAI at the west bound lane (WB) at PP115-W3-W2 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.

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.

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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
