

**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-023586**Date Inspected:** 07-May-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. Li Yang Hua

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 Trial Assembly**

This QA Inspector observed ZPMC welder Mr. Li Bin, stencil 069896 used shielded metal arc welding used shielded metal arc welding process to make temporary alignment / jacking plate welds between OBG segment 13CW and 14W bottom plates. This QA Inspector observed a welding current of approximately 160 amperes (amps), the base materials were heated with a torch and Mr. Li Bin 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 Aifei stencil 067942 used shielded metal arc welding procedure specification WPS-B-P-2214-TC-U4B-FCM-1 to make OBG segment 14W welds SEG3020AY-014, 015 and 016. This QA Inspector observed a welding current of approximately 170 amps, the base material had been preheated with electric heaters and Mr. Zhao Aifei 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. Wu Cunnang, stencil 070101 used flux cored welding process to make temporary alignment / jacking plate welds between OBG segment 13CW and 14W top deck plates. Later in the shift Mr. Wu Cunnang used welding procedure specification WPS-B-T-2233-ESAB to make OBG segment 14W weld SEG3020C-067. This QA Inspector observed a welding current of approximately 240 amps, 24.0 volts and Mr. Wu Cunnang appeared to be certified to make these welds. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Guijun, stencil 067275 used flux cored welding procedure WPS-B-T-2231T-ESAB-1 to make OBG Segment 13AE to 13BE side plate butt weld OBW13D-004. This QA Inspector observed a welding current of approximately 270 amps, 26.5 volts, the base material had been preheated with electric heaters and Mr. Wang Guijun 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. Liao Yanfei, stencil 066398 used shielded metal arc welding procedure WPS-B-P-2212-B-U2-FCM-1 to make OBG segment 13BW weld SEG3015A-004. This QA Inspector observed a welding current of approximately 240 amps, the base materials were heated with an electric heater, Mr. Liao Yanfei 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. Huang Hongpei, stencil 037705 used flux cored welding procedure WPS-B-T-2133-ESAB to make OBG segment 14W welds SEG3020B-015, 016, 017 and 018. This QA Inspector observed a welding current of approximately 260 amps, 24.5 volts, the base material had been preheated with a torch and Mr. Huang Hongpei 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. Jiang Junlin, stencil 067876 used flux cored welding procedure WPS-B-T-2231T-ESAB-1 to make weld OBW13B-005. This QA Inspector observed a welding current of approximately 300 amps, 26.5 volts, the base material had been preheated with electric heaters and Mr. Jiang Junlin 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 048433 used flux cored welding procedure WPS-345-FCAW-3G(3F)-ESAB-Repair-FCM to make critical weld repairs to OBG segment 14W weld SEG3013N-037. ZPMC QC informed this QA Inspector that weld repair document B-CWR-2836 documents repairs of this weld. This QA Inspector observed a welding current of approximately 240 amps, 26.5 volts, the base materials were preheated with a torch 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. Liu Ya, stencil 067520 used shielded metal arc welding procedure WPS-B-T-2212-TC-U4b-FCM-1 to make weld SEG3020AH-002. This QA Inspector observed a welding current of approximately 170 amps, the base material had been preheated with electric heaters and Mr. Liu Ya 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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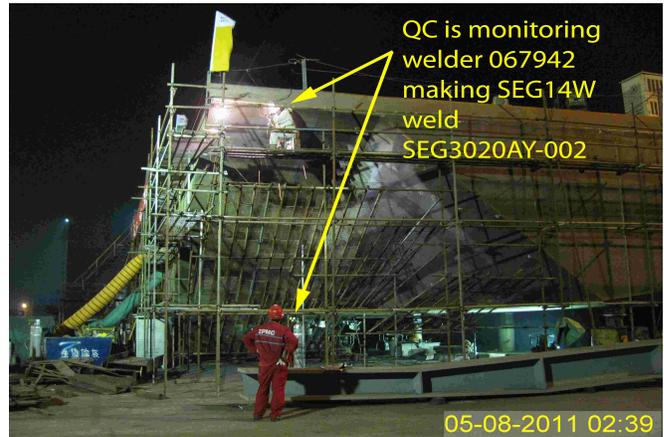
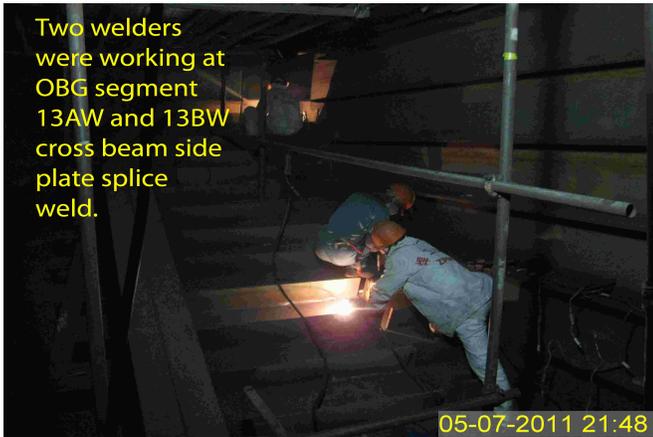
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This QA Inspector observed ZPMC welder Mr. Li Shoufu, stencil 066674 used shielded metal arc welding procedure WPS-B-T-2212-TC-U4b-FCM-1 to make weld SEG3020AH-002. This QA Inspector observed a welding current of approximately 170 amps, the base material had been preheated with electric heaters and Mr. Li Shoufu appeared to be certified to make this weld. 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.

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**Inspected By:** Dawson,Paul

Quality Assurance Inspector

**Reviewed By:** Riley,Ken

QA Reviewer