

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012832**Date Inspected:** 20-Mar-2010**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. Liu Hua Jie

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 Ms. Hue Junrong, stencil 201215 has been using flux cored welding procedure WPS-B-T-2133 to make OBG weld SEG3005K-018. This weld is located in OBG segment 12BW. This QA Inspector observed ZPMC CWI Mr. Liu Hua Jie has recorded a welding current of 300 amps and 30.2 volts. This QA Inspector observed Ms. Hue Junrong appears 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. He Hanbi, stencil 202122 has been using flux cored welding procedure WPS-B-T-2133 to make OBG weld SEG3005K-031. This weld is located in OBG segment 12BW. This QA Inspector observed ZPMC CWI Mr. Liu Hua Jie has recorded a welding current of 312 amps and 31.5 volts. This QA Inspector observed Mr. He Hanbi appears 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 stencil 204730 has been using flux cored welding procedure WPS-B-T-2232-TC-U4b-F to make OBG weld SEG3006C-016. This weld is located in OBG segment 12BW. This QA Inspector observed ZPMC CWI Mr. Liu Hua Jie has recorded a welding current of 210 amps and 25.6 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Tian Zhaoquan, stencil 045246 has been using flux cored welding process to perform make OBG weld repair B-WR-11217 to weld SEG071A-009. This weld is located in OBG segment 12BW and had multiple ultrasonic rejections. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Tu Zhi Wu, stencil 214945 is using flux cored welding procedure WPS-B-T-2133 to make OBG segment 12BW weld DP3019-PP114.5-38. This QA Inspector observed a welding current of approximately 230 amps and 26.0 volts. This QA Inspector verified Mr. Tu Zhi Wu appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

Yard, north of OBG Bay 13, OBG Segment 9CE

At approximately 1930 hours this QA Inspector observed ZPMC welder Mr. Yang Yunfei, stencil 215553 appears to be preparing to use the shielded metal welding process to perform various repair welds on the inside of OBG segment 9CE. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container and the electrodes appear to be warm but the electrical heating element was not connected to any power supply. This QA Inspector observed no ZPMC QC Inspection personnel appear to be located near this OBG segment. Mr. Yang Yunfei appears to be certified to perform shield metal arc welds. This QA Inspector did not observe Mr. Yang Yunfei performing welding. At around 2015 hours, after this QA Inspector had performed monitoring of welding activities inside OBG bays 13 and 14, this QA Inspector exited from the side door of OBG Bay 13 and observed one person appeared to be performing welding inside OBG segment 9CE. As this QA Inspector walked toward segment 9CE this QA Inspector observed a ZPMC worker, who had been standing in the roadway near segment 9CE, start to run toward segment 9CE and the person who had been welding inside segment 9CE immediately stopped welding. Approximately one minute later this QA Inspector arrived inside segment 9CE and observed all ZPMC workers had left the interior of segment 9CE and the area near where welding had been performed has warm base material. This QA Inspector observed several ZPMC employees standing around the base of segment 9CE and none of them spoke the English language. Note: No ZPMC QC personnel were observed near this location, see the photographs below for additional information. Items observed on this date do not fully comply with applicable contract documents.

Yard, north of OBG Bay 17, OBG Segment 9EW

This QA Inspector observed ZPMC welder Mr. Xu Fubao, stencil 200569 is using shielded metal arc process to perform various weld repairs inside OBG segment 9EW near panel point PP83. This QA Inspector observed this welding taking place from approximately 2030 hours to 2050 hours and no ZPMC QC personnel were observed to be monitoring any welding near this location. At approximately 2050 hours Mr. Xu Fubao appeared to stop welding and other ZPMC workers stopped grinding activities. The workers then appeared to be rolling up electrical cords and disconnecting compressed gas bottle hoses. This QA Inspector observed the shielded metal

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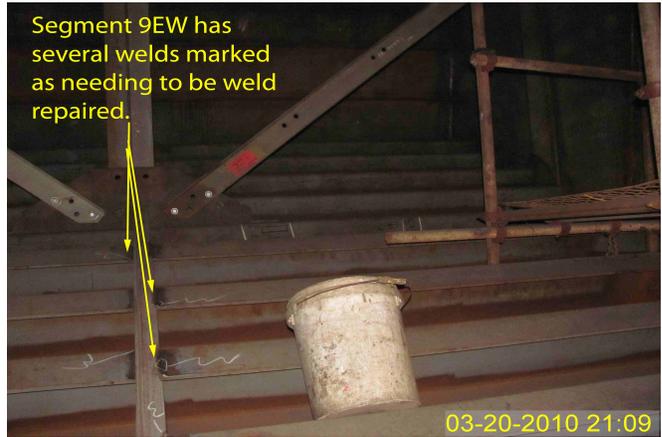
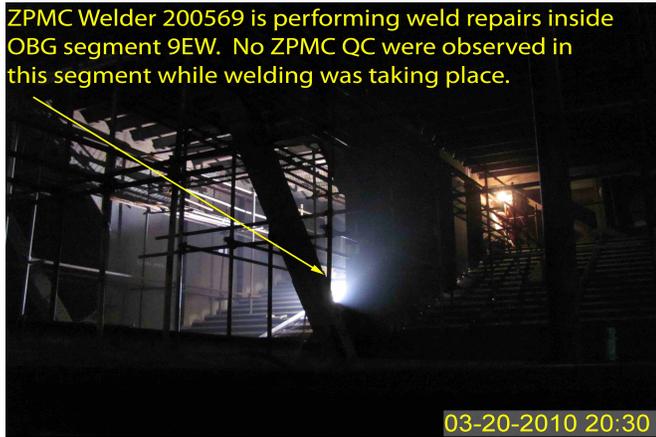
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arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch. Items observed on this date do not fully appear to comply with applicable contract documents.



## 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 Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

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**Inspected By:** Dawson,Paul

Quality Assurance Inspector

**Reviewed By:** Carreon,Albert

QA Reviewer