

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-028830**Date Inspected:** 15-Nov-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Fred Michels and Barry Drake**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:** SAS OBG**Summary of Items Observed:**

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 8W-PP61.5-W2 deck access hole outside, QA randomly observed ABF/JV qualified welder Wai Kit Lai continuing to perform CJP groove welding repair on a non-Seismic Performance Critical Member (SPCM) due to Ultrasonic Testing (UT) detected defect on welded butt joint. The welder preheated the repair area and its vicinity to >150°F using propylene gas torch prior excavation and then ground smooth the groove of the excavation. The welder was noted using propylene gas torch to preheat the repair area and its vicinity to 150°F and as soon as the required temperature was attained the welder started performing the welding repair. These repairs listed below don't need Request for Weld Repair (RWR) due to second time repair only. Welder Wai Kit Lai was observed manually welding in 1G (flat) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing Caltrans welding procedure ABF-WPS-D15-1000 Repair. Welder Wai Kit Lai was noted welding at various Y locations. During welding, ABF QC Barry Drake was noted monitoring the welder's welding parameter with measured working current of 128 amperes on the 3.2mm diameter E7018H4R electrodes. At the end of the shift, repair welding at the various locations was still continuing and should remain tomorrow. The locations and dimensions of the repair excavations are as follows; 1. Y=2410/2490mm, L190mm, W30mm, D13mm, R2- combined excavation completed. 2. Y=2995mm, L80mm, W20mm, D6mm, R2- completed. 3. Y=1620/1735mm, L230mm, W30mm, D13mm, R2-combined excavation-completed.

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At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT/MT on the Tower Head diaphragm to side plate seal/fillet weld joint. The QA verification was performed to verify that the welding and the VT/MT inspection performed by the QC inspector meet the requirements of the contract documents. At the conclusion of the QA verification it appeared that the welds and the QC inspection complied with the contract documents.

1. Tower elev.155M– Weld joint #NS-E inside North shaft chimney to tower head diaphragm joint weld cover QA verified.

2. Tower elev.155M– Weld joint #WS-E inside West shaft chimney to tower head diaphragm joint weld cover QA verified.

FW Spencer:

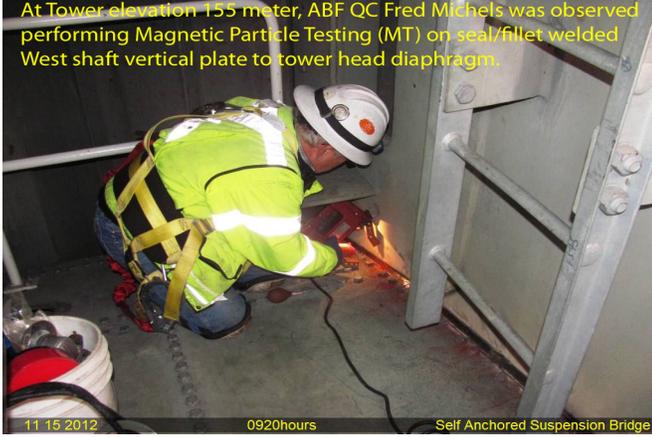
The QAI observe the ongoing installation, field fit-up and tack welding of the utility pipe support lug 5” long x 1” wide x 3/8” thick along the W2 grid line (panel point PP28). The lug pipe support was fillet welded on both sides of the 2 ½” diameter domestic water line and 4” diameter compressed air line. The QC inspection was performed by Barry Drake utilizing the Welding Procedure Specification (WPS) identified as Fillet Murex to monitor the tack welding and fillet welding to verify the welding parameters. The welding parameters were observed and recorded as 90 amps utilizing 2.4 mm electrodes with the welding performed in the 2F/4F positions. The tack welding/fillet welding was performed and completed by FW Spencer welder Damian Llanos. At the end of the shift, two (2) support lugs welded on each line were completed.



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At Tower elevation 155 meter, ABF QC Fred Michels was observed performing Magnetic Particle Testing (MT) on seal/fillet welded West shaft vertical plate to tower head diaphragm.



Summary of Conversations:

No significant conversation occurred today.

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 SMR Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo, Joselito	Quality Assurance Inspector
Reviewed By:	Reyes, Danny	QA Reviewer
