

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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-028167**Date Inspected:** 11-Aug-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** 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:** SAS OBG**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 13W-W2.8@12570 drop-in top deck plate inside, QA randomly observed ABF/JV qualified welder Richard Garcia continuing to perform CJP groove welding repair from location Y=3300mm to Y=6750mm. The welder was observed manually welding in the 4G (overhead) position utilizing dual shielded Flux Cored Arc Welding (FCAW-G) with 1.6mm diameter electrode implementing Caltrans approved welding procedure ABF-WPS-D15-3110-4. This repair has been excavated and being repaired/rewelded with Caltrans approved Request for Weld Repair (RWR) #201208-001. The repair excavation was preheated to more than 225 degree Fahrenheit using Miller Proheat 35 Induction Heating System with the heater blanket put in plate on top of the deck prior/during welding. During the shift, ABF QC Bernie Docena was noted monitoring the welder with measured working current of 260 amperes, 22.5 volts. The welder performed the FCAW-G repair at location mentioned above and completed during the shift. The welder held the same preheat and held it for three (3) hours after welding as required.

At OBG 13W-PP122.2-LS2 deck stiffener flange inside, QA randomly observed ABF/JV qualified welder Gue Wu Chen continuing to perform PJP groove welding root pass to fill pass on the deck stiffener flange T-joint. The welder was observed perform manual welding in the 4G (overhead) position utilizing a Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E9018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1162-4. The stiffener flange plate has a bevel groove being

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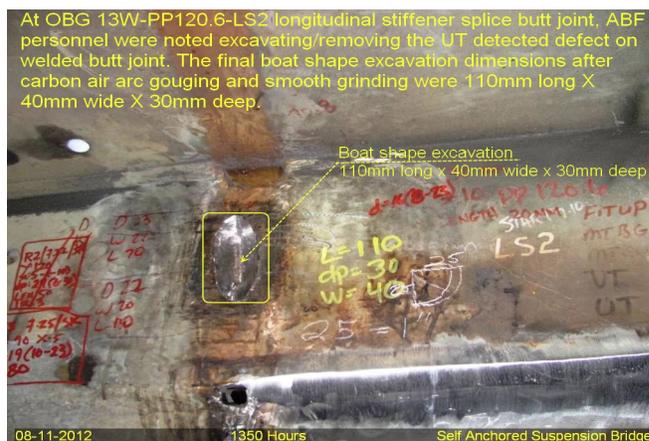
welded PJP T-joint to the longitudinal stiffener. The plates were preheated to more than 200 degree Fahrenheit using Miller Proheat 35 Induction Heating System. During welding, ABF Quality Control (QC) Bernie Docena was noted monitoring the welding parameters of the welder with measured working current of 128 amperes on the 3.2mm E9018H4R. During the shift, cover pass welding was completed and the welder held the same preheat of >200 degree Fahrenheit for three hours after welding as required. The welder was noted moving to the next deck stiffener flange at LS3 of the same location after the completion of the Post Weld Heat Treatment (PWHT). The heater blanket was put in place to one side of the longitudinal stiffener and as soon as the required preheat of >200°F was achieved, the welder started welding root pass using the same process.

At OBG 13W-PP121.5-W2 rib stiffener inside, QA randomly observed ABF/JV qualified welder Mike Jimenez perform cover pass back welding on the Complete Joint Penetration (CJP) butt joint. The welder was observed manually welding in the 2G (horizontal) position utilizing a Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040A Revision 1. The joint being welded has a single V-groove butt joint welded with steel backing that has been back gouged and ground smooth. ABF Quality Control (QC) Bernie Docena was noted monitoring the welding parameters of the welder. QA randomly monitored the welding parameter with measured working current of 134 amperes on the 3.2mm diameter E7018H4R electrode which appears in conformance to the contract requirements. Before the end of the shift, SMAW cover pass welding was completed and the welder performed flush grinding on both sides of the butt joint in preparation for inspection.

Other welding related activities observed during the shift include excavations of Ultrasonic Testing (UT) detected defects followed by smooth grinding and subsequent ABF QC MT at the following various locations;

Floor Beam Y-location Excavation dimensions

1. 13W-PP121.5-W2.5 BW1 – web splice Y=455 L50 x W50 x D13
2. 13W-PP121.0-W2.4 BW1 – web splice Y=40 L50 x W25 x D10
3. 13W-PP120.6-LS2 – long. stiff. splice Y=40 L110 x W40 x D30



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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 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