DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-026487
Date Inspected: 08-Oct-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Job Site

CWI Name: Pat Swain

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☐ No	☑ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS Tower

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 12E/13E top deck plate ‘A1 to A3’ (outside), QA randomly observed ABF certified welder James Zhen ID #6001 continuing to perform 1G (flat position) Submerged Arc Welding (SAW) welding cover pass on the 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 has a single V-groove butt joint with backing bar. The plates were preheated to more than 150 °F using Miller Proheat 35 Induction Heating System located on top of the plate prior welding and moving it the side during welding. ABF/QC Pat Swain was noted monitoring the welding parameters of the welder during welding. QA noted the welding parameters of 570 amperes, 32.2 volts with travel speed of 380 mm per minute and calculated heat input of 2.88 Kjoules per mm. The workmanship and appearance of the completed fill weld deemed satisfactory to the requirements of Seismic Performance Critical Members (SPCM). At the end of the shift, SAW cover pass welding was completed.

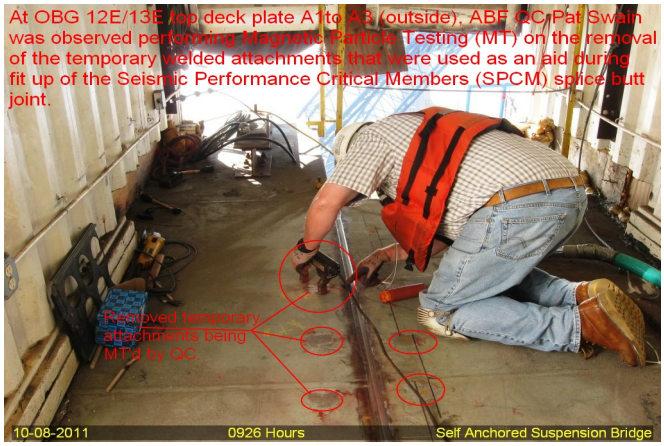
At OBG 12E/13E top deck plate ‘A3 to A5’ (outside), QA randomly observed ABF certified welder Todd Jackson ID #4639 continuing to perform 1G (flat position) Submerged Arc Welding (SAW) welding fill pass to cover pass on the splice butt joint. The welder was utilizing F7A6-EM12K-H8, 3.2mm electrode with corresponding Esab OK Flux 10.62 flux and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-4042B-1. The joint being welded has a single V-groove butt joint with backing bar. The plates

were preheated to more than 150 °F using Miller Proheat 35 Induction Heating System located on top of the plate prior welding and moving it the side during welding. ABF/QC Pat Swain was noted monitoring the welding parameters of the welder during welding. QA noted the welding parameters of 565 amperes, 32.0 volts with travel speed of 380 mm per minute and calculated heat input of 2.85 Kjoules per mm. The workmanship and appearance of the completed fill weld deemed satisfactory to the requirements of Seismic Performance Critical Members (SPCM). At the end of the shift, SAW cover pass welding was completed.

The QAI reviewed the observations and inspection with QA SPCM Lead Inspector, Daniel Reyes, written in this report. No issues were noted by the QAI and the QA SPCM Lead Inspector concurs with the QA report.

At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT/MT of the CJP welding of two (2) lifting lug holes. The QA verification was performed to verify that the welding and the VT/MT inspection performed by the QC inspector meet the requirements of the contract documents. At the conclusion of the QA verification it appeared that the weld and the QC inspection complied with the contract documents.

1. 10W-PP92-W3-#3 – QA VT/MT verified
2. 10W-PP92-W3-#4 – QA VT/MT verified



WELDING INSPECTION REPORT

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Summary of Conversations:

No significant conversation ocurred 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 Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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