

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 #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-008335**Date Inspected:** 01-Jul-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**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:** OBG Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Zou Liu Hai, Mr. Chen Xi

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

Prior to Caltrans QA Inspectors' concurring with issuance of OBG deck plate closed rib green tag releases a review of the ultrasonic inspection database is performed to verify all closed rib tack weld repair locations have been ultrasonically accepted. Today this QA Inspector, Mr. Paul Dawson, performed data entry of ultrasonic inspection information from the field generated Ultrasonic inspection data sheets onto the common drive computer database for the following OBG deck panels: DP180-001, DP182-001, DP316-001, DP345-001 and DP370-001.

SEG 1AAE

This QA Inspector performed magnetic particle (MT) inspections of the east end of Segment 1AAE weld SEG2C-001 for a distance of approximately 1100 mm from the top of the weld. This includes the areas that ZPMC QC had MT rejected and weld repaired. Prior to performing this inspection this QA Inspector confirmed with ZPMC CWI Mr. Chen Xi that a minimum of 24 hours have elapsed since the welding was completed. Areas that were MT'd appear to comply with project specifications. See the TL6028 Magnetic Particle Test Report for additional information.

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This QA Inspector observed ZPMC welder Ms. Gu Xueying, stencil 045218 is using shielded metal arc process WPS-B-T-4212-TC-U5B-3 to make OBG Segment 1AA E weld SEG2-001. This QA Inspector observed a welding current of approximately 175 amps and the base material where the weld had been heated with a torch prior to welding. ZPMC QC and ABF personnel are monitoring this welding. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch and it appears to be connected to the welding power supply cable. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xu Fubao, stencil 200569 is using shielded metal arc process WPS-B-T-4212-TC-U5B-3 to make OBG Segment 1AA E weld SEG2-001. This QA Inspector observed a welding current of approximately 165 amps and the base material where the weld is being heated with a torch. ZPMC QC and ABF personnel are monitoring this welding. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch and it appears to be connected to the welding power supply cable. Items observed on this date appeared to generally comply with applicable contract documents.

SEG 1AAW

This QA Inspector performed ultrasonic lamination scans of the west end of Segment 1AAW base material where end and strand stiffener welds had been removed due to having excessive root gaps. The following weld removal locations were UT inspected and no problems were noted:

SEG1C-088, -024, -001

SEG1E-043, -044, -214, -255, -333

SEG1F-022, -023, -024, 025, -026

This QA Inspector performed random AWS UT inspections of Segment 1AAW welds SEG1-036, SEG1D-001 and SEG1D-092. These are the corner welds on the east end, side and bottom plates to end plate. See the TL6027 Ultrasonic Test Report for additional information.

This QA Inspector observed ZPMC welder Mr. Ren Lingsheng, stencil 0207465 is using flux cored welding procedure WPS B-T-2333-TC-P4-F-3G to make OBG welds SEG2F-005, SE2C-086 and SEG2E-333. The QA Inspector observed a welding current of approximately 240 amps and 23.6 volts and that the base material had been preheated with a torch. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

OBG Bay 2

ZPMC issued "Inspection Notification Sheet" number 3562 informing QA that ZPMC has completed ultrasonic inspections of OBG floor beam welds FB012-032-045 and FB028-009-146. ZPMC ultrasonic Inspectors had previously accepted both of these welds. This QA Inspector performed random ultrasonic inspections of the welds listed above and items observed by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on these inspections see the TL6027 Ultrasonic Test Report.

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Summary of Conversations:

See 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 Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
