

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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-010538**Date Inspected:** 02-Dec-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**Summary of Items Observed:**

CWI Inspectors: Mr. Lv Li Qing, Mr. Li Yan Hua, and Mr. Tu Jun

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:

## Tower Bay 10

This QA Inspector observed ZPMC welder Mr. Huang Zhao, stencil 056200 is using shielded metal arc process procedure WPS-B-T-3212-B-U2A-2 to make South tower lift 4 weld SSSL4-1J/L-18. This QA Inspector observed a welding current of approximately 260 amps and that the welding electrodes are being stored in a heated electrode storage container that is connected to an electric power supply. This QA Inspector observed QC personnel monitoring the base material interpass temperature and the welder is waiting until the temperature appears to be below 230 degrees Celsius prior to depositing additional weld passes. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Sun Daoqing, stencil 040269 is using shielded metal arc process procedure WPS-B-T-3212-B-U2A-2 to make South tower lift 4 weld SSSL4-1J/L-20. This QA Inspector observed that the welding electrodes are being stored in a heated electrode storage container that is connected to an electric power supply and that Mr. Sun Daoqing appears to be certified to make this weld. This QA Inspector

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observed QC personnel monitoring the base material interpass temperature and the welder appears to be waiting until the temperature is below 230 degrees Celsius prior to depositing additional weld passes. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Dong Yumei stencil 054069 is using the flux cored arc welding process procedure WPS-B-T-4333-TC2-P4-F to make South tower lift 4 weld SSSL4-1G/L-93. This QA Inspector observed that Ms. Dong Yumei appears to be certified to make this weld. This QA Inspector observed QC personnel monitoring the base material interpass temperature and the welder appears to be waiting until the temperature is below 230 degrees Celsius prior to depositing additional weld passes. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yu Jun, stencil 201825 is using flux cored welding procedure WPS-B-T-4333-TC2-P4-F to make tower weld SSSL4-1F/L-094. This QA Inspector measured a welding current of approximately 310 amps and 30.0 volts and the base material has been preheated with an electrical heating element and ZPMC QC personnel are monitoring that the maximum 230 degrees Celsius interpass temperature is not exceeded prior to making the next weld pass. This QA Inspector observed that Mr. Yu Jun 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. Shi Xingyu, stencil 052930 is using shielded metal arc process procedure WPS-B-T-3212-B-U2A-2 to make South tower lift 4 weld SSSL4-1H/L-21. This QA Inspector measured a welding current of approximately 265 amps and observed that the welding electrodes are being stored in a heated electrode storage container that is connected to an electric power supply and that Mr. Shi Xingyu appears to be certified to make this weld. This QA Inspector observed QC personnel monitoring the base material interpass temperature and the welder appears to be waiting until the temperature is below 230 degrees Celsius prior to depositing additional weld passes. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Jiao Teng, stencil 053049 is using shielded metal arc process procedure WPS-B-T-3212-B-U2A-2 to make South tower lift 4 weld SSSL4-1F/L-17. This QA Inspector observed a welding current of approximately 260 amps and that the welding electrodes are being stored in a heated electrode storage container that is connected to an electric power supply. This QA Inspector observed QC personnel monitoring the base material interpass temperature and the welder appears to be waiting until the temperature is below 230 degrees Celsius prior to depositing additional weld passes. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xu Xuiping, stencil 057241 is using flux cored welding procedure WPS-B-T-4333-TC2-P4-F to make tower weld SSSL4-C/L-091. This QA Inspector measured a welding current of approximately 280 amps and 29.1 volts and the base material has been preheated with an electrical heating element and ZPMC QC personnel are monitoring that the maximum 230 degrees Celsius interpass temperature is not exceeded prior to making the next weld pass. This QA Inspector observed that Mr. Xu Xuiping 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 Mr. Wang Yunquan, stencil 057259 is using shielded metal arc process procedure WPS-B-T-3212-B-U2A-2 to make South tower lift 4 weld SSSL4-1C/L-32. This QA Inspector observed a welding current of approximately 230 amps and that the welding electrodes are being stored in a heated electrode storage container that is connected to an electric power supply. This QA Inspector observed QC personnel monitoring the base material interpass temperature and the welder appears to be waiting until the temperature is below 230 degrees Celsius prior to depositing additional weld passes. Items observed on this date appeared to generally comply with applicable contract documents.

OBG BAY 14

This QA Inspector observed ZPMC welder Ms. Wang Min, stencil 044771 is using welding procedure specification WPS-B-T-2221-B-L2c-S-2 to make submerged arc groove weld SEG3003W-008 between side plate SP3023A and SP3022-001. This QA Inspector observed a welding current of approximately 620 amps and 32.0 volts. This QA Inspector confirmed that Ms. Wang Min appears to be 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.

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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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