

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-016337**Date Inspected:** 19-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 continuing to perform CJP groove (splice) welding fill 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. During the shift, cover pass welding was completed on the area mentioned above and the welder has moved to 500mm to 1000mm where welder Hua Qiang Hwang has performed 3G SMAW welding on the splice due to limited access of the Bug-o track. The area just mentioned was also completed and the welders have moved to 7517mm to 9755mm location after the removal of the WT stiffener temporary connection plates. The welder welded the root pass using the Bug-o track. Prior to welding of the splice joint, this QA performed a fit-up alignment verification on the joint and deemed within the specification requirements. At the end of the shift, fill pass welding was still continuing and should remain tomorrow.

At OBG 2W/3W edge plate 'F' inside, this QA performed visual test (VT) and after the satisfactory completion of

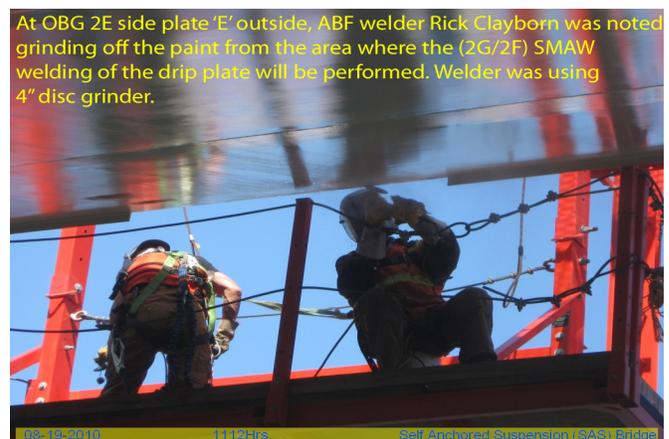
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the VT, QA also performed the Magnetic Particle Testing (MT). During the VT, the surface profile of the splice joint was ground smooth. There was no weld underfill or excessive reinforcement and undercut. The joint profile was within the requirements of the specification. During MT, this QA used a Parker Contour Probe electromagnetic yoke with red magnetic powder as detecting media. There was no significant indication noted during the test.

At OBG 5E/6E bottom plate 'D' outside, QA randomly observed ABF personnel Jeremy Dolman and Rory Hogan 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 2E to 3E side plate 'E' outside, QA randomly observed ABF welder Rick Clayborn perform fillet and partial joint penetration (PJP) welding in 2F/2G position using Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode. The welder was welding on 2 1/4" wide x 3/8" thick drip plate to the side plate of the OBG. The drip plate and the surface of the side plate (where the drip plate was welded) were noted ground and the paint coating removed. ABF QC Jim Cunningham was noted monitoring the welding and its parameters. At the end of the shift, fillet and PJP welding were still continuing and should continue tomorrow.



Summary of Conversations:

At OBG 4W/5W edge plates 'B' and 'F' outside, QA randomly observed ABF QC Jesse Cayabyab perform Ultrasonic Testing (UT) on the welded and flush ground cover of the splice butt joints. After the completion of his UT on the joints, QC mentioned to QA that he has completed scanning both sides of the joints (inside and outside) and that QC found two rejectable indications on each joint. According to QC, he marked those rejectable indications for repair.

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At OBG 4W/5W edge plate 'B' outside, ABF QC was observed performing Ultrasonic Testing (UT) on the welded and flush ground splice butt joint. Per QC, he has found 2 rejectable indications during the test.



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
