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

Report No: WIR-025471
Date Inspected: 06-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: 1530
Location: Job Site

CWI Name: Steve Mc Connell and John Pagliero

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 13Meters, Electro Slag Welding (ESW) T-joint N-045 location ‘E’, QA randomly observed ABF/JV qualified welder Jeremy Dolman perform CJP groove welding repair on the top of the welded ESW due to ABF QC noted linear indications that propagated into the Tower skin plate. ABF welder has carbon air arc and ground removed the indications then tested by QC Steve Mc Connell using Magnetic Particle Testing (MT) with affirmative result. The removal was verified by this QA and obtained same result. The welder was observed welding in the 2G (horizontal) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8” diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1001-Repairs. The weld repair was preheated to more than 300 degree Fahrenheit using propylene gas torch prior welding. 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. At the end of the shift, 2G SMAW weld repair was completed and the welder was noted flush grinding the weld cover of the repair.

At Tower Base Elevation 13Meters, Electro Slag Welding (ESW) T-joint E-045 location ‘F’, QA randomly observed ABF/JV qualified welder Rory Hogan perform CJP groove welding repair on the top of the welded ESW due to ABF QC noted linear indications that propagated into the Tower skin plate. ABF welder has carbon air arc and ground removed the indications then tested by QC Steve Mc Connell using Magnetic Particle Testing (MT) with affirmative result. The removal was verified by this QA and obtained same result. The welder was observed

welding in the 2G (horizontal) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1001-Repairs. The weld repair was preheated to more than 300 degree Fahrenheit using propylene gas torch prior welding. During the shift, ABF QC John Pagliero was noted monitoring the welder. Measured welding parameter during welding was 125 amperes on a 1/8" diameter E7018H4R electrode. At the end of the shift, 2G SMAW weld repair was completed and the welder was noted flush grinding the weld cover of the repair.

At Tower Base Elevation 13Meters, Electro Slag Welding (ESW) T-joint E-042 location 'K', QA randomly observed ABF/JV qualified welder Fred Kaddu continuing to perform CJP groove welding repair on the welded cover due to ABF QC noted overlap at approximately Y=9170mm to Y=9780mm. ABF welder has ground and removed the overlap then tested by QC Steve Mc Connell using Magnetic Particle Testing (MT) with affirmative result. The removal was verified by this QA and obtained same result. 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-D15-1001-Repairs. The weld cover repair was preheated to more than 300 degree Fahrenheit using propylene gas torch prior welding. During the shift, ABF QC John Pagliero was noted monitoring the welder. Measured welding parameter during welding was 150 amperes. At the end of the shift, 3G SMAW weld cover repair was completed and other ABF personnel was noted smooth grinding the weld cover of the joint after welding.

At Tower Base Elevation 13Meters, Electro Slag Welding (ESW) T-joint S-042 location 'L', QA randomly observed ABF/JV qualified welder Fred Kaddu perform CJP groove welding repair on the top of the welded ESW due to ABF QC noted linear indications that propagated into the Tower skin plate. The welder has moved to this location after finished welding the weld cover on T-joint E-042 location 'K'. ABF welder has carbon air arc and ground removed the indications then tested by QC Steve Mc Connell using Magnetic Particle Testing (MT) with affirmative result. The removal was verified by this QA and obtained same result. The welder was observed welding in the 2G (horizontal) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1001-Repairs. The weld repair was preheated to more than 300 degree Fahrenheit using propylene gas torch prior welding. 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. At the end of the shift, 2G SMAW weld repair was completed and the welder was noted setting up for another weld repair.

Prior to the repair welding of the T-joint locations mentioned above, Caltrans Engineer Doug Wright informed this QA that the repairs on these ESW weld locations have already been approved.

At Tower Base Elevation 13Meters, the top of 80mm shear plate at outer East was noted beveled and ground to 45 degree. This QA asked ABF QC John Pagliero if QC has already inspected the bevel preparation of the shear plate. QC responded that the top bevel preparation was acceptable. QA verified the top shear plate bevel preparation and noted that some part of the cut was rough to a maximum depth of 5mm. The required depth of bevel (39mm) was not also according to the drawing. Due to the observed discrepancy, this was brought to the attention of Lead QA Danny Reyes who also brought to the attention of ABF Superintendent Dan Ieraci. Mr. Dan Ieraci informed Mr. Reyes that if the bevel preparation was not satisfactory he will let his personnel rectify the bevel issue before they lay down the diaphragm.

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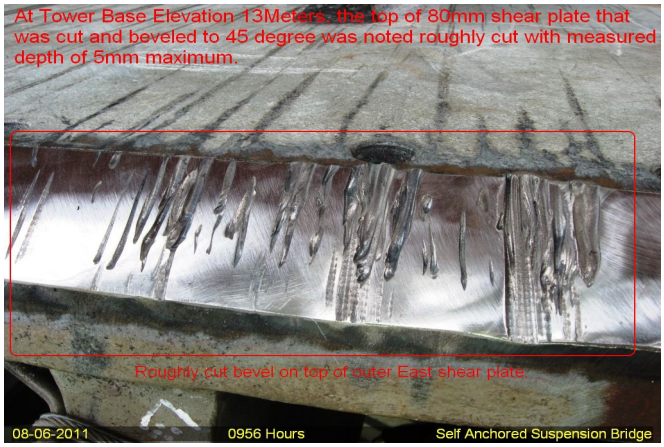

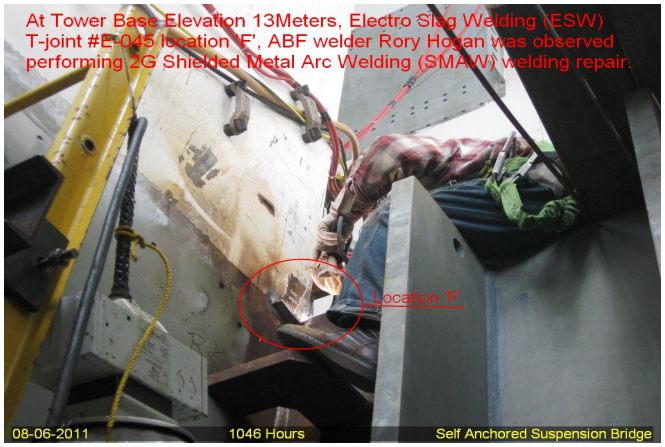

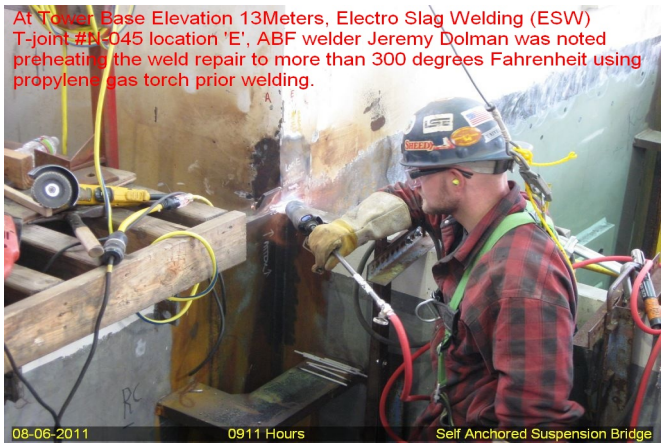

Summary of Conversations:

The bevel preparation of the outer East shear plate was brought to the attention of Lead QA Danny Reyes due to information from ABF QC John Pagliero that the top shear plate bevel preparation was acceptable despite the presence of deep notches on the cut surface.

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