

**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-022689**Date Inspected:** 14-Apr-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. Cui Zheng 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 Bay 14**

This QA Inspector observed ZPMC welder Mr. Chen Ren Zhi, stencil 058087 used shielded metal arc welding procedure WPS-B-P-2212-TC-U4B-FCM-1 to make OBG segment 14E weld SEG3019W-041. This QA Inspector observed a welding current of approximately 160 amperes (amps) and Mr. Chen Ren Zhi 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-TC-2233-ESAB to make OBG segment 14E weld SEG3019\*-015. This QA Inspector observed a welding current of approximately 270 amps, 26.5 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.

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This QA Inspector observed ZPMC welder Mr. Chen Guang, stencil 050912 used shielded metal arc welding process to make tack welds between OBG segment 14E plate SA3338A and EP3072E. This QA Inspector observed the surface of the base material where the tack welds had been made had a light coat of oxide and did not appear to have been ground or otherwise prepared to have a bright metal surface. This QA Inspector informed ABF and QC Inspectors of the oxidized surfaces and Mr. Chen Guang used an electric grinder to remove the oxide surfaces prior to additional welding. This QA Inspector observed a welding current of approximately 170 amps and Mr. Chen Guang appeared to be certified to make this weld. Following grinding, 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. Wang Li, stencil 044772 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs to OBG segment 14E weld SEG301Q-1-105. ZPMC QC informed this QA Inspector that weld repair document B-WR-20602 documents this weld had been ultrasonically rejected. This QA Inspector observed a welding current of approximately 180 amps, the base material had been preheated with a torch and 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. Yuan Wensong, stencil 055491 used flux cored welding procedure WPS-B-T-2233-ESAB to make OBG segment 14E weld SEG3019F-024. This QA Inspector measured a welding current of approximately 235 amps and 25.0 volts. This QA Inspector observed Mr. Yuan Wensong appeared to be certified to make this weld and the base materials had been heated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Changfa, stencil 058102 used shielded metal arc welding procedure specification WPS-345-SMAW-1G(1F)-FCM-Repair-1 to make repairs of OBG segment 14E weld SEG3019AG-043. ZPMC QC informed this QA Inspector that weld repair document B-WR-20321 documents this weld had been ultrasonically rejected. This QA Inspector observed a welding current of approximately 170 amps, the base material had been preheated with a torch and Mr. Wang 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. Zhu Jibo, stencil 055564 used flux cored welding procedure WPS-B-T-2233-ESAB to make OBG segment 14E weld SEG3019S-253 and weld SEG3019F-021. This QA Inspector measured a welding current of approximately 280 amps, 26.0 volts, the base materials were preheated with a torch and Mr. Zhu Jibo 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. Yang Yunfeng, stencil 215553 used shielded metal arc welding procedure WPS-345-SMAW-4G(4F)-FCM-Repair -1 to make critical weld repairs to OBG segment 14E weld SEG3019E-2-155. ZPMC QC informed this QA Inspector that weld repair document B-CWR-2862 documents this weld had been ultrasonically rejected. This QA Inspector observed a welding current of approximately 200 amps, the base materials were preheated with electrical heaters 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.

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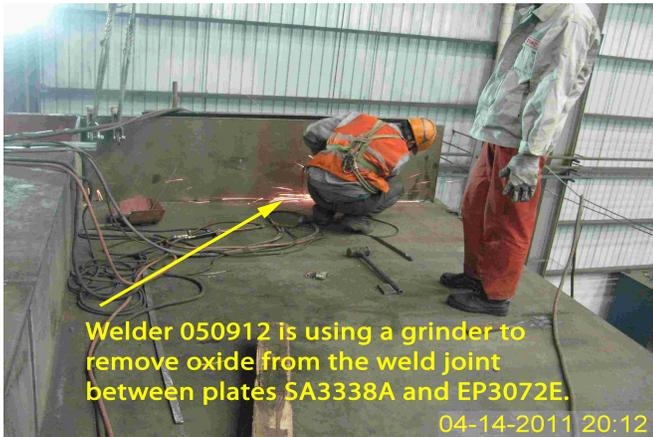
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This QA Inspector observed ZPMC welder Mr. Wang Zhengbin, stencil 216086 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-FCM-Repair -1 to make critical weld repairs to OBG segment 14E weld SEG3019J-720. ZPMC QC informed this QA Inspector that weld repair document B-WR-20500 documents this weld had been ultrasonically rejected. This QA Inspector observed a welding current of approximately 160 amps, the base materials were preheated with a torch 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.

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**Inspected By:** Dawson,Paul

Quality Assurance Inspector

**Reviewed By:** Riley,Ken

QA Reviewer