

**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-009212**Date Inspected:** 23-Sep-2009**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 & Tower Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Li Yang, Mr. Li Zhi Jiang

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 2**

This QA Inspector observed ZPMC welder Ms. Wang Chaili stencil 045203 is using flux cored welding procedure WPS B-T-2132-3 to make OBG floor beam weld FB3089-001-067. This QA Inspector observed that earlier in the shift QC Inspector Mr. Yang Qing Feng recorded that Ms. Wang Chaili had a welding current of 302 amps and 29.9 volts. This QA Inspector measured a welding current of 280 amps and 30.0 volts. This QA Inspector observed that Ms. Wang Chaili is certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

**OBG BAY 5**

This QA Inspector observed ZPMC welder Mr. Si Gao Feng, stencil 204342, is using flux cored welding procedure WPS-B-T-2132-3 (2F) to make cross beam weld CB202A-011-014. This QA Inspector observed a welding current of approximately 295 amps and 30.0 volts. This QA Inspector observed Mr. Si Gao Feng is

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certified to make this weld and that ZPMC QC Inspector Mr. Zheng Zhi Wei is monitoring this welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Liu Dong, stencil 215478 is using shielded metal arc welding procedure WPS-B-T-2111-B-U2 to make tack weld 11TR3C-016. The QA Inspector observed a welding current of approximately 90.0 amps and this welding current is near the minimum allowed by this WPS. ZPMC CWI Mr. Li Yang also observed that the welding current is near the minimum allowed by the WPS and he informed this QA Inspector that he will have the welding current adjusted to a higher welding current. This QA Inspector observed Mr. Liu Dong is certified to make this weld and the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch and it appears to be connected to the welding power supply cable. Items observed on this date appear to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Rao Wei, stencil 049972 is using shielded metal arc process WPS-B-T-2112 to tack OBG floor beam fillet weld FB3028-001-001. This QA Inspector observed a welding current of approximately 160 amps, the base material is clean where the tack welds were being made and Mr. Rao Wei is certified to make this weld. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch and it appears to be connected to the welding power supply cable. Items observed on this date appeared to generally comply with applicable contract documents.

### OBG Bay 13 (Outside)

This QA Inspector observed ZPMC welder Mr. Wang Li, stencil 044772 is using shielded metal arc welding procedure WPS-B-P-2114-FCM-1 to make OBG segment 8AW weld repair SG043-042 in accordance with weld repair B-WR6048. This QA Inspector measured a welding current of approximately 170 amps and the welding electrodes are being stored in a heated portable electrode storage oven. This QA Inspector observed Mr. Wang Li is certified to make this weld. This QA Inspector asked ZPMC QC Inspector Mr. Zhong Guo Hui for a copy of weld repair B-WR6048 and Mr. Zhong Gio Hui showed this QA Inspector the weld repair document. This QA Inspector observed weld repair B-WR6048 indicates this weld repair is to resolve ZPMC ultrasonic weld rejections and the weld repair attachment pages require QC to visually inspect and document the weld groove is acceptable prior to welding. This QA Inspector observed this signoff document lacks any signatures. This QA Inspector prepared to take a digital photograph of this blank weld repair attachment page and QC Inspector identified as CX2233 took the weld repair document and from this QA Inspector and he refused to allow this QA Inspector to photograph the blank attachment page. Later in the shift ZPMC CWI Mr. Lv Li Qing showed this QA Inspector that the weld repair document attachment page has now been signed by ZPMC QC to document the weld repair gouged area was Mr. Wang Li suitable for welding. Items observed on this date do not appear to fully comply with applicable contract documents.

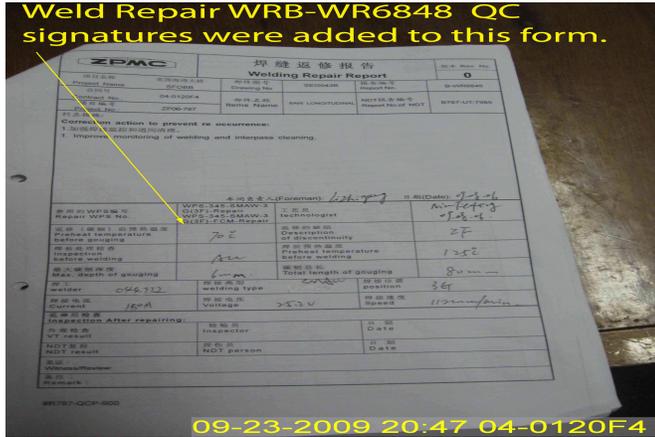
### OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Zhong Zhen Yan, stencil 202805 is using flux cored welding procedure WPS-B-T-2112 to tack weld diaphragm plates to deck plate DP100-001. The QA Inspector observed a welding current of approximately 150 and ZPMC QC Inspector Mr. Li Ming Yang appears to be monitoring this

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welding. This QA Inspector observed that Zhong Zhen Yan is 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 Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer