

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-015868**Date Inspected:** 28-Jul-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:	John Pagliero and William Sherwood			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 5E/6E bottom plate 'D2' (7000mm to 8500mm) inside, QA randomly observed ABF/JV qualified welder Hua Qiang Hwang continuing to perform CJP groove (splice) welding fill pass on the splice butt joint. The welder was observed performing manual welding in the 1G (flat) 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-1. The joint being welded had a single V-groove butt joint with backing bar and was partially welded using Submerged Arc Welding (SAW) on most part of the joint. But due to limited access of the SAW track to the corner location, welding was not completed. The splice joint was preheated to greater than 150 degrees Fahrenheit using propane gas torch prior 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 of the splice joint at location mentioned above was not completed and should continue tomorrow.

At OBG 5E/6E bottom plate 'D1' (0mm to 800mm) inside, QA randomly observed ABF/JV qualified welder James Zhen continuing to perform CJP groove (splice) welding fill pass on the splice butt joint. The welder was observed welding in the 1G (flat) position utilizing a Shielded Metal Arc Welding (SMAW) with 1/8" diameter, E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040C Rev. 1. The joint being welded had a single V-groove butt joint with backing bar and was partially welded using Submerged Arc Welding (SAW) on most part of the joint. But due to limited access of the

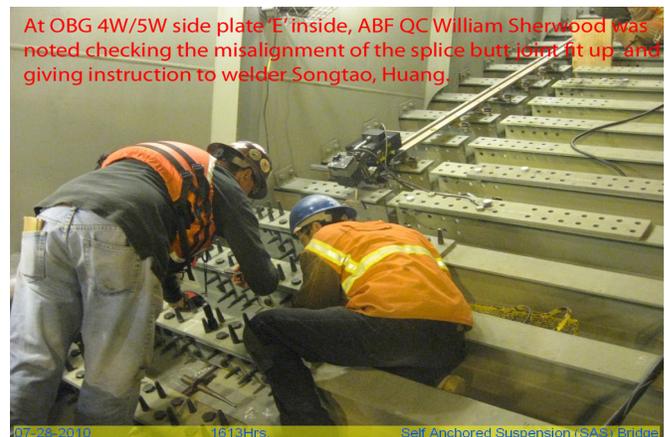
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SAW track to the corner location, welding was not completed. The splice joint was preheated using propane gas torch prior welding. ABF Quality Control (QC) John Pagliero was noted monitoring the welding parameters of the welder. Before the end of the shift, cover pass welding of the splice joint was completed. ABF QC performed visual test (VT) on the welded splice butt joint and marked spots wherein excessive reinforcement and undercut were noted. QC has instructed the welder to fix the weld defects. At the end of the shift, grinding of the excessive cover reinforcement was ongoing and should remain tomorrow.

At OBG 5E/6E edge plate 'B' inside, QA observed ABF welder Xiao Jian Wan carbon air arc gouging on the backing bar removal of the splice butt joint. After the completion of the air arc gouging, ABF QC John Pagliero performed VT on the gouged surface and later mentioned to QA that it was satisfactory. Another welder, Jin Pei Wang came to the area and started grinding the groove of the gouged surface. Grinding was still continuing at the end of the shift and should continue tomorrow.

At OBG 4E/5E side plate 'C' outside, QA randomly observed ABF personnel 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. Also at the other side of the same OBG plate 'E', grinding of the groove of the gouged backing bar removal was observed. This task was continuing and should remain tomorrow



Summary of Conversations:

At OBG 4W/5W side plate 'E' inside, QA and QC made a joint alignment check on the splice butt joint while the welders were preparing their welding equipment and accessories to weld on this location. Although the fit up had been previously checked, QA and QC want to make sure that there have been no changes on the alignment prior to proceed welding. But during the inspection, one location in between WT stiffeners number 5 and 6 from the bottom was noted to have changed from 1.5mm to 4mm misalignment. Since this value is now beyond the acceptable limit of the code, ABF QC William Sherwood has instructed the welder to fix the misalignment by welding additional fitting gear to push the plate to acceptable alignment.

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
Reviewed By:	Levell, Bill	QA Reviewer
