

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017029**Date Inspected:** 25-Sep-2010**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**Summary of Items Observed:**

CWI Inspectors: ZPMC: Mr. Liu Hua Jie, Mr. Xu Tao; ABF: Mr. Peng Wen Jun

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 Segment Trial Assembly

This QA Inspector observed ZPMC welder Mr. Hua Linming, stencil 044515 used shielded metal arc welding procedure WPS-345-SMAW-4G(4F)-FCM-Repair to make weld repairs of visual rejections on OBG segments 11AW bottom plate temporary alignment plate removal areas. This work is authorized by critical weld repair document B-CWR1799. This QA Inspector observed a welding current of approximately 160 amps, Mr. Hua Linming appeared to be certified to make these welds, the welding electrodes were being stored in a portable rod oven which was warm to the touch and ZPMC personnel used a torch to preheat the base material prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Chen Hong Ye, stencil 040270 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-FCM-Repair to make weld repairs of visual rejections on OBG segments 11AW edge plate temporary alignment plate removal areas. This work is authorized by critical weld repair document B-CWR1799. This QA Inspector observed a welding current of approximately 170 amps, Mr. Hua

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Linming appeared to be certified to make these welds, the welding electrodes were being stored in a portable rod oven which was warm to the touch and ZPMC personnel used a torch to preheat the base material prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Anlong, stencil 219210 used shielded metal arc procedure WPS-B-P-2112 to tack weld jacking plates on the OBG segment 11AW top deck adjacent to OBG segment 11BW.

ZPMC personnel attach jacks between the jacking plate and the deck plate in order to align the weld joint between the two segments. This QA Inspector observed a welding current of approximately 170 amps, Mr. Zhang Anlong appeared to be certified to perform this welding and the welding electrodes were being stored in a portable rod oven which is warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Xiaomin, stencil 046709 used shielded metal arc welding procedure specification WPS-345-SMAW-4G(4F)-FCM-Repair to repair counterweight attachment plate weld OBW10L-004. This weld joins the lower attachment plate to OBG segment 10CW edge plate. This QA Inspector observed a welding current of approximately 165 amps, Mr. Wang Xiaomin appeared to be certified to make this weld and ZPMC QC is monitoring this welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Shao Liang, stencil 500436 used shielded metal arc procedure WPS-B-P-2112 to tack weld a jacking plate on the OBG segment 11AW top deck adjacent to OBG segment 11BW. This QA Inspector observed the base material surface where the tack weld was made does not appear to have had the base material paint removed. This QA Inspector informed ZPMC QC Inspector Mr. Zhou Peng that the paint has not been removed prior to making the tack weld. Mr. Zhou Peng informed this QA Inspector that he will have the paint removed prior to additional welding. This QA Inspector observed Mr. Zhang Shao Liang appeared to be certified to perform this welding and the welding electrodes were being stored in a portable rod oven which is warm to the touch. Items observed on this date do not appear to fully comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xu Jian Wen, stencil 040378 used shielded metal arc welding procedure WPS-B-P-2214-FCM-1 to make welds EP169-001-005 through -008 and EP170-001-005 through -008. These welds are located on OBG segments 10CE and 11AE edge plates on the bikepath side of the OBG. This QA Inspector observed a welding current of approximately 170 amps and Mr. Xu Jian Wen appeared to be certified to perform this welding. A torch was used to preheat the base materials and the welding electrodes were being stored in a portable rod oven which was warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Heishan, stencil 040458 used flux cored welding procedure WPS-B-T-2131-TC-U4B-F to make OBG segment 10CE weld SEG064A-044 and segment 11AE weld SEG066A-044. These hold back welds join side plates to the bottom plate on the on the bikepath side of the OBG segments. This QA Inspector observed a welding current of approximately 320 amps and 32.5 volts. This QA Inspector observed Mr. Zhang Heishan appeared to be certified to make this weld and the base material had been preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

