

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-006102**Date Inspected:** 19-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 Inspector: Mr. Wu Ming Kai

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 10

The QA Inspector observed ZPMC welder Mr. Huang Zhao, stencil 056200 is using welding procedure WPS-B-T-3212-TC-U5B-1 to make a shielded metal arc groove weld on shear link weld WDI-A467-33M-4-1A. The QA Inspector observed ZPMC CWI Mr. Wu Ming Kai measuring Mr. Zhao to have a welding current of 235 amps. Prior to welding the QA Inspector observed ZPMC personnel had used electric heaters to preheat the base material adjacent to where the weld was to be deposited. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Mr. Gao Qiang, stencil 057258 is using welding procedure WPS-B-T-3212-TC-U5B-1 to make a shielded metal arc fillet weld on shear link weld WDI-A467-33M-4A. The QA Inspector observed ZPMC CWI Mr. Wu Ming Kai measuring Mr. Qiang to have a welding current of 270 amps. Prior to welding the QA Inspector observed ZPMC personnel had used electric heaters to preheat the base material adjacent to where the weld was to be deposited. Items observed by the QA Inspector appear to comply

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with project specifications.

The QA Inspector observed ZPMC welder stencil 040491 is using welding procedure WPS-B-T-2112 to make a shielded metal arc fillet weld on shear link weld WDI-A467-33M-4A. The QA Inspector observed ZPMC CWI Mr. Wu Ming Kai measuring a welding current of 270 amps. Prior to welding the QA Inspector observed ZPMC personnel had used electric heaters to preheat the base material adjacent to where the weld was to be deposited. Items observed by the QA Inspector appear to comply with project specifications.

This QA Inspector performed random ultrasonic inspections of approximately 80 percent length of Lift 2 North tower stiffeners to skin plate C complete joint penetration “T” welds NSD1-SA171-A/D-15, NSD1-SA171-A/D-16, NSD1-SA171-A/D-19, NSD1-SA171-A/D-20 and NSD1-SA171-A/D-22. 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 this inspection see the TL6027 Ultrasonic Test Report.

This QA Inspector performed random ultrasonic inspections of approximately 10 percent length of Lift 3 South tower skin plate C and D complete joint penetration stiffener butt welds SSD1-FASA3-1E/E-5, SSD1-FASA3-1E/E-12, SSD1-FASA3-1E/E-21, SSD1-FASA3-1E/E-24, SSD1-FASA3-1E/E-37, SSD1-FASA3-1E/E-44 and SSD1-FASA3-1E/E-53. These welds 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.

This QA Inspector performed random ultrasonic inspections of approximately 10 percent length of Lift 3 North tower skin plate D complete joint penetration butt welds NSD1 –FDSA3-1A/C-5A-(2), NSDA3-FDSA-1B/C-8A-(1) and NSD1-FDSA3-1B/C-14-(1). 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 this inspection see the TL6027 Ultrasonic Test Report and the photograph below.



Summary of Conversations:

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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.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer
