

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-009071**Date Inspected:** 18-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. Zhu Tian Shu, Mr. Guo Yan Fei

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 FB3083-003-019. This QA Inspector observed a welding current of 310 amps and 30.0 volts and ZPMC QC Inspector Mr. Yan Qing Feng is monitoring this welding. 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.

This QA Inspector observed ZPMC welder Ms. Gao Xiue, stencil 206358 is using welding procedure specification WPS-B-T-2132-3 to make floor beam flux cored weld FB3012-003-026. The QA Inspector observed Ms. Gao Xiue has completed welding and at 1900 hours ZPMC Quality Control personnel had recorded Ms. Gao Xiue to have a welding current of 310 amps and 29.8 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

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OBG BAY 5

This QA Inspector observed ZPMC welder Mr. Si Gao Feng, stencil 204342, is using welding procedure WPS-B-T-2132-3 (2F) to make cross beam weld CB202G-049-038. This QA Inspector observed a welding current of approximately 310 amps and 30.0 volts. This QA Inspector observed Mr. Si Gao Feng is 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.

The QA Inspector observed ZPMC welder Mr. Wang Yuan, stencil 215250, is using welding procedure WPS-B-T-2132-3 (2F) to make cross beam weld CB202G-052-141. This QA Inspector observed a welding current of approximately 300 amps and 29.3 volts. This QA Inspector observed Mr. Wang Yuan is 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. Li Yuanzheng, stencil 217185, is using welding procedure WPS-B-T-2132-3 (2F) to make cross beam weld CB202G-049-142. This QA Inspector observed a welding current of approximately 285 amps and 30.2 volts. This QA Inspector observed Mr. Li Yuanzheng is 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.

OBG Bay 13 (Outside)

This QA Inspector observed ZPMC welder Mr. Lu Xiaojie, stencil 067904 is using shielded metal arc welding procedure WPS-B-P-2114-FCM-1 to make OBG segment 8AW weld SSD11A-PP63-210 in the 4G (overhead) position. This QA Inspector measured a welding current of approximately 165 amps and the welding electrodes are being stored in a heated portable electrode storage oven. This QA Inspector observed ZPMC QC Inspector Mr. Zang Xian Ji has been monitoring this welding. This QA Inspector observed Mr. Lu Xiaojie is certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 14

This QA Inspector observed that earlier in the shift ZPMC QC has recorded welder Mr. Sun Guzuo, stencil 058100 has used welding procedure specification WPS-B-T-223(2)1T-2 to make submerged arc groove weld SEG062*-004. This QA Inspector observed ZPMC Quality Control have recorded a welding current of 610 amps and 31.2 volts. It appears that Mr. Sun Guzuo has completed welding for this shift. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Xianyou, stencil 047866 is using welding procedure specification WPS-B-T-2133 to make flux cored welds between deck plates and diaphragm plates in the 3F position. This QA Inspector observed Mr. Li Xianyou is certified to make this weld. This QA Inspector observed a welding current of approximately 260 amps and 23 volts. Welding procedure WPS-B-T-2133 states when welding in the 3F (vertical) direction the maximum welding current is 223 amps and the minimum welding voltage is 23.9 volts. Mr. Li Xianyou appears to be welding with a low welding voltage and a high welding current. This QA Inspector informed QC Inspector Mr. Li Jie and CWI Mr. Shen Fu You that Mr. Li Xianyou appears to be

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welding with a low welding voltage and a high welding current. Mr. Shen Fu You informed this QA Inspector that Mr. Li Xianyou was starting this weld in the 2F position and the weld joint transitions to a 3F position and that each of these two welding positions require different weld currents and voltages. Mr. Shen Fu You said in the future he will have one welding machine set to weld in the 2F position and a second welding machine set to weld in the 3F position. Items observed on this date do not appear to fully 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.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
