

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-014678**Date Inspected:** 04-Jun-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:	Steven Mc Connell and William SCAW			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.

QA randomly observed ABF/JV qualified welders Rory Hogan (ID #3186) perform CJP groove (splice) back welding fill pass on Orthotropic Box Girder (OBG) L2W/L3W side plate 'C1' outside. The welder was observed back welding in the 4G (overhead) 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-D15-3110-4. The welder was using a track mounted welder holder assembly that is remotely controlled. The joint being welded has the backing bar gouged using the Esab Plasma Arc machine and was ground smooth. The gouged and ground splice butt joint was also Non Destructive Testing (NDT) tested using the Magnetic Particle Testing (MT). The splice joint was preheated and maintained to greater than 200 degree Fahrenheit using Miller Proheat 35 Induction Heating System located at the other side of the plate prior/during welding. The vicinity was also properly protected from wind and other climatic conditions. During welding, ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welder.

At OBG L5E/L6E top deck plate 'A1' outside, QA randomly observed ABF/JV qualified welder Mitch Sittinger ID #0315 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 repair excavations were preheated to more than 140 degree Fahrenheit using propane gas torch prior welding. During the shift, ABF QC Steven Mc Connell was noted monitoring the welder.

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Prior welding, ABF QC Steven Mc Connell 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. During the shift, the welder has completed three repairs and has moved back to OBG L2E/L3E bottom plate 'D' inside to continue excavating welding repairs. On the same plate of splice butt joint OBG L5E/L6E top deck plate 'A1' outside, ABF new welder Fred Kaddu was also noted welding the undercut and underfill on the flush ground weld cover. The welder was using Shielded metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode.

At OBG L4E/L5E and L5E/L6E side plates 'C' outside, QA randomly observed ABF/JV qualified welder Rick Clayborn tack welding fitting gears/temporary attachments to the plate to be used as an aid in installing the backing bar. The welder was using Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018 H4R electrode. All tack welding of the fitting gears/temporary attachments have been completed on both splice locations and both the backing bars installed.

At OBG L3E/L4E bottom plate 'D' outside, QA observed two ABF welders Bryce Howell and Mike Maday perform plasma arc gouging on the backing bar. The welders were noted using an Esab plasma arc machine with the cutting nozzle mounted to a motorized track. Gouging of the backing bar has just started and will continue for few days.



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Summary of Conversations:

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