

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-027558**Date Inspected:** 05-May-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**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 top deck plate 13E-E2.1-@0-9500mm outside, QA randomly observed ABF certified welder Kenneth Chappell continuing to perform 1G (flat position) Submerged Arc Welding (SAW) on the Seismic Performance Critical Member (SPCM) CJP splice butt joint. The welder was noted utilizing F7A6-EM12K-H8, 3.2mm electrode with corresponding Esab OK Flux 10.62 flux and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-4042B-1. The joint being welded has a single V-groove butt joint with copper backing bar. The plate was preheated to more than 150 °F using Miller Proheat 35 Induction Heating System located on top of the plate prior welding and moving it the side during welding. ABF/QC William Sherwood was noted monitoring the welding parameters of welder with measures working current of 550 amps, 32.5 volts and travel speed of 475mm per minute. The calculated heat input was 2.25 Kjoules/mm. QA noted the welding parameters, the workmanship and appearance of the completed fill deemed satisfactory. During the shift, SAW cover pass welding at joint mentioned above was completed.

After the completion of the splice weld joint, the welder has moved to another splice location OBG top deck plate 13E-E2.2-@0-4850mm. The welder performed welding on the splice butt joint using the same process (SAW) and implementing the same procedure mentioned above. The same welding parameters were used during the SAW welding of the weld joint. The splice butt joint was also completed during the shift and the welder was again noted moving to another splice butt joint location OBG top deck plate 13E-PP123.6@0-1000mm. The welder performed

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SAW welding on the splice joint location using the same welding parameters until the end of the shift. The weld splice butt joint was not completed and should remain tomorrow.

At 13E/14E A1 (5500mm) and A2.1 (1830mm) top deck plate outside, QA randomly observed ABF certified welder Salvador Sandoval perform 1G (flat position) Shielded Metal Arc Welding (SMAW) welding fill pass on the CJP SPCM splice butt joint. The welder was utilizing 4.0mm diameter E7018H4R on the fill pass implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040C-Cu. The joint being welded has a single V-groove butt joint with copper backing bar that will be removed 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 William Sherwood. QA noted the welding parameters of 187 amperes on the 4.0mm diameter E7018H4R electrode. The workmanship and appearance of the completed fill pass deemed satisfactory. At the end of the shift, fill pass welding was still continuing and should remain Monday.

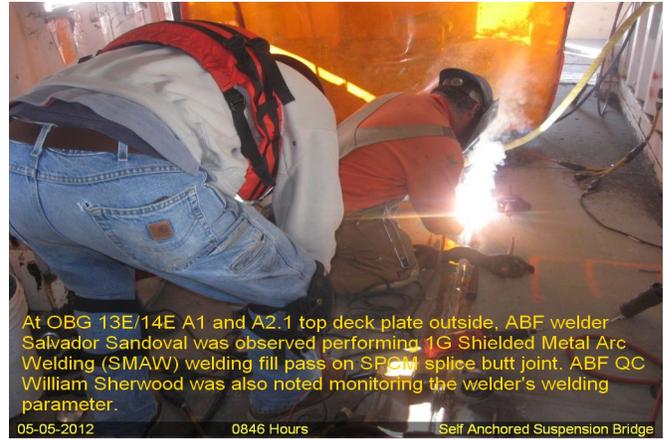
At 13E-E2.5-@0-4720mm top deck plate outside, QA randomly observed ABF certified welder Mike Jimenez perform 1G (flat position) Shielded Metal Arc Welding (SMAW) welding fill pass on the CJP SPCM splice butt joint. The welder was utilizing 4.0mm diameter E7018H4R on the fill pass implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040C-Cu. The joint being welded has a single V-groove butt joint with copper backing bar that will be removed 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 William Sherwood. QA noted the welding parameters of 260 amperes on the 4.8mm diameter E7018H4R electrode. The workmanship and appearance of the completed fill pass deemed satisfactory. At the end of the shift, fill pass welding was still continuing and should remain Monday.

At 13E/14E A0-@1400mm top deck plate outside, QA randomly observed ABF certified welder Eddie Brown perform 1G (flat position) Shielded Metal Arc Welding (SMAW) welding fill pass on the CJP SPCM splice butt joint. The welder was utilizing 4.0mm diameter E7018H4R on the fill pass implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040C-Cu. The joint being welded has a single V-groove butt joint with copper backing bar that will be removed 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 William Sherwood. QA noted the welding parameters of 180 amperes on the 4.0mm diameter E7018H4R electrode. The workmanship and appearance of the completed fill pass deemed satisfactory. At the end of the shift, fill pass welding was still continuing and should remain Monday.

At 13E-E2.3-@0-3910mm top deck plate outside, QA randomly observed ABF certified welder Jacob Stafford perform 1G (flat position) Shielded Metal Arc Welding (SMAW) welding fill pass on the CJP SPCM splice butt joint. The welder was utilizing 4.0mm diameter E7018H4R on the fill pass implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040C-Cu. The joint being welded has a single V-groove butt joint with copper backing bar that will be removed 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 William Sherwood. QA noted the welding parameters of 180 amperes on the 4.0mm diameter E7018H4R electrode. The workmanship and appearance of the completed fill pass deemed satisfactory. At the end of the shift, fill pass welding was still continuing and should remain Monday.

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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.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer