

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-018900**Date Inspected:** 27-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1830**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Fred Von Hoff and Pat Swain**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:** Orthotropic Box Girder**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 OBG 8E/9E side plate 'E' inside, QA randomly observed ABF welder Songtao, Huang continuing to perform 3G SMAW welding fill to cover pass on 0mm to 1000mm location of the splice butt joint. This location was welded manually using the Shielded Metal Arc Welding (SMAW) due to limited access when using the automatic FCAW-G track mounted Bug-o nozzle holder. The welder was using 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040A. The welder was noted running 125 amperes when measured during welding. During welding, ABF QC Fred Von Hoff was noted monitoring the welder's welding parameters. At the end of the shift, cover pass welding on this location was completed. After welding the location mentioned above, the welder has moved to new location 5277mm to 10555mm of the same OBG and set up the Bug-o track and prepared to weld using the double shielded Flux Cored Arc Welding.

At OBG 8E/9E top deck plate 'A5' outside, QA randomly observed ABF/JV qualified welder Wai Kitlai perform CJP repair welding. The welder was noted welding in 1G (Flat) position utilizing SMAW with 5/32" diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1001 Repairs. The three repairs were excavated to a boat shape profile with the two repairs combined as one repair was tested with Magnetic Particle Testing (MT) prior welding. During welding, ABF QC Pat Swain was noted monitoring the welder and his welding parameters. Welding parameter measured at the time

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of welding was 170 amperes which appears in compliance to the WPS. The locations of the repairs were noted below;

Location	Y-dimension	Profile dimension	Remarks
1. A5	Y-4222mm	150mm long x 40mm wide x 20mm deep	Completed
2. A5	Y-4564mm	130mm long x 22mm wide x 20mm deep	Completed

At OBG 4E-PP25-E3-#3 inside, QA randomly observed ABF/JV qualified welder Salvador Sandoval perform CJP groove welding repair. The welder was observed welding in the 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1001-Repairs. The repair excavation located at Y-dimension 95mm and having a length of 50mm and 10mm deep was preheated to more than 140 degree Fahrenheit using propane gas torch prior welding. During the shift, ABF QC Steven Mc Connell was noted monitoring the welder. Prior welding, ABF QC Steven Mc Connell was also observed performing Magnetic Particle Testing (MT). During the shift, repair welding at location mentioned above was completed.

At OBG 5W-PP29.5-E2-S deck access hole infill plate to top deck plate inside, ABF welder Hua Qiang Wang was observed 4G welding undercut repair on the welded butt joint. The welder was observed utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1001-Repairs. During the shift, ABF QC John Pagliero was noted monitoring the welder and his welding parameters. At the end of the shift, undercut repair on above locations was completed.



## 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

**Reviewed By:** Mertz, Robert

QA Reviewer