

**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-010518**Date Inspected:** 08-Nov-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 and Tower Fabrication**Summary of Items Observed:**

CWI Inspector: Mr. Wu Zhi Cheng

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:

## Trial Assembly Yard

This QA Inspector observed ZPMC welder Mr. Li Wengou, stencil 066261 is using shielded metal arc procedure WPS-485-SMAW-4F(4G)-FCM-Repair to make repair weld OBW1A-008 as authorized by critical weld repair document B-CWR-875. This QA Inspector measured a welding current of approximately 160 amps. This QA Inspector confirmed that Mr. Li Wengou is certified to make this weld. ZPMC personnel have installed electric heaters on the back side of the steel to preheat the base material prior to commencement of the welding. 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.

This QA Inspector observed ZPMC welder Mr. Bi Shi Jian, stencil 058764 is using shielded metal arc procedure WPS-485-SMAW-4F(4G)-FCM-Repair to make 4G position repair weld OBW1A-008 as authorized by critical weld repair document B-CWR-875. This QA Inspector measured a welding current of approximately 130 amps.

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This QA Inspector confirmed that Mr. Bi Shi Jian is certified to make this weld. ZPMC personnel have installed electric heaters on the back side of the steel to preheat the base material prior to commencement of the welding. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is cool to the touch. This QA Inspector informed CWI Mr. Wu Zhi Cheng about the cool electrode storage container and Mr. Wu Zhi Cheng instructed Mr. Bi Shi Jian to use another welder's electrodes instead of the cool electrodes. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Wengou, stencil 066261 is using shielded metal arc procedure WPS-485-SMAW-4F(4G)-FCM-Repair to make repair weld OBW1A-008 as authorized by critical weld repair document B-CWR-875. This QA Inspector measured a welding current of approximately 160 amps. This QA Inspector confirmed that Mr. Li Wengou is certified to make this weld. ZPMC personnel have installed electric heaters on the back side of the steel to preheat the base material prior to commencement of the welding. 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.

This QA Inspector observed ZPMC welder Mr. Feng Hua Jun, stencil 066258 is using shielded metal arc procedure WPS-485-SMAW-4F(4G)-FCM-Repair to make repair weld OBW1A-008 as authorized by critical weld repair document B-CWR-875. This QA Inspector measured a welding current of approximately 155 amps. This QA Inspector confirmed that Mr. Feng Hua Jun is certified to make this weld. ZPMC personnel have installed electric heaters on the back side of the steel to preheat the base material prior to commencement of the welding. 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.

This QA Inspector observed ZPMC welder Mr. Wu Hai Jun, stencil 201087 is using shielded metal arc procedure WPS-485-SMAW-2F(2G)-FCM-Repair-1 to make repair weld CA107B-001 as authorized by critical weld repair document B-CWR-882. This QA Inspector measured a welding current of approximately 170 amps. This QA Inspector confirmed that Mr. Wu Hai Jun is certified to make this weld. ZPMC personnel have installed electric heaters on the back side of the steel to preheat the base material prior to commencement of the welding. 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.

This QA Inspector observed ZPMC welder Mr. Kua Wen Shau, stencil 054013 is using shielded metal arc procedure WPS-485-SMAW-2F(2G)-FCM-Repair-1 to make repair weld CA107B-001 as authorized by critical weld repair document B-CWR-882. This QA Inspector measured a welding current of approximately 170 amps. This QA Inspector confirmed that Mr. Wu Hai Jun is certified to make this weld. ZPMC personnel have installed electric heaters on the back side of the steel to preheat the base material prior to commencement of the welding. 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.

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This QA Inspector performed random ultrasonic inspections of OBG complete joint penetration bottom plate splice weld OBW1A-003 between segments 1AW and 1AAW between 2.18 meters and 5.560 meters. This QA Inspector utilized an “A”, “B”, “C” and “D” scans with a 70 degree transducer and items observed appear to comply with project specifications

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

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