

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-012304**Date Inspected:** 19-Feb-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 and Tower**Summary of Items Observed:**

CWI Inspectors: Mr. Li Yang, Mr. Gong Liang Zhu

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 Bays 1 through 9

This QA Inspector observed no ZPMC personnel were working on Caltrans OBG segments or tower assemblies in OBG Bays 1 through 9.

OBG Bays 13 and 14

This QA Inspector observed no ZPMC personnel were working on Caltrans OBG segments or tower assemblies in OBG Bays 13 or 14 and the majority of the overhead lights were turned off.

Tower Bay 10

This QA Inspector observed ZPMC welder Mr. Shi Xingyu, stencil 052930 has recently completed using shielded metal arc process procedure WPS-345-SMAW-1G(1F)-Repair to perform north tower lift 4 weld

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

NSTL4-1B/L-1B, Repair #2 between skin plate C and skin plate D. The repair of ultrasonic rejections is being performed per critical weld repair TCWR533. This QA Inspector observed ZPMC CWI Mr. Gong Liang Zhu has documented a welding current of 224 amps. This QA Inspector observed that Mr. Shi Xingyu 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. Bai Wen Ming stencil 040434 is using flux cored welding procedure WPS-345-FCAW-1G(1F)-Repair to perform north tower lift 4 weld NSTL4-1B/L-1B, Repair #2 between skin plate C and skin plate D. The repair of ultrasonic rejections is being performed per critical weld repair TCWR533. This QA Inspector observed ZPMC CWI Mr. Gong Liang Zhu has documented a welding current of 310 amps and 30.2 volts. This QA Inspector observed that Mr. Bai Wen Ming 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 a ZPMC worker is using air carbon arc gouging equipment to remove portions of weld NSTL4-3B/L-1A in accordance with welding repair report TCWR533 as referenced on UT report T787-UT-2569R4 at location 20. It appears that ZPMC has preheated the base material prior to performing air carbon arc gouging. This weld removal was being monitored by QC CWI Mr. Gong Liang Zhu. This QA Inspector did not observe any ZPMC personnel performing welding repairs of any of these welds during this shift. Items observed on this date appeared to generally comply with applicable contract documents. See the photographs below for additional information.

OBG Trial Assembly

The QA Inspector observed ZPMC welder Mr. Sun Daocan, stencil 250833 is using shielded metal arc process WPS-B-P-2211-B-U2 to make fillet tack welds on OBG 6BW weld OBW6F-006. The QA Inspector observed one worker is using a torch to preheat the base material prior to welding, and ZPMC CWI Mr. Li Yang is monitoring this welding. Items observed by the QA Inspector appear to comply with project specifications.

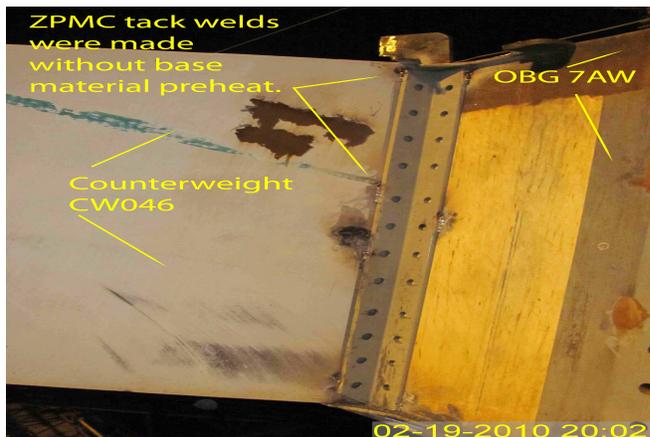
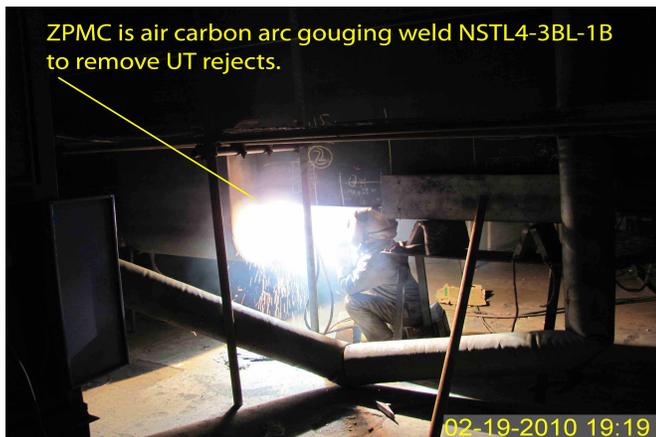
This QA Inspector observed ZPMC welder Mr. Li Wengou, stencil 066261 is using shielded metal arc process to install temporary tack welds between a steel angle plate and the side of counterweight CW046 at OBG Segment 7AW. This QA Inspector did not observe any base material preheat being applied to the area that was tack welded and after the tack weld had been made the base material adjacent to where the weld was made felt cool to the touch. This QA Inspector observed the shielded metal arc welding electrodes are being stored in a portable rod oven was not connected to any power supply and the electrodes felt cool to the touch. This QA Inspector informed Mr. Li Wang that this tack weld appears to have been made without the base material being preheated and the welding electrodes do not appear to have been kept warm. Mr. Li Wang said these temporary welds will be removed and the weld removal areas will be inspected using the magnetic particle process. Mr. Li Wang bent the remaining cold shielded metal arc welding electrodes and discarded them. Items observed on this date do not appear to fully comply with applicable contract documents. See the photograph below for additional information.

This QA Inspector observed ABF personnel performing ultrasonic inspection of repaired weld between OBG segments 6BW to 6CW side plates. This weld had previously been identified as having ultrasonic rejections, and additional ultrasonic rejections were identified by ABF personnel.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Many of the ZPMC workers are not at work due to the Chinese New Year holiday.



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
