

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-020326**Date Inspected:** 03-Feb-2011**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:	Fred Von Hoff and Steve Jensen			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 9E/10E side plate 'C2' (5277mm to 7900mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continuing to perform CJP groove (splice) welding cover 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 has 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) Fred Von Hoff was noted monitoring the welding parameters of the welder. During the shift, cover pass welding was completed at this location and the welder has moved to 'C2' 7900mm to 10555mm of the same OBG splice. While moving their welding equipment to the new location, ABF bolting personnel were noted removing the temporary WT stiffener connection plates which were blocking the access of the Bug-o track mounted nozzle holder.

QA randomly observed ABF/JV qualified welders Rory Hogan continuing to perform CJP groove (splice) back welding fill pass on Orthotropic Box Girder (OBG) 7W/8W bottom plate 'D2' outside. The welder was observed back welding fill pass 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

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Specification (WPS) ABF-WPS-D15-3110-4. The welder was using a track mounted welder holder assembly that was 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 150 degrees Fahrenheit using Miller Proheat 35 Induction Heating System located on top of the plate prior welding and by moving the blanket to the side of the weld being welded during welding. The vicinity was also properly protected from wind and other climatic conditions. ABF Quality Control (QC) Steve Jensen was noted monitoring the welding parameters of the welder. During the shift, fill pass welding was still continuing and should remain tomorrow.

At OBG 8W/9W edge plate 'B' inside, QA randomly observed ABF/JV qualified welder Fred Kaddu perform CJP repair welding. The welder was noted welding in 3G (vertical) position utilizing SMAW with 1/8" diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1001 Repairs. The welding repairs were excavated to a boat shape profile and were tested with MT prior welding. During welding, ABF QC William Sherwood was noted monitoring the welder and his welding parameters. QA noted parameter during welding was 130 amperes which appears in compliance to the WPS. The locations of the repairs were noted below;

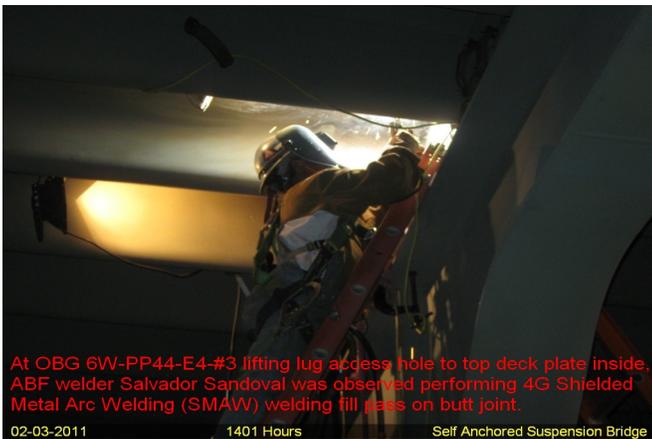
Location	Y-dimension	Length	Width	Depth	Remarks
1.	100mm	150mm	20mm	15mm	Completed
2.	280mm	90mm	20mm	10mm	Completed
3.	740mm	90mm	20mm	10mm	Completed
4.	1240mm	100mm	20mm	10mm	Completed

At OBG 9W/10W edge plate 'F' outside, QA randomly observed ABF/JV qualified welder Jorge Lopez perform cover pass welding on the CJP splice butt joint. The welder was observed manually welding in the 3G (vertical) position utilizing a Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040B. The joint being welded has a single V-groove butt joint with steel backing bar. During welding, ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welder. QA randomly monitored the welding parameter with reading of 125 amperes which appears in conformance to the contract requirements. Before the end of the shift, SMAW cover pass welding was completed and the welder started flush grinding the weld cover reinforcement of the welded butt joint.

At OBG 6E-PP44-E4#1 to #4 lifting lug access hole to top deck plate inside - ABF welder Sal Sandoval was noted back gouging using carbon air arc gouging. After back gouging all four access holes, the welder started grinding the groove of the gouged holes. The grinding of the back gouged access holes and testing of the ground groove using MT was completed and the welder started welding. The welder was observed 4G SMAW back welding fill pass on the access hole #3. The welder was noted using 1/8" diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1110A. During welding, ABF QC Steve Mc Connell was noted monitoring the welder's welding parameters. At the end of shift, cover pass welding on this location was still continuing.

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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 Sang Le 916-764-5650, who represents the Office of Structural Materials for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer