

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-028734**Date Inspected:** 10-Nov-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Fred Michels and Salvador Merin			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 Tower elevation 155 meters, QA randomly observed ABF welder Richard Garcia continuing to perform fillet welding between the Tower head cover and Tower head Chimney. The welder was noted welding in 2F (horizontal) position utilizing self-shielded Flux Cored Arc Welding (FCAW-S) with 0.072" diameter E71T-8 wire electrode implementing Caltrans Welding Procedure Specification (WPS) ABF-WPS-D15-F2200-2. Prior fillet welding, the paint coating on both sides of the joint was ground off and the plates were preheated to more than 150 degrees Fahrenheit. During the shift, QA noted ABF QC Fred Michels was on site monitoring the in process preheats and welding parameters with measured working current of 340 amperes and voltage of 23 volts. At the end of the shift, fillet welding of the Tower head cover to Tower Chimney at the south side between the Tower shafts South and East was completed.

At OBG 2W-PP13.5-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. Since these repairs are still second time repairs, Request for Weld Repair (RWR) is not yet required. 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. After its completion, ABF QC Brien Connolly performed Magnetic Particle Testing (MT) on the removal of the defects with no relevant defect noted during the test. This QA also performed same test verification and noted same result.

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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. Welder Wai Kit Lai was observed manually welding in 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm and 4.0mm diameter E7018H4R electrode implementing Caltrans approved 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 Monday.

Y-location Length Width Depth RWR# Remarks

1. 3940mm 70mm 20mm 10mm N/A R2- completed.
2. 3920mm 70mm 20mm 10mm N/A R2- completed.
3. 3620/3580mm 120mm 40mm 13mm N/A R2- combined excavation.
Completed.

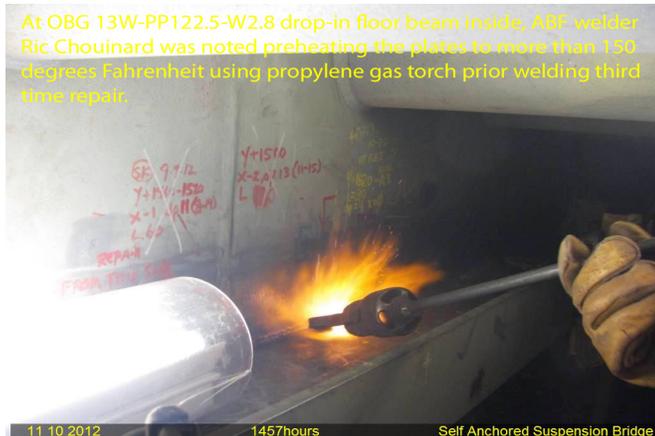
At OBG 13W-PP122.5-W2.8 drop-in floor beam inside, QA randomly observed ABF/JV qualified welder Ric Chouinard perform CJP groove welding repair (R3) on a non-Seismic Performance Critical Member (SPCM) due to Ultrasonic Testing (UT) detected defect on welded T- joint. The third time repair is being welded per Caltrans approved Request for Weld Repair (RWR) #201211-002. 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. After its completion, ABF QC Salvador Merino performed Magnetic Particle Testing (MT) on the removal of the defects with no relevant defect noted during the test. This QA also performed same test verification and noted same result. The repair excavation was measured 90mm long x 15mm wide x 5mm deep.

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. Welder Ric Chouinard was observed manually welding in 2G (horizontal) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm and 4.0mm diameter E7018H4R electrode implementing Caltrans welding procedure ABF-WPS-D15-1000 Repair. During welding, ABF QC Salvador Merino was noted monitoring the welder's welding parameter with measured working current of 126 amperes on the 3.2mm diameter E7018H4R electrodes. At the end of the shift, repair welding at the location mentioned above was completed.

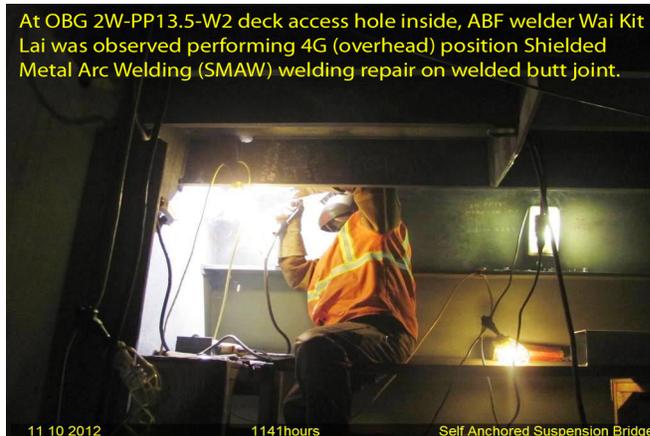
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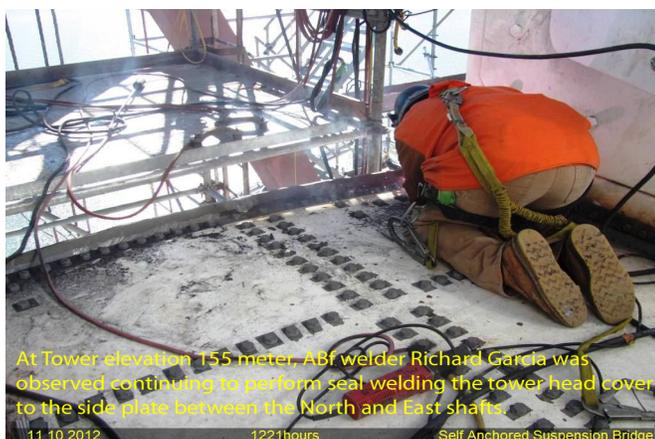
At OBG 13W-PP122.5-W2.8 drop-in floor beam inside, ABF welder Ric Chouinard was noted preheating the plates to more than 150 degrees Fahrenheit using propylene gas torch prior welding third time repair.



At OBG 2W-PP13.5-W2 deck access hole inside, ABF welder Wai Kit Lai was observed performing 4G (overhead) position Shielded Metal Arc Welding (SMAW) welding repair on welded butt joint.



At Tower elevation 155 meter, ABF welder Richard Garcia was observed continuing to perform seal welding the tower head cover to the side plate between the North and East shafts.



At OBG 12E-E2.1-C1 corner drop-in side plate outside, ABF welder Cris Bruce was observed continuing to perform 4G (overhead) position Shielded Metal Arc Welding (SMAW) welding repair on non-SPCM welded butt joint.



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