

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-021307**Date Inspected:** 01-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. Bao Qian

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

Segment 14 West

This QA Inspector performed random document review of "Team China request for information (TC-RFI)" document #TC-RFI-0002R1. This RFI addresses OBG 14W cable anchorage bearing stiffener plate SA3453A/B/C/D weld details. This QA Inspector performed random visual inspections of the welds listed in the RFI and observed ZPMC appears to have completed the welds as referenced in the RFI. This QA Inspector took random photographs of the welds and copies of the photographs have been placed in "TC-RFI Documentation" folder located on Team China common Z drive.

Segment 14 East

This QA Inspector observed ZPMC welder Mr. Guo Taotao stencil 050969 used shielded metal arc welding

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procedure specification WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs of OBG segment 14E weld DP3167-001-023. ZPMC QC informed this QA Inspector that weld repair document B-WR-20268 documents this weld repair. 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. 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 Mr. Luo Xuanping, stencil 067610 used shielded metal arc welding procedure WPS-B-P-2214-TC-U4B-FCM-1 to make OBG segment 14E weld SEG3019Z-008. This QA Inspector observed a welding current of approximately 180 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. Wu Wanyong stencil 050242 used flux cored welding procedure WPS-B-T-2233-ESAB to make OBG segment 13AE weld SEG3007G-044. This QA Inspector measured a welding current of approximately 230 amps, 26.0 volts and Mr. Wu Wanyong 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. Zhu Jibo, stencil 055564 used flux cored welding procedure WPS-B-T-2232-ESAB to make OBG segment 13AE weld SEG3007J-029. 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.

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 SEG3007L-041. This QA Inspector measured a welding current of approximately 280 amps and 26.5 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 Mr. Liu Min, stencil 044790 used flux cored welding procedure WPS-B-T-2233-ESAB to make OBG Segment 13CE weld SA3214B-001-002. This QA Inspector observed a welding current of approximately 240 amps and 24.5 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. Yang Yunfeng, stencil 215553 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs of OBG segment 14E weld SEG3019U-003. ZPMC QC informed this QA Inspector that weld repair document B-CWR-2822 documents this weld repair. This QA Inspector observed a welding current of approximately 185 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. Zhao Guanglin, stencil 044779 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs of OBG segment 14E weld SEG3019U-003. ZPMC QC informed this QA Inspector that weld repair document B-CWR-2822 documents this

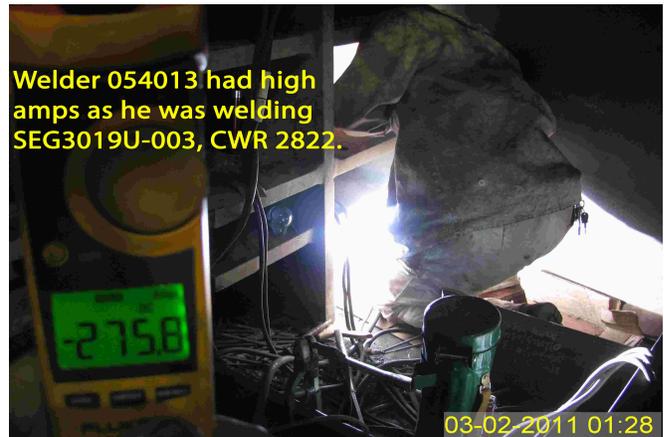
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weld repair. This QA Inspector observed a welding current of approximately 180 amps, the base materials appear to have been preheated with electric heating elements and Mr. Zhao Guanglin appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Kuai Wenshan, stencil 054013 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs of OBG segment 14E weld SEG3019U-003. ZPMC QC informed this QA Inspector that weld repair document B-CWR-2822 documents this weld repair. This QA Inspector observed a welding current of approximately 276 amps, the base materials appear to have been preheated with electric heating elements and Mr. Zhao Guanglin appeared to be certified to make this weld. This QA Inspector observed the maximum welding current listed in the welding procedure specification is 240 amps and Mr. Kuai Wenshan had a welding current that was approximately 26 amps above this maximum limit. This QA Inspector showed ABF CWI Mr. Bao Qian the welding meter and he had Mr. Kuai Wenshan adjusted the welding machine to have a current of approximately 240 amps. 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 weld SA3067-001-019 appears to have a cracked tack weld. This QA Inspector showed ABF CWI Mr. Bao Qian the cracked tack weld he informed this QA Inspector that ZPMC Magnetic Particle Inspectors will perform MT inspections of the tack weld prior to this area being welded. See the photographs below for additional information.



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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
Reviewed By:	Riley,Ken	QA Reviewer
