

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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-015795**Date Inspected:** 22-Jul-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:** Tower and OBG**Summary of Items Observed:**

CWI Inspectors: Mr. Liu Yang, Mr. Guo Zhong

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:

Tower Bay 10

This QA Inspector observed ZPMC welder Mr. Huang Zhao, stencil 056200 was using shielded metal arc procedure WPS-B-T-3213-TC-U5b to make South Tower Lift 5 weld SSD1-TL5-1E/F-4A. This QA Inspector observed ZPMC have installed electric heaters to preheat the adjacent base material prior to welding and QC personnel were monitoring the base material interpass temperatures. This QA Inspector observed the welding electrodes were being stored in a portable rod oven which was connected to an electric power cable, Mr. Huang Zhao had a welding current of approximately 180 amps and he appeared to be certified to make this weld. See the photograph below showing a typical South Tower lift 5 weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Shi Xingyu, stencil 052930 was using shielded metal arc procedure WPS-B-T-3213-TC-U5b to make South Tower Lift 5 weld SSD1-TL5-1F/F-25B. This QA Inspector observed ZPMC have installed electric heaters to preheat the adjacent base material prior to welding and QC

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personnel were monitoring the base material interpass temperatures. This QA Inspector observed the welding electrodes were being stored in a portable rod oven which was connected to an electric power cable, Mr. Shi Xingyu had a welding current of approximately 180 amps and he 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. Tang Yong, stencil 052493 was using shielded metal arc procedure WPS-B-T-3213-TC-U5b to make South Tower Lift 5 weld SSD1-TL5-1E/F-1B. This QA Inspector observed ZPMC have installed electric heaters to preheat the adjacent base material prior to welding and QC personnel were monitoring the base material interpass temperatures. This QA Inspector observed the welding electrodes were being stored in a portable rod oven which was connected to an electric power cable, Mr. Tang Yong had a welding current of approximately 170 amps and he 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. Li Panpan, stencil 057239 was using shielded metal welding procedure WBP-B-T-2211-B-U5b to tack weld bikepath plate BK4-PL1A to BK4-PL2A. This QA Inspector observed welding current of approximately 140 amps and Mr. Li Panpan appeared to be certified to make this weld. This QA Inspector observed a second person used a torch to preheat the base material where each of these tack welds was to be installed. Items observed on this date appeared to generally comply with applicable contract documents.

Tower Bay 11

This QA Inspector observed ZPMC welder Mr. Li Ming Qian stencil 054460 was using shielded metal arc procedure WPS-B-T-3213-TC-U5b to make West Tower Lift 5 weld WSD1-SPSA5-017-1B. This QA Inspector observed ZPMC had installed electric heaters to preheat the adjacent base material prior to welding and QC personnel were monitoring the base material interpass temperatures. This QA Inspector observed the welding electrodes were being stored in a portable rod oven which was connected to an electric power cable, Mr. Li Ming Qian had a welding current of approximately 270 amps and he 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. Cui Guozhong, stencil 040656 was using shielded metal arc procedure WPS-B-T-3213-TC-U5b to make West Tower Lift 5 weld WSD1-SPSA5-017-4A. This QA Inspector observed ZPMC had installed electric heaters to preheat the adjacent base material prior to welding and QC personnel were monitoring the base material interpass temperatures. This QA Inspector observed the welding electrodes were stored in a portable rod oven which was connected to an electric power cable, Mr. Cui Guozhong had a welding current of approximately 280 amps and he 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 welders Mr. Zhang Feng, stencil 049769 and Mr. Wang Xiaomin, stencil 046709 were using shielded metal arc procedure WPS-B-T-3213-TC-U5b to make East Tower Lift 5 weld ESD1-TL5-2E/F-8B. This QA Inspector observed ZPMC had installed electric heaters to preheat the adjacent base material prior to welding and QC personnel monitored the base material interpass temperatures. This QA Inspector observed the welding electrodes were stored in a portable rod oven which was connected to an electric power cable, a welding current of approximately 175 amps and both welders appeared to be certified to make this

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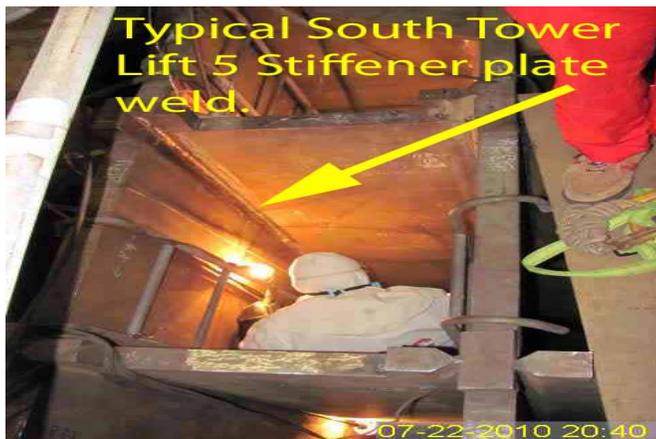
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weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welders stencil 044541 and stencil 044551 were using shielded metal arc procedure WPS-B-T-3213-TC-U5b to make East Tower Lift 5 weld ESD1-TL5-2F/F-8A. This QA Inspector observed ZPMC had installed electric heaters to preheat the adjacent base material prior to welding and QC personnel monitored the base material interpass temperatures. This QA Inspector observed the welding electrodes were stored in a portable rod oven which was connected to an electric power cable, a welding current of approximately 170 amps. Items observed on this date appeared to generally comply with applicable contract documents.

Dock

This QA Inspector observed ZPMC personnel were installing temporary structural steel shipping supports to secure OBG segments 7 and 8 to the ship that was berthed at the end of the dock and no personnel appear to be welding OBG segments or tower components.



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
