

**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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-025931**Date Inspected:** 11-Aug-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

**CWI Name:** John Pagliero  
**Inspected CWI report:** Yes No N/A  
**Electrode to specification:** Yes No N/A  
**Qualified Welders:** Yes No N/A  
**Approved Drawings:** Yes No N/A

**CWI Present:** Yes No  
**Rod Oven in Use:** Yes No N/A  
**Weld Procedures Followed:** 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 S-041 location 'S', QA randomly observed ABF/JV qualified welder Jeremy Dolman continuing to 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 top of the ESW weld joint is being repaired with approval through Repair Welding Request (RWR) # 201108-008. 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-D15-1000-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 repair welding was still continuing and should remain tomorrow.

At Tower Base Elevation 13Meters, Electro Slag Welding (ESW) T-joint N-045 location 'E', QA randomly ABF welder Richard Garcia continuing to perform 3G SMAW welding repair 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-Repairs. The boat shape 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 John Pagliero was noted

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monitoring the welder. Measured welding parameter during welding was 122 amperes on a 1/8" diameter E7018H4R electrode. The weld repair mentioned above is being repaired through Repair Welding Request (RWR) # 201108-010. At the end of the shift, 3G repair welding was completed including grinding/cleaning of the weld cover.

After welding the repair and it has cool down to atmospheric temperature, ABF QC John Pagliero performed a preliminary Ultrasonic Testing (UT) on the welded repair. ABF QC John Pagliero has found rejectable indication that was verified by another QC Steve Mc Connell. The UT defect was immediately excavated by ABF personnel using carbon air gouging without informing QA and Caltrans. The excavation continued until the end of the shift.

At Tower Base Elevation 13Meters, Electro Slag Welding (ESW) T-joint N-041 location 'N', QA randomly observed ABF/JV qualified welder Richard Garcia continuing to 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 top of the ESW weld joint is being repaired with approval through Repair Welding Request (RWR) # 201108-011. 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-D15-1000-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. During the shift, the welder was also noted 3G SMAW welding the excavated weld cover of the top 6 inches due to noted overlap during QC MT. At the end of the shift, 2G SMAW repair welding was still continuing and should remain tomorrow.

At Tower Base Elevation 13Meters outer West shear plate, ABF foreman Rory Hogan and other ABF personnel were noted cutting the top bevel to 45 degree and depth of 39mm as required. The personnel were noted using oxy-propylene gas torch in cutting the bevel. The work was still in progress at 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 1/4" diameter iron rod and were able to complete cutting at the following ESW weld locations 'P', 'Q', 'N', 'W', 'R' and 'S'. The cut was still rough and still need to be ground smooth.



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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.

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**Inspected By:** Lizardo, Joselito

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer