

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 #: 1x.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014315**Date Inspected:** 22-May-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Bonifacio Daquinag and Bernie Docena			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 L2W/L3W side plate 'C1' (1200mm to 5280mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continue perform CJP groove (splice) welding root then fill pass. 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-D15-3042A-1. The joint being welded has a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 200 degree Fahrenheit using Miller Proheat 35 Induction Heating System located at the opposite side of the plate prior/during welding. During welding, ABF Quality Control (QC) Bernie Docena was noted monitoring the welding parameters of the welder. QA performed parameter readings during welding with the following results; 255 amperes, 23.6 volts and 310mm per minute travel speed which are deemed acceptable to contract specifications. The welder has completed welding the area he was welding and has moved to area 0mm to 1200mm of the same plate.

At OBG L1W/L2W near bottom plate 'D', ABF welder Huang Fai Tsui was observed plasma arc gouging the top run off tab and the bottom cope/rat hole on various longitudinal stiffeners inside the box. After gouging, ABF welders Huang Fai Tsui and James Zhen were noted grinding the top surface of the stiffeners. Aside from grinding the top, the welders were also noted grinding the bottom cope/rat hole using a die grinder with a barrel bit. The task was not completed and the welders intend to continue on Monday.

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At OBG L2W/L3W side plate 'E' outside, plasma arc gouging was seen completed. ABF welders Rory Hogan and Jeremy Dolman were noted grinding the gouged area of the backing bar removal in preparation for Magnetic Particle Testing of the groove and eventual back welding of the splice butt joint.

At L5E/L6E top deck plate 'A' outside, ABF welder Jordan Hazelaar was seen completely welded the area he was welding at A1 to A3 while ABF Superintendent/welder Dan Ieraci was still welding at area A3 to A5. Mr. Dan Ieraci was noted using Submerged Arc Welding (SAW) welding the groove splice butt joint in flat (1G) position. 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 plates being welded have a backing bar attached to the other side and preheated and maintained to greater than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System located on top of the plate prior welding. The welding activities and parameters were monitored by ABF QC Bonifacio Daquinag. QA performed parameter check at the time of welding and noted an ampere reading of 550 amperes, 32.3 voltages and a travel speed of 378mm per minute. The welding parameters appear in conformance to the contract requirements. SAW welding at area A3 to A5 was seen completed during the shift but it was also being welded using 1/8" diameter E7018H4R electrode where low or weld underfill were noted.



Summary of Conversations:

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As stated above.

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,Josecito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
