

**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:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027796**Date Inspected:** 19-Jun-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** William Sherwood**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 OBG 13W-W2.8 @ 12570 approximately between Y=6800mm to Y=9200mm top deck drop-in plate inside, QA randomly observed ABF certified welder Jeremy Dolman continuing to perform 4G (overhead position) Shielded Metal Arc Welding (SMAW) back welding cover pass on the CJP SPCM splice butt joint. The welder was utilizing 3.2mm diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040C-CU. The joint being welded had a single V-groove butt joint with copper plate backing bar that was originally welded from the top using a combination of SMAW and Submerged Arc Welding (SAW) then removed the copper backing plate using carbon air arc gouging and ground smooth. The plates were preheated to more than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System prior welding. Welding parameters were monitored by ABF/QC William Sherwood. QA noted the working welding parameters of 126 amperes on the 3.2mm diameter E7018H4R electrode. The workmanship and appearance of the completed cover pass deemed satisfactory. During the shift, cover pass back welding on area mentioned above was completed and the welder performed the flush grinding of the back welded cover of 13W-W2.8 from panel point PP123 to PP123.5.

At OBG 13W/14W top deck splice butt joint inside Y=2500 to Y=4000, ABF welder Rory Hogan performed flush grinding of the overhead welded cover of the splice butt joint. The welder was noted using a flapper disc to flush grind the welded cover with the cut of the disc to the weld/plate in parallel to the direction of the bridge as

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required. The flush grinding was completed and the welded has moved to another location 3W-PP122.2 @ 8650 location Y=2500mm to 5000mm.

At OBG 3W-PP122.2 @ 8650 location Y=2500mm to 5000mm top deck drop-in plate butt joint inside, QA randomly observed ABF certified welder Rory Hogan continuing to perform 4G (overhead position) Shielded Metal Arc Welding (SMAW) back welding cover pass on the CJP SPCM splice butt joint. The welder was utilizing 3.2mm diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040C-CU. The joint being welded had a single V-groove butt joint with copper plate backing bar that was originally welded from the top using a combination of SMAW and Submerged Arc Welding (SAW) then removed the copper backing plate using carbon air arc gouging and ground smooth. The plates were preheated to more than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System prior welding. Welding parameters were monitored by ABF/QC William Sherwood. QA noted the working welding parameters of 130 amperes on the 3.2mm diameter E7018H4R electrode. The workmanship and appearance of the completed cover pass deemed satisfactory. During the shift, cover pass back welding on area mentioned above was partially completed.

At OBG 3W-PP122.2 @ 8650 location Y=0mm to 2500mm top deck drop-in plate butt joint inside, QA randomly observed ABF certified welder Mike Jimenez continuing to perform 4G (overhead position) Shielded Metal Arc Welding (SMAW) back welding cover pass on the CJP SPCM splice butt joint. The welder was utilizing 3.2mm diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040C-CU. The joint being welded had a single V-groove butt joint with copper plate backing bar that was originally welded from the top using a combination of SMAW and Submerged Arc Welding (SAW) then removed the copper backing plate using carbon air arc gouging and ground smooth. The plates were preheated to more than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System prior welding. Welding parameters were monitored by ABF/QC William Sherwood. QA noted the working welding parameters of 128 amperes on the 3.2mm diameter E7018H4R electrode. The workmanship and appearance of the completed cover pass deemed satisfactory. During the shift, cover pass back welding on area mentioned above was partially completed.

At OBG various locations along grid line W2.8 of the West bound lane, ABF foreman Rick Clayborn was noted performing fit up and tack welding of OBG floor beam web and flange splice connections. The welder was noted tack welding at various positions using SMAW with 3.2mm diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-F1200A . The following were noted fitted and tack welded with comments;

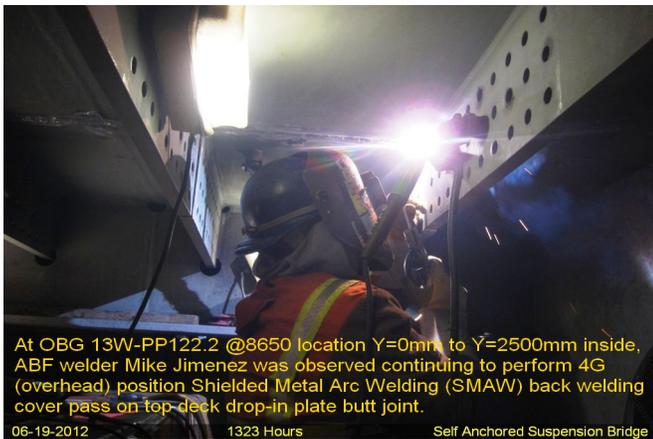
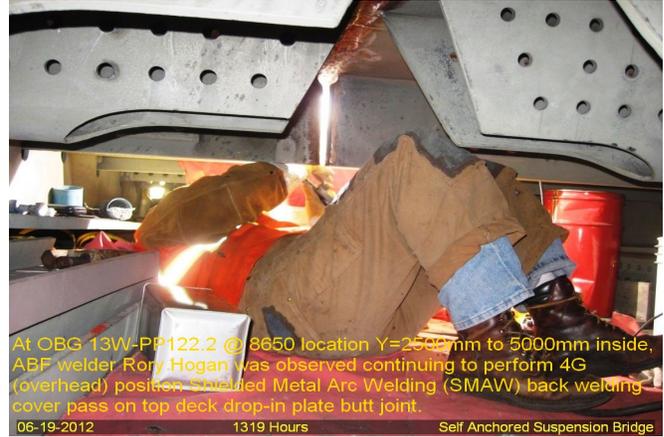
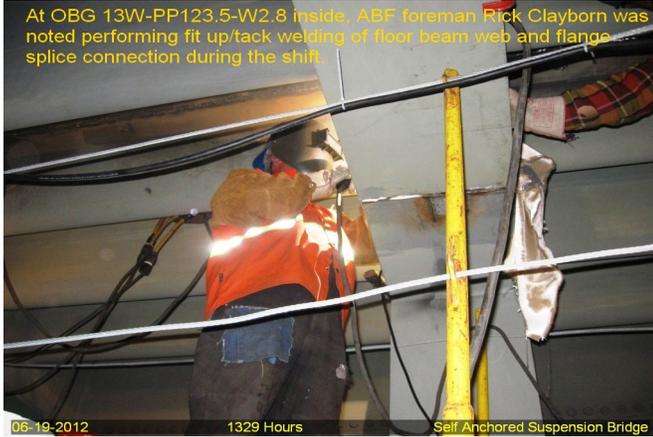
1. 13W-PP122.5-W2.8
2. 13W-PP123-W2.8
3. 13W-PP123.5-W2.8

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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