

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-017804**Date Inspected:** 30-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. Lv Li Qing, Mr. Wang Jie

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 welder Mr. Dan Deyin, stencil 044795 used flux cored welding procedure WPS-B-T-2231-TC-U4B-F to make OBG segment 13BE weld SEG3009S-027. This weld joins EB3017B to a floor beam at panel point PP120.5. This QA Inspector measured a welding current of approximately 250 amps. This QA Inspector observed that Mr. Dan Deyin 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. Hu Yancheng stencil 049339 used shielded metal arc welding procedure specification WPS-B-P-2214-TC-U4B-F to make OBG segment 13BE weld SEG3009G-075. This QA Inspector observed Mr. Hu Yancheng appeared to be certified to make this weld. This QA Inspector observed the base material appeared to have been preheated with electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

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This QA Inspector observed ZPMC welder Mr. Kua Wen Shan stencil 054013 used shielded metal arc procedure WPS-B-P-2213-TC-T4B-FCM-1 to make OBG segment 13CE weld SEG3001K-126. This weld joins stiffener plates to a floor beam. This QA Inspector observed ZPMC QC Inspector Mr. Wang Zhu has recorded a welding current of 155 amps. This QA Inspector observed a welding current of approximately 170 amps. This QA Inspector observed that the maximum welding current listed in the WPS is 160 amps and that Mr. Kua Wen Shan has a welding current that is approximately 10 amps above this maximum limit. This QA Inspector showed ZPMC QC Inspector Mr. Wang Zhu that the welding current is above the maximum and Mr. Zhu had Mr. Kua Wen Shan adjust the welding current to approximately 155 amps. This QA Inspector observed the base materials appeared to have been preheated with electric heaters prior to commencement of welding. Items observed on this date do not appear to fully comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wu Haijun stencil 201087 used shielded metal arc procedure WPS-B-P-2213-TC-T4B-FCM-1 to make OBG segment 13CE weld SEG3001K-071. This weld joins stiffener plates to a floor beam near panel point PP119.5. This QA Inspector observed ZPMC QC Inspector Mr. Wang Zhu has recorded a welding current of 153 amps. This QA Inspector observed a welding current of approximately 170 amps. This QA Inspector observed that the maximum welding current listed in the WPS is 160 amps and that Mr. Wu Haijun has a welding current that is approximately 10 amps above this maximum limit. This QA Inspector showed ZPMC QC Inspector Mr. Wang Zhu that the welding current is above the maximum and Mr. Zhu informed this QA Inspector that Mr. Wu Haijun will not be performing any additional welding this shift. This QA Inspector observed the base materials appeared to have been preheated with electric heaters prior to commencement of welding. Items observed on this date do not appear to fully comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Sun Ling Ling stencil 048047 used shielded metal arc welding procedure specification WPS-B-P-2213-TC-T4B-FCM-1 to make OBG segment 13BE weld SEG3009B-084. This weld joins a stiffener plate to floor a floor beam FB3142A near panel point PP121.5. This QA Inspector measured a welding current of approximately 160 amps. This QA Inspector observed Mr. Sun Ling Ling appeared to be certified to make this weld. This QA Inspector observed the base material appeared to have been preheated with electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Chen Chuanzong, stencil 044824 used flux cored welding procedure WPS-345-FCAW-2F(2G)-Repair-1 to make repairs of OBG stiffener plate weld. This weld had been ultrasonically rejected and the repairs were documented on weld repair document B-WR15262. This QA Inspector measured a welding current of approximately 280 amps, 31.5 volts and Mr. Chen Chuanzong appeared to be certified to make this weld. This QA Inspector observed the base materials were preheated with electric heaters prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Wang Min, stencil 044771 used submerged arc welding procedure specification WPS-B-T-2221-B-L2C-S-2 to make OBG segment 14E weld SEG3019AW-099 and SEG3019AW-103. This QA Inspector measured a welding current of approximately 590 amps, 32.0 volts and Ms. Wang Min appeared to be certified to make this weld. This QA Inspector observed the base materials were preheated with electric heaters prior to welding. Items observed on this date appeared to generally comply with

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applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Liu Zipei, stencil 062406 used submerged arc welding procedure WPS-B-T-2221-B-U3C-S-2 to make OBG segment 14E weld SEG3019AP-005. This QA Inspector observed ZPMC QC personnel have recorded a welding current of 635 amps and 31.0 volts. Mr. Liu Zipei 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.

This QA Inspector observed ZPMC personnel performed heat straightening of OBG segment 14E welds SEG3019AL-288 and SEG3019AL-289. These welds join side plates SP3116A, SP3117A and SP3118A. ZPMC QC personnel monitored this activity and ZPMC has issued heat straightening document HSR #9744 for this activity. 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
