

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-017022**Date Inspected:** 27-Sep-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:	Jesse Cayabyab and Jim Cunningham			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 6W/7W edge plate 'B' outside, QA randomly observed ABF/JV qualified welder Yao Xin Liang ID #7238 perform root pass then fill pass on the Complete Joint Penetration (CJP) splice butt joint. The welder was observed manually 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-D15-1040B. The joint being welded has a single V-groove butt joint with copper backing bar that will be removed and back gouged. During welding, ABF Quality Control (QC) Jim Cunningham was noted monitoring the welding parameters of the welder. During the shift, fill pass SMAW welding was still continuing and should remain tomorrow.

At OBG 6W/7W edge plate 'F' outside, QA randomly observed ABF/JV qualified welder Hua Qiang Huang ID #2930 perform root pass then fill pass on the Complete Joint Penetration (CJP) splice butt joint. The welder was observed manually 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-D15-1040B. The joint being welded has a single V-groove butt joint with copper backing bar that will be removed and back gouged. During welding, ABF Quality Control (QC) Jim Cunningham was noted monitoring the welding parameters of the welder. During the shift, fill pass SMAW welding was still continuing and should remain tomorrow.

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At OBG 6W/7W top deck plate 'A' outside, three ABF personnel were observed flush grinding the weld cover reinforcement of the splice butt joint as required. The personnel were using the 9" disc grinder followed by 9" flapper with the grinding cut of the discs to the plate parallel to the direction of the bridge complying with the contract requirements. Before the end of the shift, flush grinding of the weld cover reinforcement was completed. Just after the completion of the flush grinding, ABF QC Jim Cunningham was observed performing Magnetic Particle Testing (MT) of the flush ground cover of the welded splice butt joint. QC was using a Magnaflux electromagnetic yoke with red magnetic powder as detecting media. MT was still continuing at the end of the shift and should continue tomorrow.

At OBG 5W/6W side plate 'C' outside, ABF QC Jesse Cayabyab was observed performing Ultrasonic Testing (UT) on the welded splice butt joint. QC was using General Electric USM35 ultrasonic machine. QC was also observed scanning from both sides of face 'A' of the joint. During the shift, QC has completed testing the whole length of the joint and informed QA that he has found 2 rejectable repairs. Since it was already almost quitting time when he finished testing the face 'A' of the joint, he told QA that he will test (UT) the rest of the joint (face 'B') tomorrow.

At 1EPP8.5@E3#1 top deck access hole infill plates, QA randomly observed ABF/JV qualified welder Jin Pei Wang ID #7299 perform CJP groove welding repair. 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-D15-1000-Repairs. The repair excavations were preheated to more than 140 degree Fahrenheit using propane gas torch prior welding. During the shift, Steven Mc Connell was noted monitoring the welder. Prior welding, ABF QC Steven Mc Connell was also observed performing Magnetic Particle Testing (MT) using Parker Contour Probe with red magnetic powder as detecting media on the boat shape repair excavations. During the shift, repair welding of the infill plates was still continuing and should remain tomorrow.

At OBG 6W/7W side plate 'E' outside, QA randomly observed ABF welder Rick Clayborn fillet welding fitting gear/temporary attachment to the side plate. The welder was welding in 4F (overhead) position using 1/8" diameter E7018H4R electrode. QA noted ABF QC William Sherwood monitoring the welder and his parameter. During the shift, welding of the fitting gear/temporary attachment was completed and the backing bar was also put in place at the splice joint 6W/7W side plate 'E' outside. After installing the backing bar, ABF QC went inside the box and checked the alignment. QC informed QA that during the initial measurements of the fit up alignment, he was getting unacceptable misalignment on some areas which he said still need more adjustment.

