

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-017941**Date Inspected:** 09-Nov-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 John Pagliero			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 6E/7E LS3 longitudinal stiffener inside, QA randomly observed ABF welder Hua Qiang Hwang ID #2930 perform vertical battering using Shielded Metal Arc Welding (SMAW) on one side of the bevel face longitudinal stiffener LS3 splice butt joint. The joint has a double V joint preparation that has a 13mm root gap. The welder was using E9018H4R with 1/8" diameter electrode implementing Caltrans approved welding procedure specification (WPS) ABF-WPS-D1.5-1012-3. The splice joint plate was preheated to greater than 200 degrees Fahrenheit using propane gas torch prior welding/battering. During the shift, the welder has completed battering the LS3 and has moved to LS2 which has a root gap of more than 10mm. The welder also performed battering on one side of the bevel face using the same WPS mentioned above. The QA Inspector noted the ABF QC Inspector John Pagliero was on site monitoring the in process preheats and welding parameters. During the shift, QA noted ABF QC was closely monitoring the issuance of E9018 electrodes due to its limited exposure time allowed. At the end of the shift, battering on LS2 stiffener was also completed.

At OBG 7E/8E side plate 'C' (1000mm to 3240mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continuing to perform CJP groove 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

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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. At the end of the shift, fill pass welding was completed and the welder was noted getting ready for the cover pass welding which should be done tomorrow.

At OBG 8E/9E bottom plate 'D' inside, QA randomly observed ABF certified welder James Zhen ID #6001 perform 1G (flat position) Submerged Arc Welding (SAW) welding root pass to cover pass on the CJP splice butt joint. The welder was utilizing F7A6-EM12K-H8, 3.2mm electrode with corresponding Esab OK Flux 10.62 flux and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-4042B-1. The joint being welded had a single V-groove butt joint with backing bar. The plates were preheated to more than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System heater blankets located at the opposite side of the plate prior/during welding. Welding parameters were monitored by ABF/QC William Sherwood. QA noted the welding parameters, the workmanship and appearance of the completed root and cover passes deemed satisfactory. At the end of the shift, SAW cover pass welding was completed except 300mm on the north side and 1300mm on the south side of the joint wherein the track mounted SAW wire feeder has a limited access.

At OBG 8E/9E top deck plate 'A1 to A5', QA randomly observed ABF certified welder James Dan Ieraci and Kenneth Chappell perform 1G (flat position) Submerged Arc Welding (SAW) welding root pass on the splice butt joint. Welder Dan Ieraci was noted welding from A1 to A3 while welder Kenneth Chappell was welding on A3 to A5. The welders were utilizing F7A6-EM12K-H8, 3.2mm electrode with corresponding Esab OK Flux 10.62 flux and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-4042B-1. The joint being welded had a single V-groove butt joint with backing bar. The plates were preheated to more than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System located on top of the plate prior welding and moving it the side during welding. ABF/QC William Sherwood was noted monitoring the welding parameters of welders. QA noted the welding parameters, the workmanship and appearance of the completed root pass deemed satisfactory. At the end of the shift, SAW root pass welding was completed and ABF QC William Sherwood was noted performing the Magnetic Particle Testing (MT) on the welded root after wire brushing.



At OBG 6E/7E LS3 longitudinal stiffener inside, ABF welder Hua Qiang Hwang was observed performing weld baking on one side of the bevel face due to excessive root gap.

11-09-2010

1155Hrs.

Self Anchored Suspension (SAS) Bridge



At OBG 8E/9E top deck plate 'A' outside, ABF welder Dan Ieraci was observed performing Submerged Arc Welding (SAW) on the splice butt joint.

11-09-2010

1359Hrs.

Self Anchored Suspension (SAS) Bridge

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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