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This QA Inspector observed ZPMC welder Mr. Yun Qiang, stencil 044504 used shielded metal arc welding procedure WPS-B-T-4114-1 to make OBG segment 10CE welds DP716-001-015 & -016 and OBG segment 11AE welds DP717-001-008 & -009. These stiffener hold back welds are located on the cross beam side of the OBG segments. This QA Inspector observed a welding current of approximately 170 amps, Mr. Yun Qiang appeared to be certified to make this weld and the base material was preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welders Ms. Ye Xulan, stencil 040581, Ms. Lv Tong Xia, stencil 040484 and Ms. Chen Ziqion, stencil 056364 used shielded metal arc process to tack weld temporary alignment plates on the exterior side plates and bottom plates on the weld joints between OBG segments 11AE and 11BE. This QA Inspector observed each of the welders appeared to be certified to make these welds and the base material was preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Anlong, stencil 219210 and welder Mr. Gong Rui Qiang stencil 218707 used shielded metal arc procedure WPS-B-P-2214 to tack weld temporary alignment plates on the exterior side plates and bottom plate on the weld joints between OBG segments 11AW and 11BW. This QA Inspector observed each of the welders appeared to be certified to make these welds and the base material was preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Dong Zhao Fu, stencil 201080 used shielded metal arc welding procedure WPS-B-P-2112 to weld OBG traffic barrier W5-SB13-002 plates into position. This QA Inspector observed a welding current of approximately 155 amps. This QA Inspector observed Mr. Dong Zhao Fu appeared to be certified to make these welds and the base material was preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Su Hong Biao, stencil 206296 used flux cored welding procedure WPS-B-T-2132 to make traffic barrier tack weld W5-SB1-032-100. This QA Inspector observed a welding current of approximately 330 amps, 295 volts, the base material was preheated with a torch and Mr. Su Hong Biao appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

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This QA Inspector observed ZPMC welder Mr. Han Ze Jiao, stencil 062808 used flux cored welding procedure WPS-B-T-2233-TC-U4B-F to make bikepath weld BK4A-SD1-006-006. This QA Inspector observed a welding current of approximately 235 amps, 28.5 volts and Mr. Han Ze Jiao appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yu Yong Bing, stencil 062716 used flux cored welding procedure WPS-B-T-2233-TC-U4B-F to make bikepath weld BK4A-SD1-007-005. This QA Inspector observed a welding current of approximately 230 amps, 29.0 volts and Mr. Yu Yong Bing appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

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This QA Inspector observed ZPMC welder Mr. Yu Hui Ye, stencil 045143 used flux cored welding procedure specification WPS-B-T-2233-TC-U5-F to perform OBG segment 13AW longitudinal diaphragm welds LD3031-001-161 and -163. This QA Inspector observed ZPMC QC Inspector Mr. Ma Qian Li recorded a welding current of 230 amps and 29.0 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Bi Laishu, stencil 045280 used flux cored welding procedure specification WPS-B-T-2233-TC-U5-F to perform OBG segment 13AW longitudinal diaphragm weld LD3034-001-188. This QA Inspector observed ZPMC QC Inspector Mr. Ma Qian Li recorded a welding current of 216 amps and 24.4 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhao Guo Ping, stencil 201912 used shielded metal arc welding procedure WPS-B-T-2132 to make tack welds on OBG traffic barrier W5-SB3A-002 plates into position. This QA Inspector observed Mr. Zhao Guo Ping appeared to be certified to make these welds and the base material appeared to have been preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

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This QA Inspector observed ZPMC welder Ms. Wang Min, stencil 044771 was using submerged arc welding procedure WPS-B-T-223(2)1T-2 to make OBG segment 13BE to 13CE bottom plate butt weld OBE13C-001. This QA Inspector observed ZPMC QC personnel monitoring this welding and this QA Inspector measured a welding current of approximately 600 amps and 30.0 volts. Ms. Wang Min appeared to be certified to make this weld and the base material was preheated with electric heating elements. Items observed by this QA Inspector appeared to be progressing in compliance with project specifications.



Summary of Conversations:

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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
