

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-016442**Date Inspected:** 25-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 Scott Croff in performing receiving inspection of two OBG's and four crossbeams. The OBG's were marked OBG 7E and OBG 7W while the cross beams were marked CB7, CB8, CB9 and CB10. The OBG's and crossbeams were inspected against damages that could have been generated on the items just mentioned during shipment from ZPMC, China. The items were inspected mainly from the outside where damages like dents, bents and cable/chain impressions were most likely to occur. Results of the inspection were affirmative and that the OBGs/cross beams were generally in good physical condition and notably no signs of any damages resulting from the shipment.

At the job site:

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) 5E/6E bottom plate 'D2' 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

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

(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) Jim Cunningham was noted monitoring the welding parameters of the welder. Fill pass welding was still continuing and production welding was minimal due to some problem on the wire feeder.

At OBG 5W/6W side plate 'E' (3640mm to 7900mm) inside, QA noted the ABF/JV qualified welder Sungtao, Huang ID # 3794 completely welded the area he was welding and has moved to a new (1000mm to 3640mm) location. The welder has welded the root pass using the Bug-o track. The welder was also 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 parameters of the welder. After welding the root pass, the welder went outside the OBG plate and removed the fitting gear that was holding the backing bar in place. After removing the fitting gear, the heater blanket was put back in place in direct contact with the plate being welded. This set-up should give more heat to the plate. There was no more welding after the root pass due to shift was ending.

At OBG 4W/5W side plate 'E' outside, QA observed ABF personnel Mike Maday and Bryce Howell have completed gouging and grinding the groove of the backing bar removal of the splice butt joint. The joint is now awaiting ABF QC visual test (VT) and Magnetic Particle Test (MT).

At OBG 5E/6E side plate 'E' outside, QA observed ABF QC Steven Mc Connell perform visual test (VT) and Magnetic Particle Testing (MT) on the flush ground weld cover reinforcement of the splice butt joint. QC was using Parker Contour Probe electromagnetic yoke with red magnetic powder as detecting media. According to QC, there were no significant defects noted during the tests.

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.

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