

**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-023870**Date Inspected:** 18-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. Zhu Zhong Hai

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. Jiang Taian, stencil 050038 used shielded metal arc welding procedure specification WPS-B-P-2114-FCM-1 to make segment 14W weld SEG3020C-029. This QA Inspector observed a welding current of approximately 180 amperes (amps), the base materials appear to have been preheated with an electrical heater and Mr. Jiang Taian 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 specification WPS-B-P-2214-B-U2-FCM-1 to make segment 14W weld SEG3020\*-005. This QA Inspector observed a welding current of approximately 160 amps, the base materials appear to have been preheated with an electrical heater 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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This QA Inspector observed ZPMC welder Mr. Fei Cheng Xiang stencil 066239 used flux cored welding process to make temporary attachment welds to OBG segment 13BW deck plate. ZPMC CWI Mr. Zhu Zhong Hai informed this QA Inspector that weld repair document B-WR-21033 has been issued to correct top deck plate flatness problems. This QA Inspector observed a welding current of approximately 300 amps, 26.5 volts, Mr. Fei Cheng Xiang appeared to be certified to make this weld and the base materials were 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 Shoufu, stencil 066674 used shielded metal arc welding process to make OBG segment 13CW tack welds between stiffener plates and bottom plates adjacent to panel point PP124 floor beam FB3233-001. This QA Inspector observed a welding current of approximately 160 amps, the base materials were heated with a torch 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.

This QA Inspector observed ZPMC welder Mr. Wang Chang Ming, stencil 047864 used shielded metal arc procedure WPS-345-SMAW-3G(3F)-FCM-Repair-1 to make segment 13AW repair weld SEG3013P-143. ZPMC QC informed this QA Inspector that weld repair document B-WR-20971 documents repairs of this weld. This QA Inspector observed a welding current of approximately 160 amps and Mr. Wang Chang Ming Changfa 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-2233-ESAB to make OBG segment 14W welds SEG3020D-233 and 237. This QA Inspector observed a welding current of approximately 320 amps, 25.0 volts, the base material had been preheated with electrical heaters 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. Wu Cunnang, stencil 070101 used flux cored welding procedure specification WPS-B-T-2233-ESAB to make OBG segment 14W welds SEG3020D-293 and 297. This QA Inspector observed a welding current of approximately 270 amps, 25.0 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. Liu Ya, stencil 067520 used shielded metal arc welding procedure specification WPS-B-P-2214-B-U2-FCM-1 to make segment 14W weld SEG3020\*-005. This QA Inspector observed a welding current of approximately 150 amps, the base materials appear to have been preheated with a torch 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.

This QA Inspector observed ZPMC welder Mr. Li Jian stencil 067829 used shielded metal arc welding procedure specification WPS-B-P-2214-B-U2-FCM-1 to make segment 14W weld SEG3020\*-002. This QA Inspector observed a welding current of approximately 150 amps, the base material had been preheated with a torch and Mr. Li Jian 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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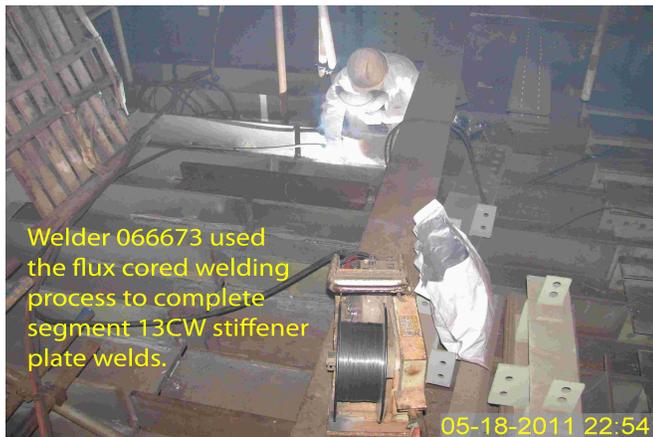
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This QA Inspector observed ZPMC welder Mr. Wang Rucheng, stencil 066881 used flux cored welding procedure WPS-B-T-2112-ESAB to make OBG segment 13CW stiffener plate hold back welds SP3094-001-055, 056, 108 and 109. This QA Inspector observed a welding current of approximately 320 amps, 26.5 volts, the base material had been preheated with electrical heaters and Mr. Wang Rucheng 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-2212-ESAB to make OBG Segment 13CW welds SEG3015C-087, 088, 091, 092, 095, 096. 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. Wang Guijun 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. Pan Ming, stencil 066673 used flux cored welding procedure WPS-B-T-2212-ESAB to make OBG Segment 13CW welds BP3067-049~060. This QA Inspector observed a welding current of approximately of approximately 300 amps, 26.0 volts, the base material had been preheated with electric heaters and Mr. Pan Ming 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. Li Shoufu, stencil 066674 used shielded metal arc welding procedure WPS-B-P-2214-TC-U4B-FCM-1 to make OBG segment 13CW welds BP3091-001~012. This QA Inspector observed a welding current of approximately 260 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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<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Riley,Ken	QA Reviewer

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