

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-010046**Date Inspected:** 06-Nov-2009**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 Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Zhu Han Shu, Mr. Zhu Zhong Hai, Mr. Li Ming

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 2

This QA Inspector observed ZPMC welder Mr. Rao Wei, stencil 049972 is using shielded metal arc welding procedure specification WPS-B-T-2112-FCM to make OBG floor beam stiffener plate fillet tack weld FB3054-001-126. This QA Inspector observed a welding current of approximately 160 amps, the base material appears to be clean where the tack welds were being made, and Mr. Rao Wei is certified to make this weld. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Ji Hua, stencil 045227 has recently used flux cored welding procedure specification WPS-B-T-2233-TC-U4b-F to make OBG floor beam stiffener plate fillet weld FB3003-001-036 in the 3F position. This QA Inspector observed ZPMC QC Inspector Mr. Zhan Hai Feng has recorded a welding current of 210 amps and 26.3 volts. Rao Wei is certified to make this weld. This QA

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Inspector observed Mr. Ji Hua appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

OBG BAY 9

This QA Inspector performed random magnetic particle inspections of approximately 15 percent of the tack welds that attach closed ribs to deck panels DP3070-001 and DP3008-001. These deck panels are clamped to the convex shaped welding platforms that are adjacent to overhead welding gantry #2. Earlier in this shift ZPMC conducted a "Production Monitoring Test" using gantry #2 and if the testing results are satisfactory these deck panels are scheduled to be welded during the dayshift. These deck panel tack welds appear to have been previously MT inspected by ZPMC personnel and several of the welds appear to have been ground to eliminate MT indications which had been marked by ZPMC MT Inspectors. These inspections were performed on an informational basis and no TL-6028 Magnetic Particle Test Report has been issued to document these inspections.

OBG BAY 10

This QA Inspector observed ZPMC welder Mr. Fang Yung Jie, stencil 054547 is using shielded metal arc welding procedure WPS-B-T-2231-TC-U5-F to make north tower splice plate tack welds. This QA Inspector measured a welding current of approximately 175 amps and the welding electrodes are being stored in a heated portable electrode storage oven. This QA Inspector observed that ZPMC workers verified the base material was preheated to a minimum of 180°C prior to welding. This QA Inspector observed Mr. Fang Yung Jie is certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

OBG BAY 14

This QA Inspector observed ZPMC welder Ms. Li Jiao, stencil 049861 is using shielded metal arc welding procedure specification WPS-B-P-2211 to make tack weld SEG070-003 which attaches side plate DP348-001 to DP375-001. This QA Inspector observed a welding current of approximately 160 amps. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yang Changming, stencil 058242 is using shielded metal arc welding procedure specification WPS-B-P-2211FCM-1 to make OBG corner assembly weld CSD9-PP86-003. This QA Inspector observed a welding current of approximately 170 amps. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Changming, stencil 047864 is using shielded metal arc welding procedure specification WPS-B-P-2213-FCM-1 to complete weld SEG051A-039. This QA Inspector observed a welding current of approximately 160 amps. Items observed on this date appeared to generally comply with applicable contract documents.

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This QA Inspector observed ZPMC welder Mr. Li Jun, stencil 051348 is using shielded metal arc welding procedure specification WPS-B-P-2213-FCM-1 to complete weld SEG051A-039. This QA Inspector observed a welding current of approximately 165 amps. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Wang Lanying, stencil 045265 has recently completed using submerged arc welding procedure specification WPS-B-T-2221-B-L2C-S-2 to make groove weld SEG3004A-002. This QA Inspector observed ZPMC QC has recorded a welding current of 610 amps and 30.5 volts. Items observed on this date appeared to generally comply with applicable contract documents.

In front of OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Wang Zhenbing, stencil 216086 is using shielded metal arc welding procedure WPS-B-P-2213-TC-U4B-FCM to deposit shielded metal arc weld SEG064D-079. This QA Inspector observed a welding current of 170 amps and that ZPMC QC representative Mr. Guo Zing Hui 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.

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| Inspected By: | Dawson,Paul | Quality Assurance Inspector |
| Reviewed By: | Carreon,Albert | QA Reviewer |
