

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-010519**Date Inspected:** 10-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 Fabrication**Summary of Items Observed:**

CWI Inspector: Mr. Li Ming

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:

ZPMC Boat Dock

This QA Inspector performed random ultrasonic inspections detection of planar transverse indications of the upper 4 meter end of the ground flush weld crown of weld OBW3A-002 between OBG segments 3AW and 3BW. This QA Inspector utilized a "D" scan with a 70 degree transducer and confirmed the areas that had previously been identified as unacceptable by ABF ultrasonic inspectors are accurately marked, and the other portions of the weld appears to comply with project specifications. For additional information on these inspections see Caltrans Ultrasonic Transverse Indication Evaluation sheet dated 11-10-09.

OBG BAY 9

This QA Inspector performed random magnetic particle inspections of approximately 15 percent of the tack welds that attach closed ribs to deck panels DP3004-001 and DP3048-001. These deck panels are clamped to the convex shaped welding platforms that are adjacent to overhead welding gantry #2. Earlier in this shift ZPMC conducted a

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“Production Monitoring Test” using gantry #2 and if the testing results are satisfactory these deck panels are scheduled to be welded during the dayshift. These deck panel tack welds appear to have been previously MT inspected by ZPMC personnel and several of the welds appear to have been ground to eliminate MT indications which had been marked by ZPMC MT Inspectors. These inspections were performed on an informational basis and no TL-6028 Magnetic Particle Test Report has been issued to document these inspections.

OBG BAY 10

This QA Inspector observed ZPMC welder Ms. Yun Chuanjin, stencil 503060 is using welding procedure specification WPS-B-T-2221-C-U2b-S-2 to make submerged arc groove weld SSTL4-1B/L-5A. This QA Inspector observed ZPMC Quality Control CWI Mr. Li Ming monitoring this welding and the QA Inspector measured a welding current of approximately 680 amps and 33.2 volts. This QA Inspector observed ZPMC had preheated the base material using electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Lu Haixian, stencil 040252 is using welding procedure specification WPS-B-T-2221-C-U2b-S-2 to make submerged arc groove weld SSTL4-1B/L-4A between south tower skin plates A to skin plate B. This QA Inspector observed ZPMC Quality Control CWI Mr. Li Ming monitoring this welding and the QA Inspector measured a welding current of approximately 680 amps and 33.0 volts. This QA Inspector observed ZPMC had preheated the base material using electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Liu Xiaoyan, stencil 207745 is using welding procedure specification WPS-B-T-2221-C-U2b-S-2 to make submerged arc groove weld SSTL4-1B/L-4A between south tower skin plates A to skin plate B. This QA Inspector observed ZPMC Quality Control CWI Mr. Li Ming monitoring this welding and the QA Inspector measured a welding current of approximately 670 amps and 31.5 volts. This QA Inspector observed ZPMC had preheated the base material using electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Chen Hongxia, stencil 040460 is using welding procedure specification WPS-B-T-2221-C-U2b-S-2 to make submerged arc groove weld SSTL4-1B/L-5A between south tower skin plates B to skin plate C. This QA Inspector observed ZPMC Quality Control CWI Mr. Li Ming monitoring this welding and the QA Inspector measured a welding current of approximately 680 amps and 33.0 volts. This QA Inspector observed ZPMC had preheated the base material using electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xu Xiuping, stencil 057244 is using welding WPS-B-T-2231-C-U2-F to make weld SSTL4-1B/L-5A between south tower skin plates B to skin plate C. This QA Inspector observed a welding current of approximately 315 amps and 31.2 volts. The QA Inspector observed Quality Control (QC) inspector Mr. Li Ming monitoring this welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Gong Zhi, stencil 050041 is using flux cored welding process WPS-B-T-2231-TC-U5-F to complete South tower splice plate weld SSD1-SPSA4-24-3B. This QA

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Inspector observed ZPMC CWI Mr. Li Ming monitoring this welding he has previously recorded Mr. Wang Gong Zhi to have a welding current of 311 amps and 30.8 volts. This QA Inspector observed the base material appears to have been preheated using electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed Mr. Chang Chuan Gang, stencil 053870 is using flux cored welding process WPS-B-T-2231-TC-U5-F to complete South tower splice plate weld SSD1-SPSA4-20-4B. This QA Inspector observed ZPMC CWI Mr. Li Ming monitoring this welding he has previously recorded Mr. Chang Chuan Gang to have a welding current of 334 amps and 31.5 volts. This QA Inspector observed the base material appears to have been preheated using electric heating elements. 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.

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