

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-021979**Date Inspected:** 13-Mar-2011**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**Summary of Items Observed:**

CWI Inspector: Mr. Lv Li Qing, Mr. Man-Kit Li

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:

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Wang Li, stencil 044772 used shielded metal arc welding procedure WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs of OBG segment 13AE weld SEG3007AB-004. ZPMC QC informed this QA Inspector that weld repair document B-WR-19454 documents this weld repair. This QA Inspector observed a welding current of approximately 190 amps and the base materials appear to have been preheated with an electric heater. This QA Inspector observed Mr. Wang Li appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.

This QA Inspector observed ZPMC welder Mr. Fang Xinyou, stencil 037748 used shielded metal arc welding procedure WPS-B-P-2214-FCM-1 to make OBG segment 13AE weld SEG3007AH-007. This QA Inspector measured a welding current of approximately 160 amps, the base materials appear to have been preheated with an electric heater and Mr. Fang Xinyou appeared to be certified to make this weld. Items observed on this date

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appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wu Wanyong stencil 050242 used flux cored welding procedure WPS-B-T-2232-ESAB to make OBG segment 13AE welds SEG3007Y-252 and 262. This QA Inspector measured a welding current of approximately 300 amps, and 29.6 volts. This QA Inspector observed the maximum welding voltage listed in the welding procedure specification is 26.6 volts and Mr. Wu Wanyong had a welding current that was approximately 3.0 volts above this maximum limit. This QA Inspector showed ABF CWI Mr. ZPMC QC Inspector Mr. Lv Li Qing the welding meter and he had the welding machine adjusted to have a voltage of approximately 26.0 volts. Following adjustment of the welding machine, items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.

This QA Inspector observed ZPMC welder Mr. Yuan Wensong, stencil 055491 used flux cored welding procedure WPS-B-T-2232-ESAB to make OBG segment 13AE weld SEG3007AH-166. This QA Inspector measured a welding current of approximately 300 amps and 23.5 volts. This QA Inspector observed Mr. Yuan Wensong appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder stencil 070006 used shielded metal arc welding procedure WPS-B-P-2213-B-U2-FCM-1 to make OBG segment 13E welds SEG3009C-002 and 003. This QA Inspector measured a welding current of approximately 150 amps and the base materials appear to have been preheated with an electric heater. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Guangzu, stencil 069493 used shielded metal arc welding procedure WPS-B-P-2213-B-U2-FCM-1 to make OBG segment 13AE welds SEG3007J-002 and 003. This QA Inspector measured a welding current of approximately 140 amps and Mr. Li Guangzu appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yang Yunfeng, stencil 215553 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs to OBG segment 14E weld SEG3019U-003. ABF QC informed this QA Inspector that critical weld repair document B-CWR-2822 R1 documents this weld repair. This QA Inspector observed a welding current of approximately 200 amps, the base materials appear to have been preheated with electric heating elements and Mr. Yang Yunfeng appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Linjiang stencil 051356 used flux cored welding procedure WPS-B-T-2233-ESAB to make OBG segment 14E welds SEG3019K-217, 221, 223 and 237. This QA Inspector observed a welding current of approximately 280 amps and 27.0 volts and Mr. Wang Linjiang appeared to be certified to make his weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Zhengbin, stencil 216086 used shielded metal arc welding procedure WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make OBG segment 14E weld SEG3019D-1-323. ABF

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QC informed this QA Inspector that critical weld repair document B-CWR-2677 R2 documents this weld repair. This QA Inspector observed a welding current of approximately 200 amps the base materials were preheated with an electrical heater and Mr. Wang Zhengbin appeared to be certified to make these welds. Items observed on this date appeared to generally comply with applicable contract documents.



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 James Devey +8615000026784, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Riley,Ken	QA Reviewer