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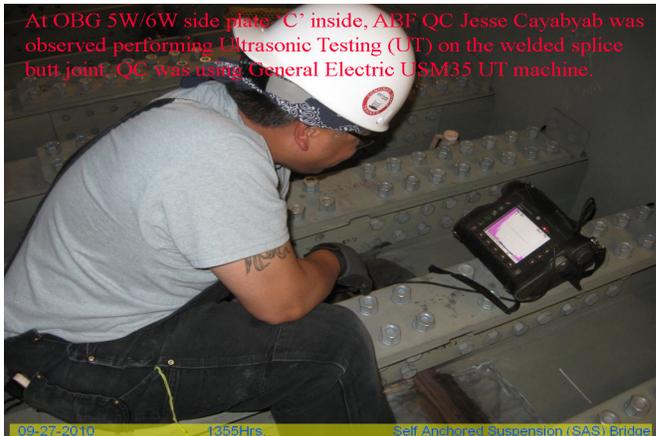
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At OBG 1EPP8 5@E3#1 top deck access hole (with plates) ABF QC Steven Mc Connell was observed performing Magnetic Particle Testing (MT) on the butt shape repair excavation of the C/P welded joint.



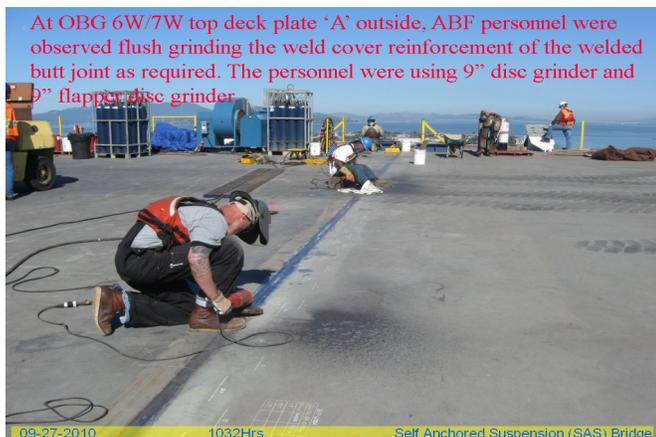
09-27-2010 1527Hrs. Self Anchored Suspension (SAS) Bridge

At OBG 5W/6W side plate 'C' inside, ABF QC Jesse Cayabyab was observed performing Ultrasonic Testing (UT) on the welded splice butt joint. QC was using General Electric UTM35 UT machine.



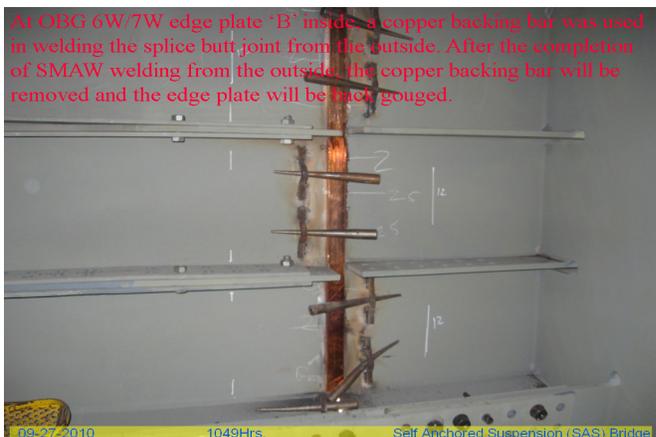
09-27-2010 1558Hrs. Self Anchored Suspension (SAS) Bridge

At OBG 6W/7W top deck plate 'A' outside, ABF personnel were observed flush grinding the weld cover reinforcement of the welded butt joint as required. The personnel were using 9" disc grinder and 9" flap wheel grinder.



09-27-2010 1032Hrs. Self Anchored Suspension (SAS) Bridge

At OBG 6W/7W edge plate 'B' inside, a copper backing bar was used in welding the splice butt joint from the outside. After the completion of SMAW welding from the outside, the copper backing bar will be removed and the edge plate will be back gouged.



09-27-2010 1049Hrs. Self Anchored Suspension (SAS) Bridge

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 Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer