

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-018414**Date Inspected:** 30-Nov-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:	Bonifacio Daquinag and John Pagani			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 6E-PP46.5-E2-SE access hole infill plate to top deck plate outside, QA randomly observed ABF/JV qualified welder Mick Chan ID #9265 perform CJP groove root pass welding. The welder was observed welding in the 1G (flat) position utilizing Shielded Metal Arc Welding (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 with open root. ABF Quality Control (QC) Bonifacio Daquinag was noted monitoring the welding parameters of the welder. At the end of the shift, root pass welding of the butt joint at location mentioned above was still continuing and should remain tomorrow.

At OBG 6E-PP37.5-E2-SW access hole infill plate to top deck plate outside, QA randomly observed ABF/JV qualified welder Wen Han Yu continuing to perform CJP groove cover pass welding. The welder was observed welding in the 1G (flat) position utilizing Shielded Metal Arc Welding (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) Bonifacio Daquinag was noted monitoring the welding parameters of the welder. During the shift, cover pass welding of the butt joint was completed and the welder started flush grinding the welded cover of the joint. While the top side weld is complete, the joint will still have to be back gouged from the bottom side and welded.

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At OBG 7E/8E LS5 longitudinal stiffener inside, QA randomly observed ABF welder Hua Qiang Hwang perform 3G (vertical) Shielded Metal Arc Welding (SMAW) complete joint penetration (CJP) back welding fill 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 welded from one side and now being back welded from the other side. 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, fill pass welding was still continuing and should remain tomorrow.

At OBG 8E/9E edge plate 'B' inside, QA randomly observed ABF/JV qualified welder Fred Kaddu perform fill pass back welding on the CJP splice butt joint. The welder was observed manually back welding 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-D15-3110-3. The joint being welded has a single V-groove butt joint with copper backing bar that has been removed and back gouged. The groove of the ground and gouged area of the copper backing bar was also tested and passed using Magnetic Particle Testing (MT). During welding, ABF Quality Control (QC) John Pagliero was noted monitoring the welding parameters of the welder. During the shift, SMAW fill pass welding was still continuing and should remain tomorrow.

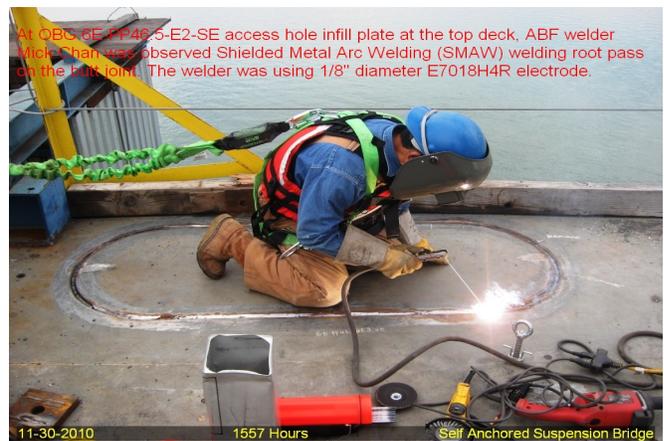
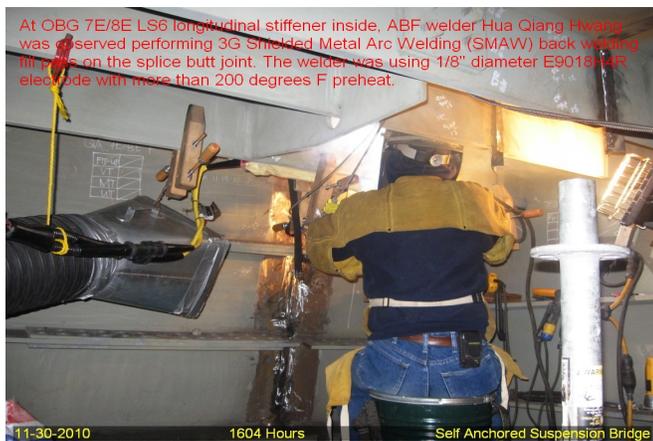
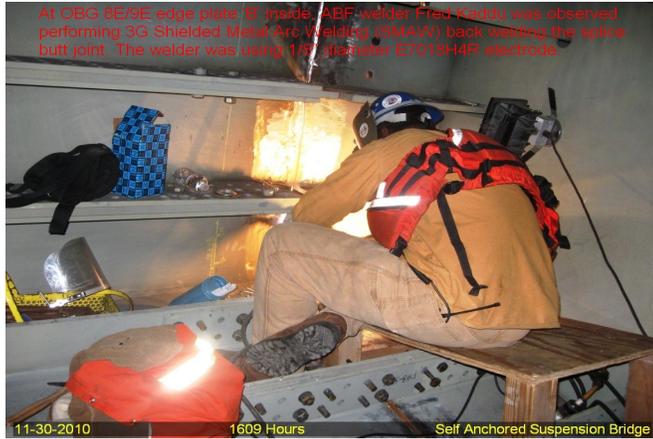
At OBG 8E/9E edge plate 'F' inside, QA randomly observed ABF/JV qualified welder Jorge Lopez perform fill pass back welding on the CJP splice butt joint. The welder was observed manually back welding in the 3G (vertical) position utilizing a Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3110-3. The joint being welded has a single V-groove butt joint with copper backing bar that has been removed and back gouged. The groove of the ground and gouged area of the copper backing bar was also tested and passed using Magnetic Particle Testing (MT). During welding, ABF Quality Control (QC) John Pagliero was noted monitoring the welding parameters of the welder. During the shift, SMAW fill pass welding was still continuing and should remain tomorrow.

This QA performed 10% MT verification at the following welded butt joints. Please see TL-6028 report for more information.

1. 6E/7E edge plate 'F' inside – no defects noted.
2. 2E-PP17.5-E2-SE access hole - no defects noted.
3. 3E-PP19.5-E2-NW access hole - no defects noted.
4. 3E-PP23.5-E2-NE access hole - no defects noted.

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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