

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-017004**Date Inspected:** 05-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 Inspector: Mr. Shi Lei

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. Cheng Chong Lang, stencil 251194 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-Repair to make buttering welds on the ends of OBG segment 10AW cross beam top deck stiffener plates. ZPMC CWI M. Shi Lei showed this QA Inspector weld repair report B-WR14574 indicated that the ends of these stiffener plates will be welded due to being too short. This QA Inspector observed Mr. Cheng Chong Lang appeared to be certified to make these welds, ZPMC personnel used a torch to preheat the base material prior to welding and a welding current of approximately 160 amps. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xue Yuan stencil 202316 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-Repair to complete repairs of OBG segment 10BW bottom plate stiffener plate hold back welds. ZPMC CWI Mr. Shi Lei informed this QA Inspector that these welds had been visually rejected. This QA Inspector measured a welding current of approximately 196 amps and ZPMC

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CWI Mr. Shi Lei informed this QA Inspector that the maximum welding current is 160. Mr. Shi Lei informed this QA Inspector that he will have Mr. Xue Yuan adjust the welding current to a lower setting. Later in this shift, this QA Inspector measured a welding current of approximately 150 amps. Mr. Xue Yuan appeared to be certified to make these welds. Items observed on this date do not fully appear to comply with applicable contract documents. See the photograph below for additional information.

This QA Inspector observed ZPMC welder Mr. Wang Xiaomin, stencil 046709 used shielded metal arc welding procedure specification WPS-345-SMAW-3G(3F)-Repair-1 to complete repairs of weld OBW10B-004 as directed on weld repair document B-WR14757. This weld repair document was issued to allow repairs of ultrasonic rejections. This weld joins OBG segment 10AW and 10BW cross beam side plates near panel point 88. This QA Inspector measured a welding current of approximately 190 amps and ZPMC CWI Mr. Shi Lei informed this QA Inspector that the maximum welding current is 160 and that he had previously measured Mr. Wang Xiaomin to have a welding current of approximately 150 amps. Mr. Shi Lei informed this QA Inspector that someone must have adjusted the welding machine controls and that he will have Mr. Xue Yuan adjust the welding current to a lower setting. Later in this shift, this QA Inspector measured a welding current of approximately 150 amps. Mr. Wang Xiaomin appeared to be certified to make these weld repairs. Items observed on this date do not fully appear to comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Bing Hua, stencil 053316 used flux cored welding procedure WPS-B-T-2233-B-U2-F to make OBG segment 10BW to 10CW "T" stiffener plate splice weld BP103-001-020. This QA Inspector measured a welding current of approximately 220 amps and 24 volts, the base material was heated with a torch and Mr. Zhang Bing Hua 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. Ma Yusheng, stencil 040759 used flux cored welding procedure WPS-B-T-2233-B-U2-F to make OBG segment 10BW to 10CW "T" stiffener plate splice weld BP157-001-022. This QA Inspector measured a welding current of approximately 220 amps and 24 volts, the base material was heated with a torch and Mr. Ma Yusheng 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. Wu Wen Kai stencil 500433 used shielded metal arc welding process to tack weld hold back weld EP133-001-013 on OBG segment 10BW cross beam side edge plate. This QA Inspector observed a welding current of approximately 140 amps and Mr. Wu Wen Kai appeared to be certified to perform this welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC workers were performing heat straightening of OBG segment 10BW counterweight attachment plate that had been distorted during welding of welds OBW10L-01 through OBW10L-12. ZPMC has issued heat straightening document HSR1(B)9106 to complete his work. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Chen Rui stencil 041713 used shielded metal arc welding procedure specification WPS-B-P-2214-TC-U4b-FCM-1 to complete weld OBW9B-011. This weld is located on OBG segment 9DW. This QA Inspector observed a welding current of approximately 150 amps and Mr. Chen

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Rui 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.



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
