

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-016545**Date Inspected:** 30-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:	Jim Cunningham and William She			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 Pier 7 Oakland, CA, this QA assisted the group led by Caltrans Engineer Jason Wilcox and fellow QA Robert Mertz in performing post-arrival inspection of Orthotropic Box Girder (OBG) 7E. The OBG 7E was inspected against damages that could have been inflicted during shipment from ZPMC, China. The internal inspection of the whole OBG 7E was shared and divided between the three QAs, and this QA started from panel point (PP) 47 up to the west side of PP55 and from the mid section of the OBG up to the edge plate 'B' of the OBG. Items of interest that were inspected include the floor beams, diagonal braces, lifting brackets at PP52, PP53 and PP55, WT stiffeners, U-ribs, longitudinal diaphragms and etc. Results of the inspection were affirmative and that the OBG 7E was generally in good physical condition and notably no signs of any damages resulting from the shipment.

QA randomly observed ABF/JV qualified welders Rory Hogan (ID #3186) and Jeremy Dolman (ID #5042) perform CJP groove (splice) back welding fill pass on Orthotropic Box Girder (OBG) 4W/5W side plate 'C1' 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 200 degrees

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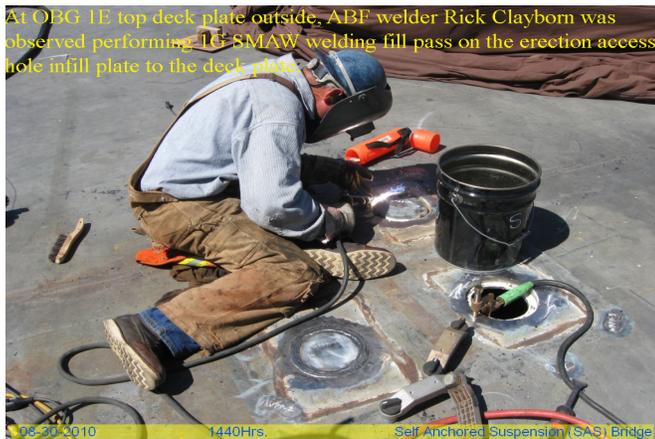
Fahrenheit using Miller Proheat 35 Induction Heating System located on top of the plate prior and maintained the preheat by moving the heater blankets on the side of the plate during welding. The vicinity was also properly protected from wind and other climatic changes. During welding, ABF Quality Control (QC) Jim Cunningham was noted monitoring the welding parameters of the welder. Fill pass welding was still continuing at the end of the shift and should remain tomorrow.

At OBG 5W/6W side plate 'C' outside, QA randomly observed ABF personnel Mike Maday and Bryce Howell continuing to 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.

At OBG 1E top deck plate outside, QA randomly observed ABF welders Rick Clayborn, James Zhen and welder with ID #7258 perform CJP groove welding in 1G (flat) position on the erection access hole infill plate to top deck plate. The welders were using Shielded Metal Arc Welding (SMAW) with 1/8" and 5/32" diameter E7018H4R electrodes implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1050A Revision 1. The infill plate being welded has 45 degree single bevel and the joint has a ceramic backing that will be removed/backgouged and back welded. The location/welder of infill plates that were being welded were as follows;

1. 1E-PP11@E4#2 – Rick Clayborn, welding root to cover pass using 1/8" diameter E7018H4R electrode
2. 1E-PP11@E3#3 & #4 – welder 7258, welding root to fill using 5/32" diameter E7018H4R electrode
3. 1E-PP8.5@E4#1 – welder James Zhen, welding root to fill using 1/8" diameter E7018H4R electrode

ABF QC William Sherwood was noted monitoring the three welders. At the end of the shift, all three welders were still continuing welding and should remain tomorrow.



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

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Inspected By:	Lizardo, Joselito	Quality Assurance Inspector
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Reviewed By:	Levell, Bill	QA Reviewer
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