

**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-008489**Date Inspected:** 14-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 715**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:** Tower Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Sun Bo, Mr. Lu Li Qing and Mr. Wang Chuan Qing

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:

This QA Inspector did not observe any ZPMC personnel welding on Caltrans Bridge components in OBG Bays 1 through 7 and bay 9.

**OBG Bay 8**

This QA Inspector observed ZPMC welder stencil 066678, is using welding procedure WPS-B-T-2232-TC-U4b-T to make OBG Cross Beam flux cored tack weld CB201A-2. This QA Inspector observed ZPMC QC Inspector Mr. Xia Yong Zheng has recorded a welding current of 170 amps and 24.5 volts. Items observed on this date appeared to generally comply with applicable contract documents.

**OBG Bay 14**

ZPMC issued "Inspection Notification Sheet" number 3960 informing QA that ZPMC has completed visual inspections of lift 2 north tower corner skin plate C to skin plate D exterior surface of weld NSD1-TL8B/L-4A.

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ZPMC Inspectors appear to have previously visually accepted this weld. This QA Inspector performed random visual inspections of the entire length of the weld and items observed by this QA Inspector appear to comply with AWS D1.5 UT requirements.

This QA Inspector observed ZPMC welder Mr. Bian Henggui, stencil 051359 is using welding procedure WPS-B-B-2212-FCM-1 to make flux cored fillet welds #15 through #28 between "T" stiffeners and side plate SP543-001. The QA Inspector measured a welding current of approximately 170 amps. QA Inspector observed the base material appears to have been preheated with a torch prior to 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. This QA Inspector observed Mr. Bian Henggui is qualified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Sun Guzuo, stencil 058100 is using welding procedure specification WPS-B-T-2231-T-2 to make segment deck plate weld SEG050-003. The QA Inspector observed a welding current of approximately 660 amps and 30.0 volts. ZPMC QC Inspector Mr. Zhong Guo Hui has recorded a welding travel speed of 597 mm per minute. This QA Inspector observed Mr. Sun Guzuo is qualified to make this weld. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC QC Inspector Mr. Zhong Guo Hui has documented that ZPMC welder Mr. Dan Deyin, stencil 044795 is using flux cored welding process WPS-B-T-2231-TC-U4b-F to make OBG weld SEG052A-009. This QA Inspector observed the QC document indicates a welding current of 213 amps and 25.1 volts. Items observed by this QA Inspector appear to comply with project specifications.

This QA Inspector observed ZPMC QC Inspector Mr. Zhong Guo Hui has documented that ZPMC welder Mr. Wang Yunquan, stencil 057259 has recently used shielded metal arc process WPS-B-P-3212-B-U2-1 to complete south tower lift 3 weld SSTL3-1D/K-61. This QA Inspector observed QC has recorded a welding current of 198 amps. This QA Inspector observed Mr. Zhong Guo Hui is qualified 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. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Huang Zhao, stencil 056200 is using welding procedure WPS-B-P-3212-B-U2A-1 to make a shielded metal arc fillet weld to complete south tower lift 3 weld SSTL3-1I/K-067. The QA Inspector observed a welding current of approximately 260 amps and the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch. 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 Serge Sinevod phone: 134-8257-0045 , who represents the Office of Structural Materials for your project.

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