

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-017304**Date Inspected:** 07-Oct-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: Mr. Shi Lei & An Qing Xiang

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. Fan Shuai stencil 205616 used shielded metal arc process to tack weld temporary alignment plates on the exterior of 10CE and 11CE side plates adjacent to the bottom plate. This QA Inspector measured a welding current of approximately 155 amps and Mr. Fan Shuai appeared to be certified to perform this welding. ZPMC CWI Mr. An Qing Xiang was monitoring this welding, the base material had been preheated with a torch and the welding electrodes were 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. Cheng Yun, stencil 040320 used shielded metal arc welding procedure WPS-345-SMAW-4G(4F)-FCM-Repair-1 to make OBG segment 10CE weld CA078-001. This weld had been ultrasonically rejected and weld repair document B-WR15508 had been issued to document this repair. This corner assembly weld is located near panel point 95. This QA Inspector observed ZPMC has documented a welding current of 153 amps and the welding electrodes were stored in were stored in a heated portable electrode

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

This QA Inspector observed ZPMC welder Mr. Sun Guang Ping, stencil 050289 used shielded metal arc welding procedure WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make weld repairs on the bikepath side longitudinal diaphragm located between panel point 94 and 95. This LD had recently been reworked to correct misalignment in accordance with critical weld repair CWR1937. ZPMC CWI Mr. An Qing Xiang stated these welds were being performed to resolve visual rejections and he did not know the weld numbers. This QA Inspector observed a welding current of approximately 170 amps. This QA Inspector observed that Mr. Sun Guang Ping appeared to be certified to perform this welding, the electrodes were stored in a heated portable electrode storage container and a torch was used 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. Xue Fu Tai stencil 500674 used shielded metal arc procedure WPS-B-P-2112-FCM-1 to tack weld temporary alignment plates on 11AW and 11BW cross beam side plate "I" stiffener plates. Prior to installation of the temporary plates, mechanical jacks were used to align the adjacent stiffener plates. This QA Inspector measure a welding current of approximately 160 amps, a torch was used to preheat the base material, Mr. Xue Fu Tai appeared to be certified to perform this welding, and the welding electrodes were 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 Qiu Jun stencil 057333 used shielded metal arc welding procedure WPS-B-P-2214-B-U2-FCM-1 to make stiffener plate splice welds SP780-001-044 through -054. These side plate stiffener plate welds are on the inside of OBG segments 11AW and 11BW panel points PP097 and 098. This QA Inspector observed a welding current of approximately 160 amps. This QA Inspector observed that Mr. Zhang Qiu Jun appeared to be certified to perform this welding and the electrodes were stored in a heated portable electrode storage container. 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 WPS-B-P-2214-B-U2-FCM-1 to make stiffener plate splice welds SP740-001-044 through -054. These side plate stiffener plate welds are on the inside of OBG segments 11AW and 11BW panel points PP097 and 098. This QA Inspector observed QC has recorded welding current of 150 amps. This QA Inspector observed that Mr. Chen Rui 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 welder Mr. Hong Jie Fang, stencil 205758 used shielded metal arc process to tack weld temporary alignment plates on the exterior of OBG cross beam CB13 adjacent to OBG segment 10AW. These welds are being made to hold the splice plate that will be bolted between the bottom surfaces of the cross beam and 10AW bottom plate. This splice plate will be later be bolted to both of these components. This QA Inspector observed Mr. Hong Jie Fang appeared to be certified to perform this welding and the base material appears to have been preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.

This QA Inspector observed ZPMC workers were performing heat straightening of OBG longitudinal diaphragms

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between OBG segments between OBG segments 10BE and 10CE in accordance with heat straightening document 9555 and OBG segments 10CE and 11AE in accordance with heat straightening document 9559. This QA Inspector observed ZPMC CWI Mr. An Qing Xiang was monitoring this work. Items observed on this date appeared to generally comply with applicable contract documents.

ZPMC CWI Mr. An Qing Xiang informed this QA Inspector that ZPMC will start sandblasting of OBG segments 10E today at 2200 hours.



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
