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-026243
Date Inspected: 06-Sep-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 1030
OSM Departure Time: 1730
Location: Job Site

CWI Name: John Pagliero and Steve Mc Connell

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 W-041 location 'W', 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. 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 repairs located at Y=3300mm was excavated to dimensions of 180mm long x 20mm wide x 10mm deep and 150mm long x 15mm wide x 5mm deep. The excavations were previously tested using Magnetic Particle Testing (MT) by ABF QC Steve Mc Connell and verified by this QA with positive result. The repair excavations 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 110 amperes on a 1/8" diameter E7018H4R electrode. During the shift, repair welding was completed.

At Tower Base Elevation Electro Slag Welding (ESW) T-joint S-041 location 'S', QA randomly observed ABF welder Richard Garcia excavate the visually and Ultrasonic Testing (UT) detected defect at ESW welded T-joint using carbon air arc gouging. Prior the excavation, the welder has preheated the defect location to more than 250°F using the propylene gas torch. During the excavation, the welder has noted linear indications which signified a lack of fusion defect. QC has performed the MT as the welder chase the extent of the indications. The repair

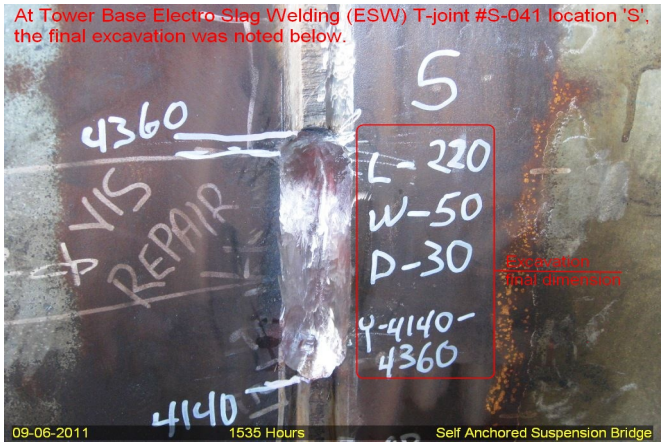
excavation was located at Y=4140mm to Y=4250mm and was having a final excavation dimensions of 220mm long x 50mm wide x 30mm deep that was ground smooth. ABF QC John Pagliero was noted performing the VT and Magnetic Particle Testing (MT) on the excavation with positive result. This QA performed VT/MT verification on the defect removal and noted same result. After the excavation and testing on the defect removal of the defect, QC has informed this QA that QC will initiate the Request for Welding Repair (RWR) and forward it to ABF for Caltrans approval.

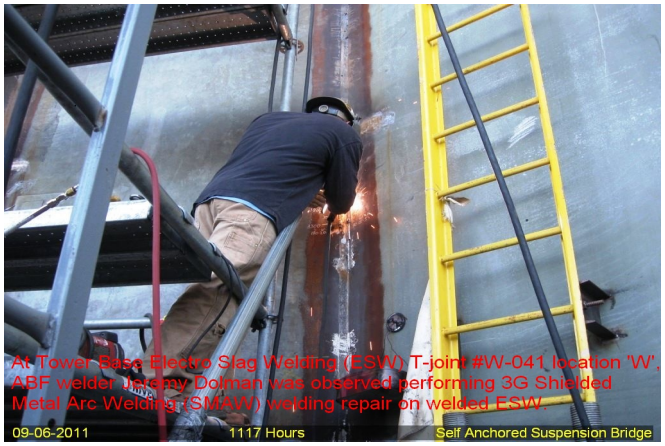
Other welding related activities noted during the shift include the following;

1. ESW location 'N' (inside) – removal of the strong back remnants using carbon air arc gouging was noted still in progress.

2. ESW locations 'N' and 'W' (outside) – smooth grinding of the cut and gouged radius of the sump block removal were noted in progress.

3. ESW locations 'R', 'S', 'C' and 'B' (inside south diaphragm) – grinding still continues after ABF QC VT/MT on the ESW weld cover.





Summary of Conversations:

WELDING INSPECTION REPORT

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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