

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-021309**Date Inspected:** 26-Feb-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 Inspectors: Mr. Bao Qian, Mr. Geng Wei

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. Mei Lei stencil 044749 used shielded metal arc welding procedure specification WPS-B-P-2112-FCM-1 to complete OBG segment 13AE tack weld SA3067-001-026 and 027. This QA Inspector observed a welding current of approximately 150 amps and the base materials had been preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Yong Shui, stencil 067656 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs of OBG segment 14E welds DP3160-001-216, 217 and 218. ZPMC QC informed this QA Inspector that weld repair document B-WR-20272 documents these weld repairs. This QA Inspector observed a welding current of approximately 180 amps, the base materials appear to have been preheated with electric heating elements and Mr. Li Yong Shui appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

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This QA Inspector observed ZPMC welder Mr. Guo Taotao stencil 050969 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs of OBG segment 14E weld DP3161-001-018. ZPMC QC informed this QA Inspector that weld repair document B-WR-20250 documents this weld repair. This QA Inspector observed a welding current of approximately 160 amps, the base materials appear to have been preheated with electric heating elements and Mr. Guo Taotao 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 Ms. Li Jiao, stencil 049861 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs of OBG segment 14E weld DP3160-001-167. ZPMC QC informed this QA Inspector that the weld repair was required to resolve visual rejections and there was no weld repair document issued for this weld repair. This QA Inspector observed a welding current of approximately 160 amps, the base materials appear to have been preheated with electric heating elements and Ms. Li Jiao 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. Niu Duoju, stencil 037932 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs of OBG segment 14E welds DP3160-001-006 and 007. ZPMC QC informed this QA Inspector that weld repair document B-WR-20269 documents these weld repairs. This QA Inspector observed a welding current of approximately 170 amps, the base materials appear to have been preheated with electric heating elements and Mr. Niu Duoju 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 Gencheng, stencil 066418 used shielded metal arc welding procedure WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make weld repair of OBG segment 14E weld SEG3019D-1-323. ZPMC QC informed this QA Inspector that weld repair document B-CWR-2677 documents this weld repair. This QA Inspector measured a welding current of approximately 200 amps. The maximum welding current listed in the welding procedure specification is 180 amps and Mr. Huang Hongpei had a welding current that was approximately 20 amps above this maximum limit. This QA Inspector showed ZPMC QC Inspector Mr. Wang Li Yang the welding meter and he had Mr. Yang Gencheng adjust the welding machine to have a current of approximately 180 amps. Following adjustment of the welding machine, items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Kuai Wenshan, stencil 054013 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-FCM-Repair-1 to make weld repair of ultrasonic rejections to OBG segment 14E weld SEG3019D-1-178. ZPMC QC informed this QA Inspector that weld repair document B-CWR-2745 documents this weld repair. This QA Inspector measured a welding current of approximately 170 amps and Mr. Kuai Wenshan 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. Zhao Guanglin, stencil 044779 used shielded metal arc welding procedure WPS-345-SMAW-2G(2F)-FCM-Repair to make weld repair of ultrasonic rejections to OBG segment 14E weld SEG3019BB-169. ZPMC QC informed this QA Inspector that weld repair document B-CWR-2737

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documents this weld repair. This QA Inspector measured a welding current of approximately 170 amps and Mr. Zhao Guanglin 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. Luo Xuanping, stencil 067610 used shielded metal arc welding procedure WPS-B-P-2114 to make OBG segment 14E weld FB3287-001-020. This QA Inspector observed a welding current of approximately 170 amps. This QA Inspector observed Mr. Luo Xuanping 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 Jinjiu stencil 043661 used shielded metal arc welding procedure specification WPS-345-SMAW-3G(3F)-FCM-Repair-1 to perform OBG segment 14E repair weld SEG3019M-147 and 153. ZPMC QC informed this QA Inspector that weld repair document B-WR-20248 documents this weld repair. This QA Inspector measured a welding current of approximately 180 amps. 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 weld SEG3019AZ-148. This QA Inspector observed a welding current of approximately 240 amps and 24.0 volts. 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. Liu Min, stencil 044790 used flux cored welding procedure WPS-B-T-2233-ESAB to make OBG Segment 14E weld DP3104-001-253. This QA Inspector observed a welding current of approximately 270 amps and 25.0 volts. Mr. Liu Min 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. Zhu Jibo, stencil 055564 used flux cored welding procedure WPS-B-T-2233-ESAB to make OBG segment 13AE weld SEG3076-001-020. This QA Inspector measured a welding current of approximately 270 amps and 26.5 volts. This QA Inspector observed Mr. Zhu Jibo appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.



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

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