

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-016870**Date Inspected:** 21-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:	Tom Pasqualone and Jesse Cayabyab			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/7E side plate 'C' (4700mm to 7955mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continuing to perform CJP groove (splice) welding root pass then fill pass on the splice butt joint. The welder was observed performing automatic 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 had a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 150 degrees Fahrenheit using Miller Proheat 35 Induction Heating System located at the opposite side of the plate prior/during welding. ABF Quality Control (QC) John Pagliero was noted monitoring the welding parameters of the welder. Prior welding, QA performed random alignment verification on the fit-up of the splice joint. The bottom area (near bottom plate 'D') was noted marked by QC where they measured an offset of 7.0mm and at the top (near edge plate 'B') they measured an offset of 10.0mm. QA measured an offset of 7.0mm at the bottom and 5.0mm at the top that was after the adjustment. Per Bonifacio Daquinag, they already recorded all the unacceptable offsets and reported them to ABF for review. At the end of the shift, fill pass welding was still continuing and should remain tomorrow.

At OBG 6E/7E edge plate 'F' inside, QA randomly observed ABF/JV qualified welder Yao Xin Liang ID #7238 perform cover pass back welding on the Complete Joint Penetration (CJP) splice butt joint. The welder was

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

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-D15-3110-3. 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, cover pass SMAW welding was completed with bad result. QC informed QA that he visually checked the completed weld and found unsatisfactory surface profile. QA went and did the VT and it was noted that the weld reinforcement was 8.0mm high with irregular weld beads and unacceptable profile. According to QC John Pagliero, he will let the welder grind off the excess weld reinforcement and will reexamine again after grinding.

At OBG 6E/7E edge plate 'B' inside, QA randomly observed ABF/JV qualified welder Yao Xin Liang ID #7238 perform cover pass back welding on the Complete Joint Penetration (CJP) splice butt joint. The welder has moved here after the completion from the other edge plate 'F' and continued cover pass welding where James Zhen had left off. This same 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-D15-3110-3. 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, cover pass SMAW welding was still continuing and should remain tomorrow.

At OBG 6E/7E top deck plate 'A' outside, QA randomly observed ABF/JV qualified welder Eric Sparks continuing to perform 2F fillet welding on fitting gear/temporary attachment to the top deck. The fitting gears were used in adjusting the top deck plate alignment/offset. The welder was using Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode. During welding, ABF QC William Sherwood was noted monitoring the welder and at the same time measuring the alignment as they hit the insert rod to push the other plate for the adjustment. At the end of the shift, welding of the fitting gear was still continuing and should remain tomorrow.

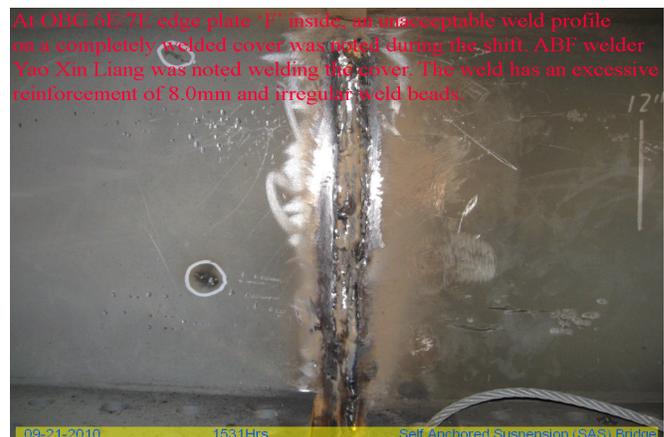
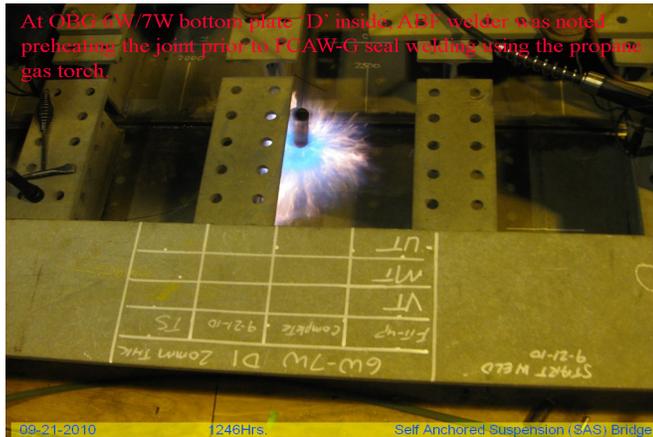
At OBG 5W/6W edge plate 'F' outside, QA randomly observed ABF/JV qualified welder Fred Kaddu ID # 2188 perform CJP groove welding repair. The welder was observed welding in the 3G (vertical) position utilizing Shielded metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repairs. The repair excavation was preheated to more than 140 degree Fahrenheit using propane gas torch prior welding. During the shift, ABF QC Jesse Cayabyab was noted monitoring the welder. Prior welding, ABF QC Jesse Cayabyab was also observed performing Magnetic Particle Testing (MT) using Parker Contour Probe with red magnetic powder as detecting media on the repair excavation. There were no significant defects noted during the test. During the shift, the welder has completed welding one (UT) repair and has moved to another work location.

At OBG 6W/7W bottom plate 'D' inside, QA randomly observed ABF/JV qualified welders Xiao Jian Wan and Hua Qiang Huang seal welding bottom plates 'D' to the backing bar. The welders were 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-D15-3040A-1. The joint had a single V-groove butt

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

joint design with the bottom plate and backing bar being seal welded. The plate with the backing bar was preheated to greater than 150 degrees Fahrenheit using propane gas torch prior welding. During the shift, ABF QC William Sherwood was noted monitoring the welder. The welders have completed seal welding on both sides of the plates and then hand welded using the same process the two ends (north side, 600mm and south side, 1000mm) of the splice wherein the SAW track mounted feeder has a limited access. These two ends were also completely welded with cover before the end of the shift.



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
