

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017362**Date Inspected:** 07-Oct-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:	Bonifacio Daquinag and Jesse Cayabyab			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 7W/8W top deck plate A1 and A5 outside, QA randomly observed ABF welder Darcel Jackson fillet welding fitting gear/temporary attachment to the top deck for the fit up alignment. The welder was welding on 2F position using 1/8" diameter E7018H4R electrode. The welder has welded four attachments on each A1 and A5 and welder Eric Sparks was noted inserting/hammering the bull pins to adjust the alignment. ABF QC Bonifacio Daquinag was also noted measuring the alignment as the welder hammered the bull pins. At the end of the shift, preliminary measurements on deck plate A5 were good (less the 2mm offset) except deck plate A1 wherein it was measured with one location having 2.5mm offset. According to QC, ABF should be able to adjust that to a better reading.

At OBG 7W/8W bottom plate 'D' inside, QA observed ABF QC William Sherwood perform alignment check on the fit up of the splice butt joint. After the completion of the alignment check, QC informed QA that the alignment was acceptable and that he was getting an offset measurement reading of less than 2.0mm all throughout the length of the joint. QA also performed the alignment verification and noted a measurement reading of 0mm to 1.5mm and root opening of 20mm to 22mm which were deemed in compliance to the contract requirements.

As soon as the alignment was accepted by QC, ABF welders started preheating the splice joint using propane gas torch. The ABF welders Xiao Jian Wan and Hua Qiang Hwang also started seal welding the bottom plate to the

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backing bar when the preheat was attained. The welders were using 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-D15-3040A1. During welding, ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welder. During the shift, seal welding on both sides of the bottom plate was completed and the welders have continued 1G FCAW-G welding root pass then fill pass on the north and south ends of the splice joint where the SAW track mounted wire feeder has limited access.

At OBG 6W/7W side plate 'E' (1500mm to 3500mm) inside, QA noted the location 3500mm to 7955mm was completely welded and the welder has moved to new location 1500mm to 3500mm. QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continuing to perform CJP groove (splice) welding root pass then fill pass on the splice butt joint. The welder was observed perform 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 heater blankets located at the opposite side of the plate prior/during welding. During welding, ABF Quality Control (QC) John Pagliero was noted monitoring the welding parameters of the welder. At the end of the shift, fill pass welding on the splice butt joint was still continuing and should remain tomorrow.

At OBG 4W/5W bottom plate 'D' inside, QA randomly observed ABF/JV qualified welder Fred Kaddu ID # 2188 perform CJP groove welding repair. The welder was observed welding in the 1G (flat) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repairs. The second time repair excavation was located at D2 Y-dimension 4090mm to Y4250mm. The boat shape excavation was preheated to more than 140 degree Fahrenheit using propane gas torch prior welding. During the shift, ABF QC Jesse Cayabyab was noted monitoring the welder. Prior welding, ABF QC Jesse Cayabyab was also observed performing Magnetic Particle Testing (MT) using Parker Contour Probe with red magnetic powder as detecting media on the repair excavation. There were no significant defects noted during the test. Before the end of the shift, the repair was completed and the welder has moved to plate 'E' of the same OBG and started excavating more repairs.



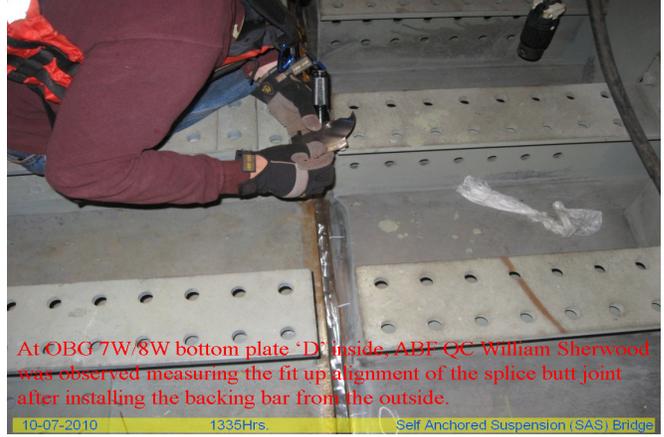
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At OBG 7W/8W top deck plate A' outside, ABF QC Bonifacio Daquinag was observed checking the fit up alignment of the splice joint.



10-07-2010 1403Hrs. Self Anchored Suspension (SAS) Bridge



At OBG 7W/8W bottom plate 'D' inside, ABF QC William Sherwood was observed measuring the fit up alignment of the splice butt joint after installing the backing bar from the outside.

10-07-2010 1335Hrs. Self Anchored Suspension (SAS) Bridge

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) 813-3677, who represents the Office of Structural Materials for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer