DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

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

Report No: WIR-028901
Date Inspected: 19-Dec-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:	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 Tower

Summary of Items Observed:

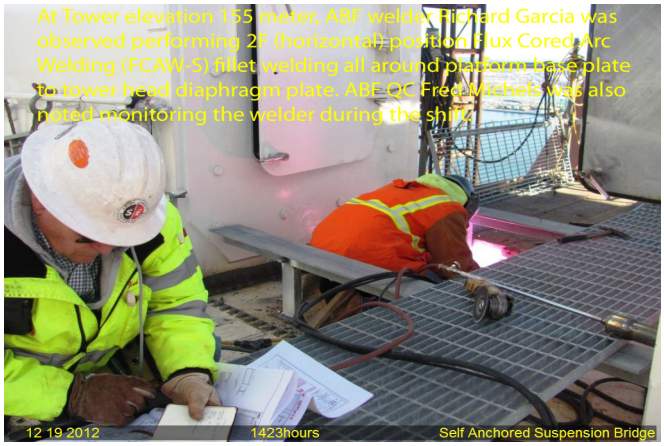
Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 5E-PP29.5-E5 deck access hole outside, QA randomly observed ABF/JV welder Cris Bruce continuing to perform CJP groove welding repair on a Non-Seismic Performance Critical Member (SPCM) due to Ultrasonic Testing (UT) detected defect on welded splice 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. 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. 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 Cris Bruce 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 Cris Bruce was noted welding at various Y locations; 1)Y= 1660mm (R3), L130mm x W30mm x D15; RWR#201212-006; 2) Y=3200 (R1), L100mm x w30mm x D12mm; 3) Y=3395mm (R3), L170mm x W30mm x D11mm (RWR#201212-004); 4) Y=3630mm (R2), L75mm x W30mm x D10mm; and 5) Y=3980mm (R1), L100mm x W30mm x D12mm. During welding, ABF QC Barry Drake was noted monitoring the welder's welding parameter with measured working current of 130 amperes on the 3.2mm diameter E7018H4R electrodes. At the end of the shift, repair welding at locations mentioned above was completed.

At Tower elevation 155 meters, QA randomly observed ABF welder Richard Garcia continuing to perform 6mm all around fillet welding between the Tower head diaphragm and platform base plate. The welder was observed 2F (horizontal) position fillet welding 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 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. At the end of the shift, fillet welding of the Tower head diaphragm to platform base plate was completed.

At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT/MT on the interior Tower Head side plate seal 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 #A3 inside tower head seal weld joint QA verified.
2. Tower elev. 155M – Weld joint #A4 inside tower head seal weld joint QA verified.
3. Tower elev. 155M – Weld joint #A2.1 inside tower head seal weld joint QA verified.
4. Tower elev. 155M – Weld joint #A2.2 inside tower head seal weld joint QA verified.
5. Tower elev. 155M – Weld joint #A2.3 inside tower head seal weld joint QA verified.
6. Tower elev. 155M – Weld joint #A2.4 inside tower head seal weld joint QA verified.



Summary of Conversations:

No significant conversation 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.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

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