

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-013965**Date Inspected:** 12-May-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:** Jim Cunningham**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 L4E/L5E plate A1 to A5, ABF welder Jordan Hazelaar (ID #2135) was seen completely welded the splice butt joint at location A1 to A3 while ABF welder Bryce Howell (ID #5591) was still performing flat (1G) Submerged Arc Welding (SAW). 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 welder was using a track mounted Lincoln Electric "Cruiser Tractor" wire feeder and a Lincoln Electric AC/DC 1000 SD Power Wave welding machine. The plates were preheated to >150 degree F using two Miller Proheat 35 Induction Heating System located at the other side of the plate prior/during welding. Welding parameters was monitored by ABF/QC Tom Pasqualone with measured parameters of 550 amperes, 32.2 volts and 380mm per minute travel speed. QA noted the welding parameters, the workmanship and appearance of the completed fill and cover passes satisfactory and were deemed acceptable to contract requirements. After completing the weld on this side A3 to A5, two ABF personnel were seen flush grinding the cover weld reinforcement using a belted sanding machine. At the end of the shift, the work was not completed and it was still ongoing.

At OBG L3E/L4E side plate 'C' outside, QA randomly observed ABF/JV qualified welder Mitch Sittinger continue perform CJP groove welding repair. The welder was observed welding in the 4G (overhead) position utilizing Shielded metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding

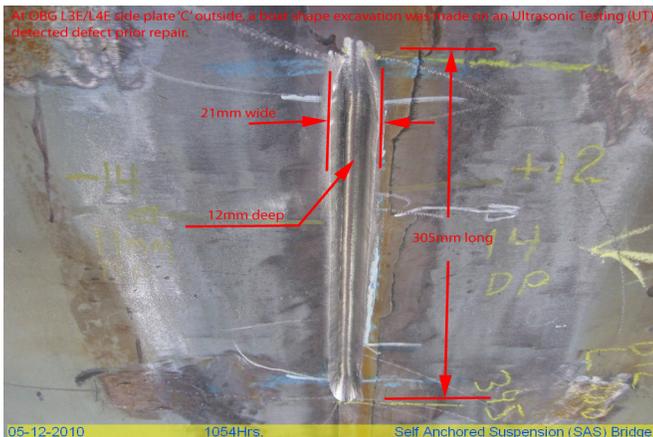
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procedure ABF-WPS-D15-1000-Repairs. The weld repair was excavated to a boat shape and having a dimension of 305mm long X 21mm wide X 12mm deep. The repair excavation was preheated to more than 140 degree Fahrenheit using propane gas torch prior welding. During the shift, ABF QC William Sherwood was noted monitoring the welder. Prior welding, ABF QC William Sherwood was also observed performing Magnetic Particle Testing (MT) using Parker Contour Probe and red magnetic powder as detecting media on the repair excavation. During the shift, the welder has completed one welding repair outside and was noted flush grinding the repaired area and fixing the temporary welding attachment removal.

QA randomly observed ABF/JV qualified welder Jordan Hazelaar perform tack welding backing bar to one side of the splice butt joint at OBG L5E/L6E bottom plate 'D' inside. The welder was using SMAW with 1/8" diameter E7018H4R electrode and implementing Caltrans approved welding procedure ABF-WPS-D15-F1200. Prior to welding, QA and ABF QC Bonifacio Daquinag performed a joint inspection of the butt joint fit up. The root gap was noted greater than 16mm wide minimum and 18mm wide maximum and the misalignment was noted 2.0mm maximum which appears in conformance to the contract requirements. During welding, ABF QC Bonifacio Daquinag was noted monitoring the welder and welding parameters.

Other work activities by ABF noted during the shift include installation of backing bar to the bottom of top deck plate 'A' at OBG L5E/L6E top deck plate 'A' which is still in progress and Ultrasonic Testing (UT) by ABF QC at the splice butt joint of L3E/L4E side plate 'C' inside.



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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
