

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-008485**Date Inspected:** 12-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 715**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:** Tower and OBG Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Zheng Jin Xin, Mr. Chen Xi, Mr. You Qi Guo and Mr. Yu Gun

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 Mr. Rao Wei, stencil 049972 is using shielded metal arc process WPS-B-T-2112 to tack stiffener plates to OBG floor beam FB3003A-001. This QA Inspector observed a welding current of approximately 150 amps, the base material is clean where the tack welds were being made and Mr. Rao Wei is qualified to make this weld. 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 Ms. Zou Dianqin, stencil 250050 is using welding procedure specification WPS-B-T-2211-B-U2C-S-2 to make floor beam submerged arc groove weld FB3087-001-023. The QA Inspector observed a welding current of approximately 510 amps, 31.0 volts and a welding travel speed of 480 mm per minute. This QA Inspector observed Ms. Zou Dianqin is qualified to make this weld. Items observed by

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this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Mr. Rao Wei, stencil 049972 is using shielded metal arc process WPS-B-T-2112 to tack weld various stiffener plates to OBG floor beam FB3003A-001. This QA Inspector observed a welding current of approximately 150 amps, the base material is clean where the tack welds were being made and Mr. Rao Wei is qualified to make this weld. 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. Yun Chengxian, stencil 045138 is using shielded metal arc process WPS-B-P-2211-B-U2A to tack weld OBG floor beam groove weld FB3052-001-023. This QA Inspector observed a welding current of approximately 150 amps, the base material is clean where the tack welds were being made and Mr. Yun Chengxian is qualified to make this weld. 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.

This QA Inspector observed ZPMC QC representative Mr. Zhan Hai Feng performing weld joint inspections to confirm the adjacent plates that had been tack welded together are properly aligned. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xu Fubao, stencil 200569 is using shielded metal arc process WPS-B-P-2211-B-U2A to tack weld OBG floor beam groove weld FB3055-001-021. This QA Inspector observed a welding current of approximately 160 amps, the base material is clean where the tack welds were being made and Mr. Yun Chengxian is qualified to make this weld. 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.

This QA Inspector performed random weld joint inspections and confirmed the adjacent plates that had been tack welded together are properly aligned and that the weld grooves appear to comply with project specifications. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 9

This QA Inspector observed ZPMC welder Mr. Xu Guoyin, stencil 059443, is using welding procedure WPS-B-T-2342-U2 (U-rib) to make flux cored welds on OBG deck plate closed rib weld DP3013-001-135. This QA Inspector observed a welding current of approximately 200 amps 28.0 volts and Mr. Xu Guoyin is qualified to make this weld. This QA Inspector observed ZPMC QC Inspector Mr Zheng Jing Xin is monitoring this welding. Items observed on this date appeared to generally comply with applicable contract documents.

Tower Bay 10

This QA Inspector observed ZPMC welder Mr. Zang Song Lin, stencil 057266 is using flux cored welding process WPS B-T-2333-P4-F to make North Tower Lift 1 weld NSD1-A166F/J-065. This QA Inspector observed the base material had been preheated using an electrical heater element prior to welding and ZPMC QC Inspector Mr. Yuan Hi Gang observed Mr Zang Song Lin using a temperature indicating crayon to confirm the base material was at a minimum of 180°C prior to commencement of welding. This QA Inspector observed Mr. Zang Song Lin having a welding current of approximately 225 amps and 24.0 volts and Mr. Zang Song Lin is qualified to make this weld.

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Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Ms. Dong Yuqun, stencil 053116 is using flux cored welding process WPS B-T-2333-P4-F to make North Tower Lift 1 weld NSD1-A166F/J-066. This QA Inspector observed the base material had been preheated using an electrical heater element prior to welding and ZPMC QC Inspector Mr. Yuan Hi Gang observed Ms. Dong Yuqun using a temperature indicating crayon to confirm the base material was at a minimum of 180°C prior to commencement of welding. This QA Inspector observed Ms. Dong Yuqun having a welding current of approximately 225 amps and 24.0 volts and Ms. Dong Yuqun is qualified to make this weld. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

Tower Bay 11

This QA Inspector observed ZPMC welder Mr. Guo Xian Wei, stencil 255865 is using shielded metal arc procedure WPS-B-T-2112 to tack weld temporary stiffener plates on shear link WDI-A601-3 temporary stiffener plates. The QA Inspector observed a welding current of 140 amps. Prior to welding the QA Inspector observed ZPMC personnel to be using torches to preheat the base material where the weld is to be made. Items observed by this QA Inspector appear to comply with project specifications.

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 Serge Sinevod phone: 134-8257-0045 , who represents the Office of Structural Materials for your project.

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