

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-006087**Date Inspected:** 01-Mar-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**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 Fabrication**Summary of Items Observed:**

CWI Inspectors Mr. Lin Dong Liang, Mr. Wu Ming Kai, Mr. Liu Zhong An

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. The QA Inspector observed the following:

## Tower Bay 11

This QA Inspector performed random ultrasonic (UT) inspections of approximately 10 percent length of West Tower Lift 2 Skin A stiffener to skin plate welds WSD1-SA340D/F-13, WSD1-SA340D/F-16, WSD1-SA340E/F-16, WSD1-SA340E/F-28 and WSD1-SA340E/F-31. These welds had previously been ultrasonically inspected and accepted by ZPMC inspection personnel. The QA Inspector observed the welds that were ultrasonically inspected by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on these inspections see the TL6027 Ultrasonic Test Report.

This QA Inspector performed random ultrasonic (UT) inspections of approximately 10 percent length of East Tower Lift 3 Skin A stiffener to skin plate weld ESD1-FASA3-2A/E-1. This weld had previously been ultrasonically inspected and accepted by ZPMC inspection personnel. The QA Inspector observed the weld that was ultrasonically inspected by this QA Inspector appears to comply with AWS D1.5 UT requirements. For additional information on this inspection see the TL6027 Ultrasonic Test Report.

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Tower Bay 10

The QA Inspector observed ZPMC welder Ms. Zhang Lingling stencil 207746 is using welding procedure specification WPS-B-T-2221-B-S2 to make submerged arc groove weld NSD1-FDSA3-1B/C-9A. The QA Inspector observed QC personnel had recorded a welding current of approximately 615 amps, 30.1 volts and the base material appears to be between 110°C and 230°C. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Ms. Liu Xiaoyan stencil 207745 is using welding procedure specification WPS-B-T-2221-B-S2 to make submerged arc groove weld NSD1-FDSA3-1B/C-6A. The QA Inspector observed QC personnel have recorded a welding current of approximately 645 amps, 30.5 volts and the base material appears to be between 110°C and 230°C. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Mr. Chang ChuanGang stencil 53870 is using flux cored welding procedure WPS B-T-2221-TC-U5-F to make stiffener plate to tower skin plate weld NSD1-FCSA3-1B/C-6A. The QA Inspector observed the base material had been preheated using electrical heater elements. The QA Inspector observed ZPMC Quality Control personnel measuring Mr. Chang ChuanGang having a welding current of approximately 312 amps and 31.5 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

The QA Inspector observed ZPMC welder Mr. Bi Chun stencil 040343 is using flux cored welding procedure WPS B-T-2231-TC-P5-F to make stiffener plate to tower skin plate weld NSD1-FCSA3-1B/C-6A. The QA Inspector observed the base material had been preheated using electrical heater elements. The QA Inspector observed ZPMC Quality Control personnel measuring Mr. Bi Chun having a welding current of approximately 309 amps and 31.0 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

The QA Inspector observed ZPMC welder Mr. Zhang Ronghong stencil 205908 is using shielded metal arc welding procedure WPS B-T-2221-B-U3C-5-2 to make tower skin plate weld NSD1-FCSA3-1B/C-6A. The QA Inspector observed the base material had been preheated using a torch. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

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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 Serge Sinevod phone: 134-8257-0045 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Clifford,William	QA Reviewer

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