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-026475
Date Inspected: 06-Oct-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: John Pagliero

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 Electro Slag Welding (ESW) T-joint #S-045 location ‘G’ (face B), QA randomly ABF welder Richard Garcia 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 John Pagliero 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 140 amperes on a 1/8” diameter E7018H4R electrode. At the end of the shift, weld cover repair at ESW location mentioned above was still continuing and should remain tomorrow.

At Tower Base Elevation Electro Slag Welding (ESW) 60-70 transition butt joint E-044 location ‘B’ (face A) 0 to 9 meters elevation, QA randomly ABF welder Jeremy Dolman excavate an Ultrasonic Testing (UT) detected defect located at Y=3820mm. The welder was using carbon air arc gouging to excavate the majority of the repair then followed by smooth grinding using a die grinder. The UT detected defect was excavated to dimensions of 220mm long x 55mm wide x 40mm deep but during the Magnetic Particle Testing (MT) on the defect removal it was noted that the linear indication still exist. ABF QC John Pagliero has stopped the welder to further excavate

the defect due to 2/3 thickness limitation. It was later learned from QC that ABF intends to get Caltrans approval prior to repair from one side then excavate the remaining linear indication from the other side of the repair. After completing the excavation, the welder has moved to another VT/MT detected defect of the same ESW and performed the weld cover repair.

At Tower Base Elevation Electro Slag Welding (ESW) 60-70 transition butt joint E-044 location 'B' (face A) 0 to 9 meters elevation, QA randomly ABF welder Jeremy Dolman continuing to perform 3G SMAW cover welding repair due to excessive grinding on the visually/MT 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 located at Y=670mm and having dimensions of 180mm long x 20mm wide x 8mm deep was tested using Magnetic Particle Testing (MT) by ABF QC John Pagliero and randomly verified by this QA with positive result. The repair location 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 120 amperes on a 1/8" diameter E7018H4R electrode. At the end of the shift, repair welding at Y location mentioned above was still continuing and should remain tomorrow.

At Tower Base Electro Slag Welding (ESW) 60-70 transition butt joint #S-044 location 'C' (face B), ABF welders Rory Hogan and Jorge Lopez were noted removing the remnants of the temporary strong back attachments. The welders were using carbon air arc gouging and followed by a disc grinder to completely remove the remnants. The welders were noted working at 9 to 13 meters elevation. At the end of the shift, both welders have completed carbon air arc gouging and grinding three strong back remnants at this location.

At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT of the ESW welding of one (1) location at 0 to 9 meters elevation. The QA verification was performed to verify that the welding and the VT inspection performed by the QC inspector meet the requirements of the contract documents. At the conclusion of the QA verification it appeared that the weld and the QC inspection complied with the contract documents.

ESW Location	Remarks
1. E-041 location 'R' (face A)	VT deemed acceptable except pending ESW Restart area.

WELDING INSPECTION REPORT

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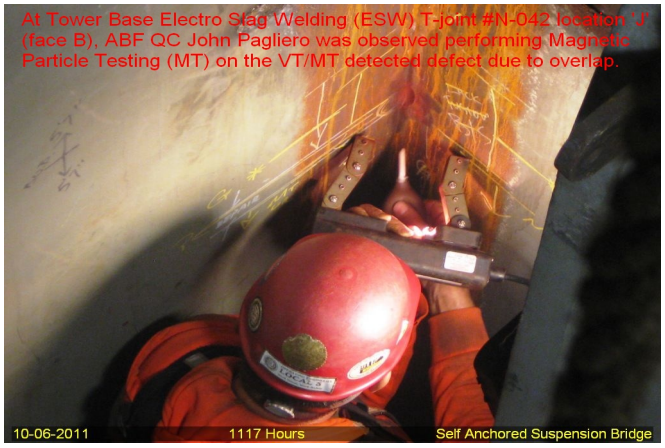

Summary of Conversations:

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