

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-009998**Date Inspected:** 01-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. Xu Xian Ping, Mr. Lv Li Qin, Mr. Lin Ziao 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:

OBG Assembly

This QA Inspector observed two ZPMC employees performing air carbon arc gouging of weld OBW1A-008 in accordance with critical weld repair CWR B-CWR-875. This weld joins the bottom plates of segment 1AW and segment 1BW. This QA Inspector observed one ZPMC QC representative standing outside of segment 1AW/1BW and this QC Inspector did not have a copy of the critical weld report at the location of the weld repair activities. This QA Inspector went to the ZPMC QC office and ZPMC lead CWI Inspector Mr. Li Yang informed this QA Inspector that he had a copy of the critical weld repair document. This QA Inspector informed Mr. Li Yang that the critical weld repair document states "Removal shall be witnessed by the CWI..." and that ZPMC personnel are performing gouging of the weld without any monitoring by QC personnel. Mr. Li Yang said he will go to the area of the gouging and a few minutes later this QA Inspector observed Mr. Li Yang near where this carbon arc gouging was being performed and that Mr. Li Yang had a copy of the critical weld repair document which lists over 200 ultrasonic indications in this weld which require weld repairs.

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TOWER BAY 10

This QA Inspector observed ZPMC welder Ms. Dong Yumei stencil 054069, is using welding WPS-B-T-2132 to make tower skirt plate weld NSD1-A803A/B-8. This QA Inspector observed a welding current of approximately 315 amps and 30.0 volts. This QA Inspector observed that Ms. Dong Yumei is certified to make this weld and ZPMC QC Inspector Mr. Li Peng Fei is monitoring this welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Dong Yuqun stencil 053116, is using welding WPS-B-T-2132 to make tower skirt plate weld NSD1-A803A/B-7. This QA Inspector observed a welding current of approximately 315 amps and 30.0 volts. This QA Inspector observed that Ms. Dong Yuqun is certified to make this weld and ZPMC QC Inspector Mr. Li Peng Fei is monitoring this welding. Items observed on this date appeared to generally comply with applicable contract documents.

TOWER BAY 11

This QA Inspector observed ZPMC welder Mr. Wang Shouru stencil 042218, is using welding WPS-B-T-2132 to make tower skirt plate weld ESD1-A65B/B-5-1. This QA Inspector observed a welding current of approximately 325 amps and 32.1 volts. This QA Inspector observed that Mr. Wang Shouru is certified to make this weld and ZPMC QC CWI Mr. Lin Xigozhong is monitoring this welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wu Jinguo stencil 059541, is using welding WPS-B-T-2132 to make tower skirt plate weld ESD1-A65B/B-7-1. This QA Inspector observed a welding current of approximately 338 amps and 31.5 volts. This QA Inspector observed that Mr. Wu Jinguo is certified to make this weld and ZPMC QC CWI Mr. Lin Xigozhong is monitoring this welding. Items observed on this date appeared to generally comply with applicable contract documents.

An Incident report was issued to document the following:

This QA Inspector observed ZPMC personnel performing shielded metal arc welding of temporary alignment plates to 100 mm thick skin plate A on West Tower Lift 1 at approximately 50 meters elevation without obtaining adequate base material preheat of the tower skin plate. This QA Inspector felt the base material adjacent to where the tack weld had been made and determined the base material where the weld was made appears to be at an ambient temperature and Welding Procedure WPS-B-T-2112 requires this thickness of material to have a minimum preheat of 110 degrees Celsius. This QA Inspector informed ZPMC CWI Mr. Lin Ziao Zhong that this temporary weld appears to have been made without preheating the base material and that an incident report is being issued to document this lack of preheating. See the photographs below for additional information.

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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
