

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-008364**Date Inspected:** 02-Jul-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 Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Chen Xi, Mr. Zou Liu Hin

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:

Prior to Caltrans QA Inspectors' concurring with issuance of OBG deck plate closed rib green tag releases a review of the ultrasonic inspection database is performed to verify all closed rib tack weld repair locations have been ultrasonically accepted. Today this QA Inspector, Mr. Paul Dawson, performed data entry of ultrasonic inspection information from the field generated Ultrasonic inspection data sheets onto the common drive computer database for the following OBG deck panels: DP182-001 and DP480-001.

SEG 1AAE

This QA Inspector observed ZPMC welder Ms. Gu Xueying, stencil 045218 is using shielded metal arc process WPS-B-T-4212-TC-U5B-3 to make OBG Segment 1AA E weld SEG2-001. This QA Inspector observed a welding current of approximately 165 amps and the base material where the weld had been heated with a torch prior to starting the welding. ZPMC QC and ABF personnel are monitoring this 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 and it appears to be connected to the welding power supply cable. Items

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observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wu Zeqiang, stencil 066481 is using shielded metal arc process WPS-B-T-4212-TC-U5B-3 to make OBG Segment 1AA E weld SEG2-001. This QA Inspector observed a welding current of approximately 160 amps and the base material where the weld had been heated with a torch prior to welding. ZPMC QC and ABF personnel are monitoring this 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 and it appears to be connected to the welding power supply cable. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Ai Xionglong, stencil 066480 is using shielded metal arc process WPS-B-T-4212-TC-U5B-3 to make OBG Segment 1AA E weld SEG2-001. This QA Inspector observed a welding current of approximately 170 amps and the base material where the weld had been heated with a torch prior to welding. ZPMC QC and ABF personnel are monitoring this 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 and it appears to be connected to the welding power supply cable. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Ye Shengjun, stencil 0303871 is using flux cored welding procedure WPS B-T-2333-TC-P4-F-3G to make OBG welds SEG2F-026, SEG2D-088 and SEG2E-334. The QA Inspector observed a welding current of approximately 230 amps and 24.0 volts and that the base material had been preheated with a torch. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

SEG 1AAW

This QA Inspector observed ZPMC welder Mr. Ji Hongwei, stencil 058245 is using flux cored welding procedure WPS B-T-2333-TC-P4-F-3G to make OBG welds SEG1F-022, SEG1C-001 and SEG2E-214. The QA Inspector observed a welding current of approximately 220 amps and 31.0 volts and that the base material had been preheated with a torch. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

OBG Bay 6

This QA Inspector observed ZPMC welder Mr. Zhou Songsong, stencil 068091 is using shielded metal arc process WPS-B-P-3313-TC-P5 to make tower diaphragm weld NSD1-DPSA4-04B/B-016. This QA Inspector observed a welding current of approximately 230 amps and the base material where the weld is being made appears to have been preheated with an electric heating element to a temperature above 140 degrees Celsius. ZPMC QC and ABF personnel are monitoring this welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wei Hengbin, stencil 068924 is using shielded metal arc process WPS-B-P-3313-TC-P5 to make tower diaphragm weld NSD1-DPSA4-04B/B-012. This QA Inspector observed a welding current of approximately 260amps and the base material where the weld is being made appears to have

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been preheated with an electric heating element to a temperature above 140 degrees Celsius. ZPMC QC and ABF personnel are monitoring this welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Niu Duojun, stencil 037932 is using shielded metal arc process WPS-B-P-3313-TC-P5 to make tower diaphragm weld NSD1-DPSA4-04B/B-013. This QA Inspector observed a welding current of approximately 270 amps and the base material where the weld is being made appears to have been preheated with an electric heating element to a temperature above 140 degrees Celsius. ZPMC QC and ABF personnel are monitoring this welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Fu Yanjie, stencil 066268 is using shielded metal arc process WPS-B-P-3313-TC-P5 to make tower diaphragm weld NSD1-DPSA4-04B/B-013. This QA Inspector observed a welding current of approximately 265 amps and the base material where the weld is being made appears to have been preheated with an electric heating element to a temperature above 140 degrees Celsius. ZPMC QC and ABF personnel are monitoring this welding. 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
