

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-017797**Date Inspected:** 15-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: ABF: Mr. Shang Qing Quan, Mr. Li Shi You

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 14

This QA Inspector observed ZPMC workers were performing heat straightening of OBG segment 14E anchor plates AP3001 and 3007. ABF CWI Mr. Shang Qing Quan showed this QA Inspector heat straightening documents for these two plates. This QA Inspector observed the two heat straightening (HS) documents do not have any document numbers written in the corner of the sheets. Mr. Shang Qing Quan informed this QA Inspector that he will contact dayshift personnel to have them add tracking numbers to these two documents. 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 welder Mr. Zhang Yuan Ming stencil 055482 used shielded metal arc process to tack weld of segment 13BE weld SEG3011A-016. QA observed that ZPMC did not appear to have preheated the base materials prior to welding. ABF CWI Mr. Shang Qing Quan was informed and he had the weld ground out and a new tack weld was installed. Items observed on this date do not appear to fully comply with applicable

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contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Quin Quan, stencil 044774 used flux cored welding procedure WPS-B-T-2232-TC-U4B-F to make stiffener plate weld VP3007-001-045. This QA Inspector measured a welding current of approximately 300 amps, 31.0 volts Mr. Zhang Quin Quan appeared to be certified to make this weld. This QA Inspector observed the base materials were preheated with electrical heaters prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Jinjiu stencil 043661 used shielded metal arc procedure WPS-B-P-2214-B-U2-FCM-1 to make OBG segment 13AE weld SEG3007AL-017. This QA Inspector observed Mr. Wang Jinjiu has a welding current of 170 amps and the base materials appeared to have been preheated with electric heaters prior to commencement of welding. This QA Inspector observed the shielded metal arc welding electrodes were stored in an electrically heated electrode storage container and it appeared 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. Wang Li, stencil 044772 used shielded metal arc procedure WPS-B-P-2214-B-U2-FCM-1 to make OBG segment 13AE weld SEG3007AL-013. This QA Inspector observed Mr. Wang Li has a welding current of 160 amps and the base materials appeared to have been preheated with electric heaters prior to commencement of welding. This QA Inspector observed the shielded metal arc welding electrodes were stored in an electrically heated electrode storage container and it appeared 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. Li Jun, stencil 051348 used shielded metal arc procedure WPS-B-P-2211-B-U3B to tack weld CJP weld joint that joins OBG segment 14W side plates SP3135A and SP3134A. This QA Inspector observed Mr. Li Jun has a welding current of 160 amps and the base materials were preheated with a torch prior to commencement of welding. This QA Inspector observed the shielded metal arc welding electrodes were stored in an electrically heated electrode storage container and it appeared 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. Hong Liang, stencil 200113 used shielded metal arc welding procedure specification WPS-345-SMAW-4G(4F)-FCM-Repair to make OBG segment 13CE weld repair SEG3011A-003. This weld had previously been identified as having UT rejections and weld repair document B-WR15792 has been issued to document this repair. This QA Inspector observed a welding current of approximately 140 amps, the base materials were preheated with electric heaters and Mr. Hong Liang appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

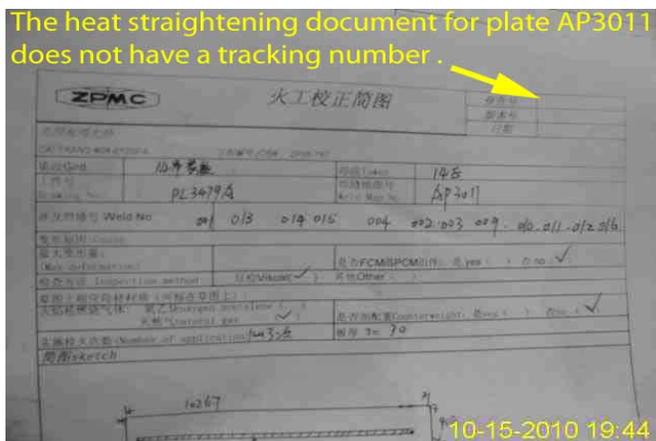
This QA Inspector observed ZPMC was using a grinder to remove tack welds from OBG segment 13AW stiffener plate weld joints SA3168-037 and SA3168-038. ABF CWI Mr. Li Shi You informed this QA Inspector that ZPMC had installed a stiffener plate which has a curved end instead of installing a rectangular shaped plate. See the photograph below for additional information.

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This QA Inspector observed ZPMC welder Mr. Tian Shang Long, stencil 050240 used shielded metal arc welding procedure specification WPS-B-P-2212-FCM-1 to tack weld segment 13CE longitudinal diaphragms LD3036A and LD3033A. This QA Inspector measured a welding current of approximately 160 amps and Mr. Tian Shang Long 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. Rao Wei stencil 049972 used shielded metal arc welding procedure specification WPS-B-P-2212-FCM-1 to tack weld segment 13CW longitudinal diaphragms LD3033A and LD3035A. This QA Inspector measured a welding current of approximately 150 amps and Mr. Rao Wei appeared to be certified to make this weld. 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