

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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014993**Date Inspected:** 16-Jun-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:	Jim Cunningham 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 L5E/L6E edge plate 'B' outside, QA randomly observed welder Xiao Jian Wan welding fill to cover pass on the splice butt joint. The welder was observed perform semi-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-D15-3040B-3. The joint being welded has a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 200 degree Fahrenheit using Miller Proheat 35 Induction Heating System located on top of the plate prior welding. ABF Quality Control (QC) Jesse Cayabyab was noted monitoring the welding parameters of the welder. QA also performed verification on the parameter and noted readings of 245 Amperes, 21.7 voltages and 200mm per minute travel speed which appear acceptable to contract requirements. At the end of the shift, the welder has not completed welding the whole length of the splice joint and intends to continue tomorrow.

QA randomly observed ABF/JV qualified welder Mitch Sittinger perform CJP groove (splice) back welding fill pass on Orthotropic Box Girder (OBG) L3E/L4E 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-D15-3040A-4. The welder was using a track mounted welder holder assembly that is remotely controlled. The joint being welded has the backing bar gouged using the Esab Plasma Arc machine and was

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ground smooth. The splice joint was preheated to greater than 150 degree Fahrenheit prior welding and the vicinity was properly protected from wind and other weather conditions. During welding, ABF Quality Control (QC) Jim Cunningham was noted monitoring the welder and his welding parameters.

At OBG L2W/L3W side plate 'E' outside, QA randomly observed ABF/JV qualified welder Rick Clayborn perform CJP groove welding repair. The welder was observed welding in the 4G (overhead) 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 Bonifacio Daquinag was noted monitoring the welder. Prior welding, ABF QC Bonifacio Daquinag 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 one repair outside and three repairs from the inside of the same splice joint.

At OBG L4E/L5E side plate 'C' inside, ABF welder Huang Songtao was noted moving all his welding equipment in this location. It was learned from the welder that he will be welding the splice butt joint using the FCAW-G in 3G position. The welder has installed the heater blankets of the Miller Proheat 35 Induction Heating System from the outside of the joint, set up his 'Bug-o' wire nozzle holder track from the inside and expected to start welding tomorrow. QA performed fit up verification on the joint and noted 2.0mm maximum misalignment which appears in compliance to the project requirements.



Summary of Conversations:

As stated above.

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) 227-5298, who represents the Office of Structural Materials for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

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Reviewed By: Levell,Bill

QA Reviewer