

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-026327**Date Inspected:** 22-Sep-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	John Pagliero and Steve Mc Conn			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 Tower Base Elevation Electro Slag Welding (ESW) T-joint S-041 location 'S', QA randomly ABF welder Richard Garcia continuing to perform 3G SMAW second time welding repair (R2) on the Ultrasonic Testing (UT) detected defect on the internal of the vertical weld of the ESW. 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-Repair Rev. 2. The boat shape repair excavation located at Y=4245mm to Y=4385mm was excavated to dimensions of 140mm long x 20mm wide x 11mm deep. The excavation was tested using Magnetic Particle Testing (MT) by ABF QC John Pagliero and this QA with positive result. The excavation is located at the opposite side of the excavation that was repaired (R1) from the outside of the weld joint. The repair excavation and the adjacent base metal was preheated and maintained to more than 149°C (300°F) using propylene gas torch. During the shift, ABF QC John Pagliero was noted monitoring the welder. Measured welding parameter during welding was 135 amperes on a 1/8" diameter E7018H4R electrode. Before the end of the shift, repair welding was completed and the welder has moved to the bottom of the ESW location 'S' and carbon arc gouged the radius of the cut sump block.

At Tower Base Elevation Electro Slag Welding (ESW) T-joint W-044 location 'D' (north side), QA randomly ABF welder Jeremy Dolman continuing to perform 3G SMAW cover welding repair due to excessive grinding on the visually noted overlap. The welder was observed welding in the 3G (vertical) position utilizing Shielded Metal

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Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repair Rev. 2. The excavation was previously tested using Magnetic Particle Testing (MT) by ABF QC Steve Mc Connell and randomly verified by this QA with positive result. The repair excavation and the adjacent base metal were preheated to more than 300°F using the propylene gas torch. During the shift, ABF QC John Pagliero was noted monitoring the welder. Measured welding parameter during welding was 115 amperes on a 1/8" diameter E7018H4R electrode. After completing some repairs, the welder has excavated a visually rejected weld defect at the same ESW, Y location 3000mm. Dimensions of the excavation was 200mm long x 25mm wide x 20mm deep. The boat shape excavation was tested by ABF QC John Pagliero using Magnetic Particle Testing (MT) with positive result. This QA performed a random verification and noted same result. The excavation is now awaiting Caltrans approval prior to perform the repair.

At Tower Base Elevation Electro Slag Welding (ESW) T-joint E-044 location 'B' (south side), QA randomly ABF welder Rory Hogan continuing to perform 3G SMAW cover welding repair due to excessive grinding on the visually noted overlap. 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-Repair Rev. 2. The excavation was previously tested using Magnetic Particle Testing (MT) by ABF QC Steve Mc Connell and randomly verified by this QA with positive result. The repair excavation and the adjacent base metal were preheated to more than 300°F using the propylene gas torch. During the shift, ABF QC John Pagliero was noted monitoring the welder. Measured welding parameter during welding was 130 amperes on a 1/8" diameter E7018H4R electrode. After completing some repairs, the welder has excavated a UT rejected weld defect at the same ESW, Y location 9010mm. Dimensions of the excavation was 160mm long x 40mm wide x 42mm deep. The boat shape excavation was tested by ABF QC John Pagliero using Magnetic Particle Testing (MT) with positive result. This QA performed a random verification and noted same result. The excavation is now awaiting Caltrans approval prior to perform the repair.

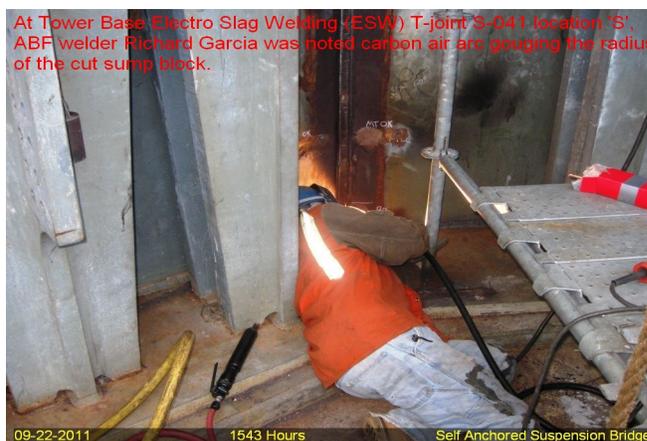
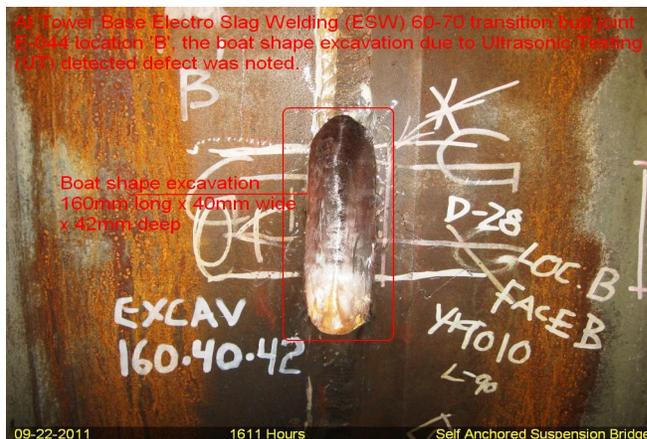
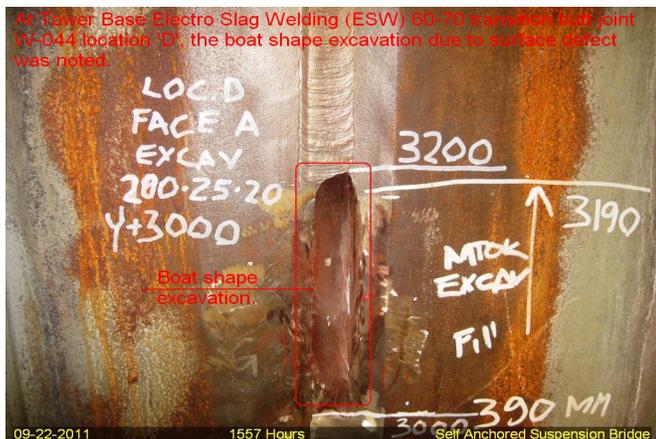
Other welding related activities noted during the shift include the following;

1. ESW location 'K' (inside inner east diaphragm) – ABF personnel were noted continuing to remove the remnants of the cut strong back using carbon air arc gouging.

2. ESW locations 'G' and 'F' (inside center diaphragm) – ABF personnel were noted continuing to grind the ESW weld cover that were marked by QC.

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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 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