

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-018515**Date Inspected:** 06-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:	Mike Johnson and 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:	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 1W-PP10.5-W5-TS transverse stiffener inside, QA randomly observed ABF/JV qualified welder Jin Pei Wang manually welding on the Complete Joint Penetration (CJP) butt joint. The welder was noted welding root pass to fill pass in the 3G (vertical) position utilizing a Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1010 Revision 1. The joint being welded has a double V-groove butt joint with open root. During welding, ABF Quality Control (QC) Mike Johnson was noted monitoring the welding parameters of the welder. During the shift, SMAW fill pass welding on both sides of the splice butt joint was still continuing and should remain tomorrow.

At OBG 7W/8W side plate 'C' (7155mm to 9655mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continuing to perform CJP groove welding fill pass to cover pass on the splice butt joint. The welder was observed welding in the 3G (vertical) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3042B-1. The joint being welded has a single V-groove butt joint with backing bar. During the FCAW welding, the splice joint was preheated and maintained to greater than 150 degrees Fahrenheit using Miller Proheat 35 Induction Heating System heater blankets located at the opposite side of the plate prior/during welding. ABF Quality Control (QC) William Sherwood was noted monitoring the

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welding parameters of the welder. During the shift, cover pass FCAW welding was completed and the welder has moved to new location 9655mm to 10555mm and started welding the area using the SMAW due to limited access of the track mounted Bug-o FCAW nozzle holder. At the end of the shift, fill pass welding of the splice joint at new location was still continuing and should remain tomorrow.

At OBG 5E-PP29.5-E2-LS longitudinal stiffener inside, QA randomly observed ABF welder Xiao Jian Wan ID #9677 perform 3G (vertical) SMAW welding root pass to cover pass on the stiffener splice butt joint. The stiffener plates being welded are made of high strength plate material HPS 485W and has a thickness of 30mm. The joint has a double V joint preparation that was being welded from one side. Prior welding, the fit up was inspected and accepted by ABF QC John Pagliero. QA also verified the root gap of less than 5mm and alignment of less than 2mm which deemed acceptable to the contract requirements. The welder was noted using E9018H4R with 1/8" diameter electrode implementing Caltrans approved welding procedure specification (WPS) ABF-WPS-D1. 5-1012-3. The joint being welded was root welded using a ceramic backing. The splice joint was preheated to greater than 200 degrees Fahrenheit using Miller Proheat 35 Induction Heating System heater blanket located at the opposite side of the plate prior/during welding. The QA Inspector noted the ABF QC John Pagliero was on site monitoring the in process preheats and welding parameters. During the shift, QA noted ABF QC was closely monitoring the issuance of E9018H4R electrodes due to its limited exposure time allowed. At the end of the shift, cover pass welding on one side was completed and the joint preheat was held for three more hours after welding as required.

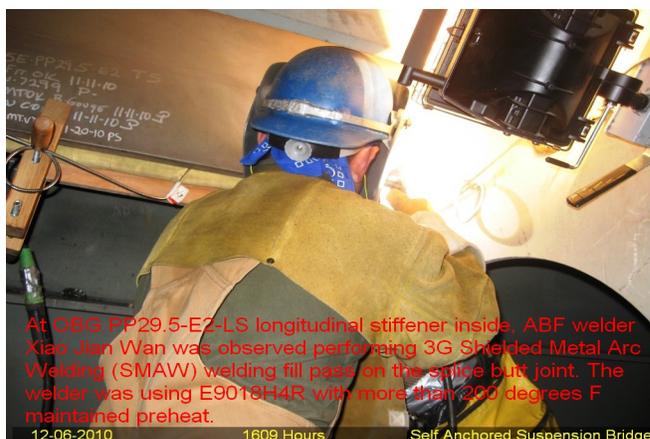
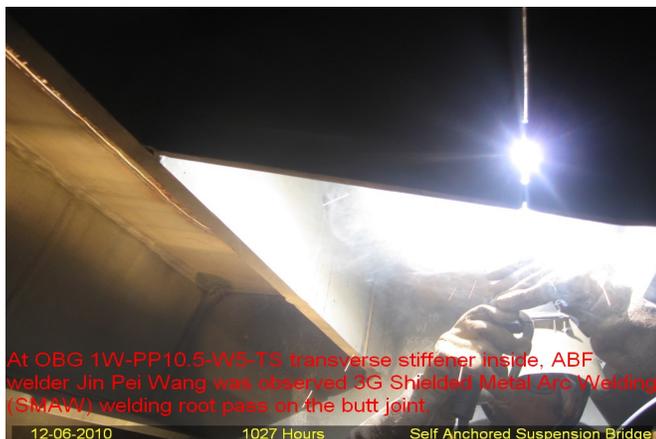
At OBG 4W-PP24.5-W5-S deck access hole infill plate to top deck plate outside, QA randomly observed ABF/JV qualified welder Kenneth Chappell continuing to perform CJP groove fill pass welding. The welder was observed welding in the 1G (flat) position utilizing SMAW with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1010 Revision 1. The joint being welded has a double V-groove butt joint. ABF Quality Control (QC) Steven Mc Connell was noted monitoring the welding parameters of the welder. During the shift, fill pass welding of the butt joint was still continuing but the welder was pulled out from this joint and has moved to another OBG 3W-PP19.5-W5-S and performed fit up of the access hole infill plate to the top deck plate. The fit up alignment was verified and accepted by ABF QC Bonifacio Daquinag and it was concurred by this QA. Welder Kenneth Chappell was observed welding the root pass after the fit up acceptance. The welder was using the same electrode and implementing the same procedure mentioned above. At the end of the shift, root pass welding was completed.

Flush grinding/grinding cut orientation and smooth finish verification on the bottom of welded lifting lug restoration at the following locations were verified by this QA;

1. 1E-PP8.5-E3-#3 & #4
2. 1E-PP9.5-E3-#1
3. 1E-PP9.5-E4-#2
4. 1E-PP11-E3-#4

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Summary of Conversations:

No significant conversation 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
