

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-008366**Date Inspected:** 30-Jul-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 745**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 Inspectors: Mr. Lv Li Qing, Mr. Wang Chuan Qing and Mr. Shen Fu You

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 5

ZPMC issued "Inspection Notification Sheet" number 3810 informing QA that ZPMC has completed ultrasonic inspections of OBG closed rib splice welds for deck panel DP3001-001. The weld numbers are DP3005-001-021, DP3005-001-022, DP3005-001-023, DP3005-001-024 and DP3005-001-025. This QA Inspector observed ZPMC ultrasonic Inspectors appears to have previously accepted 100 percent length of all of the welds and that weld DP3005-001-022 has been marked as being ultrasonically rejected by QC personnel. This QA Inspector performed ultrasonic inspections of approximately 10 percent length of the four welds that have been accepted by QC Inspectors and items observed by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on these inspections see the TL6027 Ultrasonic Test Report.

OBG Bay 14

This QA Inspector observed ZPMC welder Ms. He Junrong, stencil 201215 is using flux cored welding procedure WPS-345-FCAW-1G(1F)-Repair to make repairs to OBG segment weld SEG061A-008. The QA Inspector

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observed a welding current of approximately 300 amps and 29.7 volts. This QA Inspector observed Ms. He Junrong 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. Li Yongshui, stencil 067656 is using shielded metal arc process WPS-B-T-2114-U4B-FCM to make weld SEG048-046 in the 4G (overhead) position at panel point 68/69 between deck plates and corner assembly weld CA059-003. This QA Inspector observed ZPMC QC Inspector Mr. Geng Wei has recorded Mr. Yongshui to have a welding current of approximately 150 amps. In order to obtain a welding current this QA Inspector had to climb to the top of the OBG assembly where this QA Inspector measured a welding current of approximately 195 amps. This welding current is approximately 40 amps higher than what QC had previously documented. This QA Inspector asked ZPMC QC Inspector Mr. Geng Wei what is the maximum welding current allowed by the welding procedure that is being used and ZPMC QC Inspector Mr. Geng Wei did not appear to know the answer to that question. ZPMC QC Inspector Mr. Geng Wei obtained a copy of the welding procedure and he informed this QA Inspector that the maximum allowable welding current is 210 amps. This QA Inspector observed Mr. Li Yongshui 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. Lu Liguang, stencil 200114 is using shielded metal arc process WPS-B-T-2114-U4B-FCM to make weld SEG048-046 in the 4G (overhead) position at panel point 68/69 between deck plates and Corner assembly weld CA059-003. This QA Inspector measured a welding current of approximately 165 amps. This QA Inspector observed Mr. Lu Liguang is qualified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

Tower Bay 10

This QA Inspector observed ZPMC welder Mr. Sun Daoqing, stencil 040269 is using shielded metal arc process WPS-B-P-3312-TC-P5 to make north tower lift 3 weld NSTL3-3C/K-70. This QA Inspector observed a welding current of approximately 260 amps and this welding current is similar to that which ZPMC CWI Mr. Wang Chuan Qing has recorded. This QA Inspector observed Mr. Sun Daoqing 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 Ms. Ye Xulan, stencil 040269 is using shielded metal arc process WPS-B-P-3312-TC-P5 to make north tower lift 3 weld NSTL3-3I/K-74. This QA Inspector observed a welding current of approximately 260 amps and this welding current is similar to that which ZPMC CWI Mr. Wang Chuan Qing has recorded. This QA Inspector observed Ms. Ye Xulan 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. Wang Yunquan, stencil 057259 is using shielded metal arc process WPS-B-P-3312-TC-P5 to make north tower lift 3 weld NSTL3-3G/K-73. This QA Inspector observed a welding current of approximately 260 amps and this welding current is similar to that which ZPMC CWI Mr. Wang Chuan Qing has recorded. This QA Inspector observed ZPMC CWI Mr. Wang Chuan Qing has documented that welder stencil 59157 was performing this weld, which conflicts with what the QC Inspector has recorded. ZPMC CWI Mr. Wang Chuan Qing also looked at the welder identification card and he then acknowledged that he has recorded the incorrect welder number on his documents and he will correct his paperwork. Items observed on this

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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.

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