

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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016249**Date Inspected:** 17-Aug-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 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 5W/6W side plate 'C' (1000mm to 3200mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 perform CJP groove (splice) welding root 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) William Sherwood was noted monitoring the welding parameters of the welder. At the end of the shift, fill pass welding was still continuing and should remain tomorrow.

QA randomly observed ABF/JV qualified welders Rory Hogan and Jeremy Dolman continuing to perform CJP groove (splice) back welding fill pass on Orthotropic Box Girder (OBG) 5E/6E side plate 'E1' outside. The welder was observed back 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

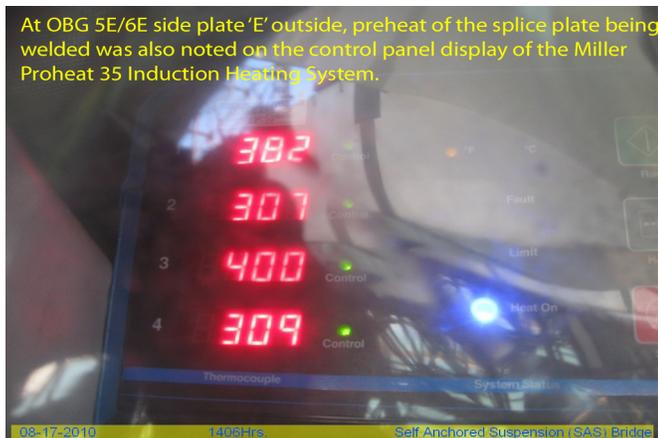
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(NDT) tested using the Magnetic Particle Testing (MT). The splice joint was preheated and maintained to greater than 150 degrees Fahrenheit using Miller Proheat 35 Induction Heating System located on top of the plate prior welding and by moving the blanket to the side of the weld being welded during welding. The vicinity was also properly protected from wind and other climatic conditions. ABF Quality Control (QC) Jim Cunningham was noted monitoring the welding parameters of the welder. During the shift, fill pass welding was still continuing and should remain tomorrow.

At OBG 5E/6E side plate 'C' outside, ABF personnel was noted flush grinding the weld cover reinforcement of the welded splice butt joint as required. The personnel was using 4" disc grinder with the grinding cut to the plate parallel to the direction of the bridge in compliance to the project specification.

At OBG 4W/5W side plate 'C' outside, QA randomly observed ABF personnel Mike Maday and Bryce Howell perform plasma arc gouging on the backing bar removal of the splice butt joint. The personnel were using an Esab plasma arc gouging machine that has the nozzle holder attached to a Bug-o track. Gouging of the backing bar was not completed today and should continue tomorrow.



Summary of Conversations:

At OBG 1W/2W line W3 panel point 13 inside, the plate that was replaced due to damage during shipment from ZPMC, China and splice welded into the longitudinal connection plate but failed the Ultrasonic Testing (UT) is now being cut and to be replaced. The plate was previously repaired thru American Bridge Fluor/Joint Venture (ABF/JV) NCR-002 dated March 17, 2010. According to ABF QC William Sherwood, ABF is awaiting the approved Request for Information (RFI) for the exact dimension of the plate to be cut. According to ABF welder Fred Kaddu, the plate was initially cut 2 inches away to the anticipated cutting lines of the plate.

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At O&G 1W/2W line W3 panel point 13, the original plate had been cut out and the replacement plate had been welded/spliced into the longitudinal connection plate and rejected by Ultrasonic Testing (UT) is now being cut using oxy-acetylene cutting torch. Per QC William Sherwood, ABF is awaiting the approved RFI prior to cut the final dimension.



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

Reviewed By: Levell, Bill

QA Reviewer