

**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-027744**Date Inspected:** 09-Jun-2012**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

|                                    |                                 |           |            |                                  |            |           |            |
|------------------------------------|---------------------------------|-----------|------------|----------------------------------|------------|-----------|------------|
| <b>CWI Name:</b>                   | Salvador Merino and William She |           |            | <b>CWI Present:</b>              | <b>Yes</b> | <b>No</b> |            |
| <b>Inspected CWI report:</b>       | <b>Yes</b>                      | <b>No</b> | <b>N/A</b> | <b>Rod Oven in Use:</b>          | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
| <b>Electrode to specification:</b> | <b>Yes</b>                      | <b>No</b> | <b>N/A</b> | <b>Weld Procedures Followed:</b> | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
| <b>Qualified Welders:</b>          | <b>Yes</b>                      | <b>No</b> | <b>N/A</b> | <b>Verified Joint Fit-up:</b>    | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
| <b>Approved Drawings:</b>          | <b>Yes</b>                      | <b>No</b> | <b>N/A</b> | <b>Approved WPS:</b>             | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
|                                    |                                 |           |            | <b>Delayed / Cancelled:</b>      | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
| <b>Bridge No:</b>                  | 34-0006                         |           |            | <b>Component:</b>                | 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 13E-PP124-E2.8-BW1 drop-in floor beam, QA randomly observed ABF certified welder Richard Garcia perform 1G (flat position) Shielded Metal Arc Welding (SMAW) welding root pass to fill pass on the CJP SPCM flange splice butt joint. The welder was utilizing 3.2mm diameter E7018H4R on the root to fill pass implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1030 Rev. 0. The joint being welded has a single V-groove butt joint without backing bar that will be back gouged then back welded. The plates were preheated to more than 150 degree Fahrenheit using propylene gas torch prior welding. Welding parameters were monitored by ABF/QC Salvador Merino. QA noted the welding working parameter of 127 amperes on the 3.2 diameter E7018H4R electrode. The workmanship and appearance of the completed fill pass deemed satisfactory. At the end of the shift, fill pass welding on web splice joint mentioned above was still continuing and should remain tomorrow.

At OBG 13E-PP123.5-E2.8-BW1 drop-in floor beam, QA randomly observed ABF certified welder Steve Davies perform 3G (vertical position) Shielded Metal Arc Welding (SMAW) welding fill pass on the CJP SPCM web splice butt joint. The welder was utilizing 3.2mm diameter E7018H4R on the fill pass implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1030 Rev. 0. The joint being welded has a single V-groove butt joint without backing bar that will be back gouged then back welded. The plates were preheated to more than 150 degree Fahrenheit using propylene gas torch prior welding. Welding parameters were

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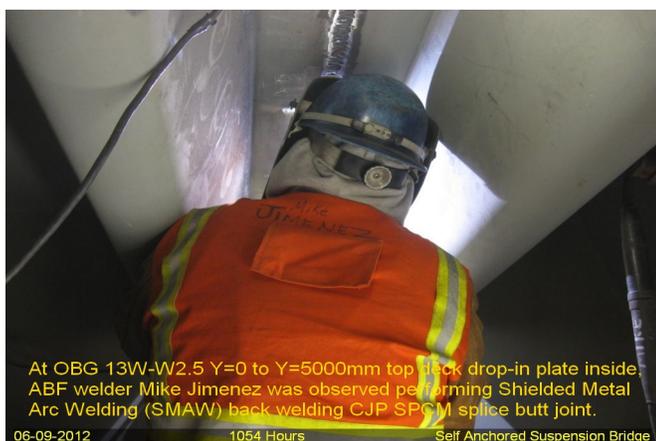
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monitored by ABF/QC Salvador Merino. QA noted the welding working parameter of 120 amperes on the 3.2 diameter E7018H4R electrode. The workmanship and appearance of the completed fill pass deemed satisfactory. During the shift, cover pass welding was completed and the welder has moved to the bottom flange of the same beam.

At OBG 13E-PP123-BF1 drop-in floor beam, the same welder mentioned above was observed perform 4G (overhead position) SMAW back welding fill pass on flange CJP SPCM splice butt joint. The welder was utilizing 3.2mm diameter E7018H4R on the fill pass implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1030 Rev. 0. The joint being welded has a single V-groove butt joint that was SMAW welded from top and back gouged. The plates were preheated to more than 150 degree Fahrenheit using propylene gas torch prior welding. Welding parameters were monitored by ABF/QC Salvador Merino. QA noted the welding working parameter of 120 amperes on the 3.2 diameter E7018H4R electrode. The workmanship and appearance of the completed fill pass deemed satisfactory. At the end of the shift, SMAW 4G fill pass welding on the flange splice butt joint was still continuing and should remain tomorrow.

At OBG 13W-W2.5 Y=0mm to Y=5030mm top deck drop-in plate 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 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 127 amperes on the 3.2mm diameter E7018H4R electrode. The workmanship and appearance of the completed cover pass deemed satisfactory. At the end of the shift, cover pass welding on area mentioned above was partially completed.



## Summary of Conversations:

No significant conversation occurred today.

## Comments

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## WELDING INSPECTION REPORT

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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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| <b>Inspected By:</b> | Lizardo, Joselito | Quality Assurance Inspector |
| <b>Reviewed By:</b>  | Levell, Bill      | QA Reviewer                 |

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