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

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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: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-026123
Date Inspected: 18-Aug-2011

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: Steve Mc Connell

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ 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: 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.

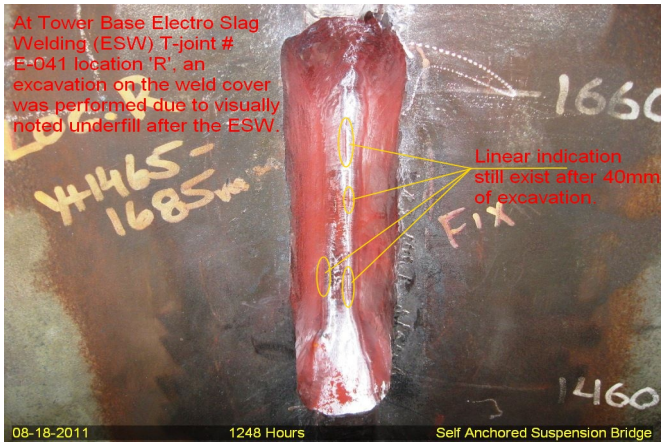
At Tower Base Elevation 13Meters, Electro Slag Welding (ESW) T-joint N-041 location ‘N’, QA randomly ABF welder Jeremy Dolman continuing to perform 3G SMAW first time welding repair (R1) on the Ultrasonic Testing (UT) detected defect on the vertical weld of the ESW per Repair Welding Request (RWR) #201108-013. The welder was observed welding in the 3G (vertical) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8” diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repairs. The boat shape repair located at Y=9450mm was excavated to dimensions of 170mm long x 75mm wide x 40mm deep. The excavation was previously tested using Magnetic Particle Testing (MT) by ABF QC John Pagliero and fellow QA Danny Reyes. The repair excavation and the adjacent base metal was preheated to more than 300°F using propylene gas torch prior welding. During the shift, ABF QC Steve Mc Connell was noted monitoring the welder. Measured welding parameter during welding was 125 amperes on a 1/8” diameter E7018H4R electrode. During the shift, while the welder was welding at this location, he was pulled out and moved to the center diaphragm location and fillet welded temporary attachments/clips for the erection aid of the center diaphragm installation. The welder was noted using the same process as he previously used SMAW. At the end of the shift, the welder was still with the erection crew assisting them.

At Tower Base Elevation 13Meters Center Diaphragm location, ABF personnel have removed eight clips that were welded from ZPMC China due to interference with the center diaphragm installation. The clips removal were

ground smooth by ABF personnel and tested by ABF QC Steve Mc Connell using Magnetic Particle Testing (MT). After the removal of the clips, ABF welder Jeremy Dolman was noted fillet welding temporary attachments/clips relocating the removed ones as mentioned above. ABF personnel have tried to install the center diaphragm but the plate was wider than the opening leaving them no choice but to cut the two sides of the plate. The inner East 13Meters diaphragm plate was cut on one side and ground smooth. ABF personnel were able to install this diaphragm in place.

At Tower Base Elevation Electro Slag Welding (ESW) T-joint #E-041 location 'R', ABF welder Richard Garcia was noted continuing to excavate the weld cover underfill that was noted after the ESW. The welder was using carbon air arc gouging and die grinder to excavate the gouged groove of the excavation. During the shift, the excavation was completed at Y=1450mm with boat shape profile of 275mm long x 60mm wide x 40mm deep with linear indications still exist. The linear indications were detected through Magnetic Particle Testing (MT). Since the welder has reached the depth of excavation 2/3 x thickness restriction (per ABF-WPS-D15-1000-Repair), he stopped the excavation from the outside per ABF QC advise. According to QC, the outside excavation will be welded/repaired and after its completion from the outside the welder will go to the opposite side of the same repair location and excavate the remaining discontinuity and continue the repair. The welder has moved to the other ESW weld cover underfill of the same ESW T-joint location and started excavating. The welder has used the same carbon air arc gouging to excavate the visually detected ESW weld defect until the end of the shift.

At Tower Base Elevation 0Meters, ABF personnel were noted cutting the shear plate sump blocks that were used during the ESW. The personnel were using Thermal Lance Cutting with 3/8" diameter iron rod and were able to complete cutting at ESW weld locations 'T' and 'V'. The cut was still rough and still need to be ground smooth.



WELDING INSPECTION REPORT

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Summary of Conversations:

No significant conversation ocurred 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 Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer