

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-016932**Date Inspected:** 22-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:	William Sherwood and Mike Johnson			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.

QA randomly observed ABF/JV qualified welders Rory Hogan (ID #3186) and Jeremy Dolman (ID #5042) continuing to perform complete joint penetration (CJP) groove (splice) back welding fill to cover pass on OBG 5W/6W bottom plate 'D' outside. The welder was observed welding in the 4G (overhead) 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-D15-3110-4. The welder was using a track mounted welder holder assembly that was remotely controlled. The joint being welded has the backing bar gouged using the Esab Plasma Arc machine and was ground smooth. The gouged and ground splice butt joint was also Non Destructive Testing (NDT) tested using the Magnetic Particle Testing (MT). The splice joint was preheated to greater than 150 degrees Fahrenheit using Miller Proheat 35 Induction Heating System located on top of the plate prior and maintained the preheat by moving the heater blankets on the side of the plate during welding. The vicinity was also properly protected from wind and other climatic changes. During welding, ABF Quality Control (QC) Mike Johnson was noted monitoring the welding parameters of the welder. At the end of the shift, fill pass welding was still continuing and should continue tomorrow.

At OBG 6W/7W bottom plate 'D', QA randomly observed ABF certified welder James Zhen ID #6001 and Songtao, Huang ID #3794 perform 1G (flat position) Submerged Arc Welding (SAW). The welders were utilizing F7A6-EM12K-H8, 3.2mm electrode with corresponding Esab OK Flux 10.62 flux and implementing Caltrans

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approved Welding Procedure Specification (WPS) ABF-WPS-D15-4042B-1. The joint being welded had a single V-groove butt joint with backing bar. The plates were preheated to more than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System located at the opposite side of the plate prior/during welding. Welding parameters were monitored by ABF/QC William Sherwood. QA noted the welding parameters, the workmanship and appearance of the completed fill deemed satisfactory. At the end of the shift, SAW fill pass welding was still continuing and should remain tomorrow.

At OBG 3W top deck plate 'A' outside/north (panel point PP19), ABF welder Eric Sparks was observed perform 1G (flat) position CJP welding 3/8" thick x 3 5/8" wide counter weight connection plate to the top deck plate. The welder was using SMAW with 1/8" diameter E7018H4R electrode implementing Caltrans approved welding procedure specification (WPS) ABF-WPS-D1.5-D1080. The connection plate has a 45 degree bevel that was welded from one side and then back gouge and back welded from the other side. ABF QC Mike Johnson was also noted monitoring the welding and its parameters. At the end of the shift, welding of the top counter weight connection plate was still continuing and should remain tomorrow.

At OBG 4W/5W bottom plate 'D' outside, QA observed ABF QC Jesse Cayabyab perform Ultrasonic Testing (UT) on the flush ground cover of the welded splice butt joint. QC had not completed the UT on the whole length of the splice joint and should continue tomorrow.

At 4W/5W side plate 'C' inside, QA performed final visual test (VT) verification on the welded splice butt joint. The joint was preliminarily VT'd by this same QA and observed some surface defects such as undercut and excessive reinforcement that were noted and marked for fixing. ABF QC informed QA that noted surface defects have already been fixed and now ready for final VT. QA obliged to the request and performed the VT. All the defects that have been noted were fixed and found the weld joint deemed in compliance to the contract requirements.



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At OBG 3W top deck plate 'A' outside, ABF welder Eric Sparks was observed 1G Shielded Metal Arc Welding (SMAW) welding cover on the CJP groove joint of the 3/8" wide x 3/8" thick counter weight connection plate to the deck plate.



At OBG 4W/5W bottom plate 'D' outside, ABF QC Jesse Cavabyah was observed performing Ultrasonic Testing (UT) on the welded and flush ground weld cover of the splice butt joint.



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