

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-006101**Date Inspected:** 18-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 Yang, Mr. Wu Ming Kai, Mr. Jin Dong Liang

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

This QA Inspector performed random ultrasonic inspections of approximately 10 percent length of Lift 2 North tower stiffeners to skin plate B complete joint penetration "T" welds NSD1-SA61F/G-1, NSD1-SA61E/G-14, NSD1-SA61E/G-19 and NSD1-SA10E/G-10. 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 2 North tower stiffeners to skin plate B complete joint penetration "T" welds NSD1-SA163-A/D-14, NSD1-SA163-A/D-15, NSD1-SA163-A/D-16 and NSD1-SA163-B/D-3. 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

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

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 D complete joint penetration butt weld SSD1-FDSA3-1A/C-5A-(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.

This QA Inspector performed random ultrasonic inspections of approximately 10 percent length of Lift 3 North tower skin plate C complete joint penetration butt weld NSD1-FCSA3-1B/C-7 and NSD1-FCSA3-1B/C-10. 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 stiffener on A3 complete joint penetration butt weld SSD1-FASA3-1E/E-28 and Lift 3 South tower stiffener on A1 complete joint penetration butt weld SSD1-FASA3-1E/E-60. 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 B complete joint penetration butt weld SSD1-FBSA3-1A/C-3. 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.

Tower Bay 11

This QA Inspector observed ZPMC welder Mr. Jin Xiao Gang, stencil 057258 is tack welding stiffeners to shear link WDI-A467-33M-4 using the shielded metal arc welding process. The QA Inspector observed ZPMC Quality Control personnel measuring Mr. Jin Xiao Gang having a welding current of approximately 200 amps. QA Inspector verified the base material adjacent to the weld had previously been preheated to a minimum of 140 degrees Centigrade. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Mr. Li Yun Jing, stencil 040392 is using the shielded metal arc process to fillet tack weld stiffener plates to shear link WDI-A467-18M-4. The QA Inspector observed ZPMC CWI Mr. Wu Ming Kai monitoring this welding. The QA Inspector observed Mr. Li Yun Jing had fillet welded the full length of the bottom of one of the stiffener plates and since Mr. Li Yun Jing is only qualified to tack weld Mr. Li Yun Jing was not certified to make this weld. The QA Inspector informed Mr. Wu Ming Kai that the full length fillet weld that had been made by Mr. Li Yun Jing is in violation of the AWS D1.5 Welding Code. Mr. Wu Ming Kai said he will have Mr. Li Yun Jing remove the fillet weld with a grinder. Items observed by the QA Inspector do not appear to fully comply with project specifications. See the photograph below for additional information.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



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.

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