

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014869**Date Inspected:** 08-Jun-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 Huajie, Mr. Geng Wei

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 Segment Trial Assembly**

This QA Inspector observed ZPMC welder Mr. Chen Zheng Hua, stencil 220067 is using flux cored welding procedure WPS-345-FCAW-3G(3F)-Repair to add weld material to various weld joints on segment 8CW to 9AW longitudinal diaphragm #11A. This longitudinal diaphragm had been identified as having excessive distortion and weld repair document B-WR13499 was issued to remove, straighten and reinstall this longitudinal diaphragm. This QA Inspector measured a welding current of approximately 240 amps, 24 volts and Mr. Chen Zheng Hua 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. Zhang Han Ming, stencil 220066 is using flux cored welding procedure WPS-345-FCAW-2G(2F)-Repair to add weld material to various weld joints on segment 8BW to 8CW longitudinal diaphragm. This longitudinal diaphragm had been identified as having excessive distortion and weld repair document B-WR13500 was issued to remove, straighten and reinstall this longitudinal diaphragm. This QA

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Inspector measured a welding current of approximately 270 amps, 30.0 volts and Mr. Zhang Han Ming 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. Li Shuqiang, stencil 053609 is using flux cored welding procedure WPS-345-FCAW-2G(2F)-Repair to add weld material to various weld joints on segment 8BW to 8CW longitudinal diaphragm. This longitudinal diaphragm had been identified as having excessive distortion and weld repair document B-WR13500 was issued to remove, straighten and reinstall this longitudinal diaphragm. This QA Inspector measured a welding current of approximately 300 amps, 30.0 volts and Mr. Li Shuqiang 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. Wang Zhenbing, stencil 216086 is using shielded metal welding procedure WPS-345-SMAW-3G(3F)-Repair to make OBG cross beam stiffener plate welds SEG043E-039 and -048 which was identified as being misaligned on weld repair document B-WR-13262. This weld is located near OBG segment 8AW near panel point PP62 on the cross beam side. This QA Inspector observed Mr. Wang Zhenbing appears to be certified to make this weld. This QA Inspector measured a welding current of approximately 160 amps and the base material was preheated with a torch prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Segment 11EW located in the yard behind bay 15

This QA Inspector observed ZPMC welder Mr. Xi Xianyou, stencil 047866 is using flux cored welding process to make segment 11EW weld repairs between the counterweight side plate and the corner assembly. This QA Inspector did not observe any ZPMC QC representatives at this location and an ABF representative who was near this location informed this QA Inspector that a QC Inspector had previously monitored this welding and that the QC Inspector had left this area. No weld repair document, weld number or other similar information was available to this QA Inspector. This QA Inspector observed the base material was preheated with a torch prior to welding and observed a welding current of approximately 290 amps and 27.9 volts. This QA Inspector observed Mr. Xi Xianyou appears to be certified to make these weld repairs. Items observed on this date appeared to generally comply with applicable contract documents. See the photographs below for additional information.

OBG Bay 14

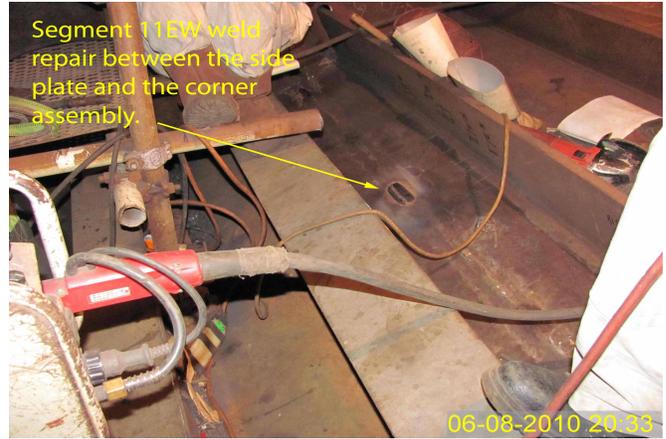
This QA Inspector observed ZPMC welder Mr. He Huohong, stencil 219136 is using shielded metal arc process WPS-B-P-2112-FCM to tack weld OBG segment 13 side plate weld SP3098-001-057 through -066. These welds join various stiffeners plate to the side plate. This QA Inspector observed a welding current of approximately 190 amps and Mr. He Huohong appears to be certified to make this weld. This QA Inspector observed ZPMC preheated the base material prior to welding and the welding electrodes are being kept warm in a portable electrode storage container that is warm to the touch. Items observed by the QA Inspector appear to comply with project specifications.

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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 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

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**Reviewed By:** Carreon,Albert

QA Reviewer