

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-012746**Date Inspected:** 17-Mar-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. Liu Hua Jie, Mr. Lv Li Qing and Mr. Li Jia

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 6

This QA Inspector observed ZPMC welder Mr. Li Shu Qiang, stencil 53609 has recently used flux cored welding procedure WPS-B-T-2231-TC-U4b-1 to make welds USPL1-383-001 and USPL1-383-002. This QA Inspector observed QC inspector Mr. Liu Chuan Gang has recorded a welding current of 302 amps and 30.2 volts. This QA Inspector verified Mr. Li Shu Qiang appears 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 Yuan Zheng, stencil 217185 has recently used flux cored welding procedure WPS-B-T-2231-TC-U4b-1 to make welds USPL1-384-001 and USPL1-384-002. This QA Inspector observed QC inspector Mr. Liu Chuan Gang has recorded a welding current of 308 amps and 30.4 volts. This QA Inspector verified Mr. Li Yuan Zheng appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

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OBG Bay 14

This QA Inspector observed ZPMC welder Mr. He Hanbi, stencil 202122 is using flux cored welding procedure WPS-B-T-2132 to make floor beam FB3065 gusset welds at OBG segment 12BE panel point 113. This QA Inspector measured a welding current of approximately 260 amps and 27.2 volts. This QA Inspector observed ZPMC CWI Mr. Liu Hua Jie is monitoring this welding and Mr. He Hanbi appears to be certified to make this weld. CWI Mr. Liu Hua Jie informed this QA Inspector that he did not know the weld number for this specific weld because he did not have a weld map that lists these welds. 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. Wang Changming, stencil 047864 is using shielded metal arc welding procedure specification WPS-B-T-2133 to complete weld SEG3005H-008. This QA Inspector observed a welding current of approximately 145 amps and the welding electrodes are being stored in a heated portable electrode storage oven. This QA Inspector observed the base material was preheated with a torch prior to commencement of the welding and Mr. Wang Changming appears 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 Ms. Hue Junrong, stencil 201215 is using flux cored welding procedure WPS-B-T-2132 to make OBG weld SEG3005E-021. This weld is located between a floor beam and the bottom plate near PP114 at OBG segment 12BW. This QA Inspector measured a welding current of approximately 290 amps and 31.0 volts. This QA Inspector observed the base material had been preheated with a torch and Ms. Hue Junrong appears 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. Sun Gusong, stencil 058592 is using shielded metal arc welding procedure specification WPS-B-P-2213-B-U2-FCM to tack weld SEG3001P-020 in the 3G (vertical) position. This QA Inspector observed a welding current of approximately 160 amps and the adjacent base material appears to be at an ambient temperature. This QA Inspector informed ZPMC CWI Mr. Lv Li Qing that this base material had not been preheated prior to making tack welds. This QA Inspector observed the base material is approximately 30 mm thick and WPS-B-P-2213-B-U2-FCM requires this thickness of material to have a minimum preheat of 60 degrees Celsius (140 degrees Fahrenheit). Mr. Lv Li Qing informed this QA Inspector that all the tack welds will be removed and he will talk to Mr. Sun Gusong and ensure preheat is established prior to any additional welding. Later in the shift, this QA Inspector observed the tack welds that had been made on ambient temperature material have been removed and new tack welds have been installed adjacent to where the tack welds had been removed. This QA Inspector observed Mr. Sun Gusong appears to be certified to make this weld. Items observed on this date do not appear to fully comply with applicable contract documents. See the photographs below for additional information.

OBG Bay 19

This QA Inspector observed no ZPMC workers appeared to be working on Caltrans materials. Support bracket SB010-042 was staged in the area where several other support brackets had previously been located and most of the overhead lights in bay 19 are turned off.

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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
