

**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-008378**Date Inspected:** 11-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 715**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 Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Zhu Zhong Hui, Mr. Zhong Guo Hui

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 Bay 3**

ZPMC issued "Inspection Notification Sheet" number 3923 informing QA that ZPMC has completed ultrasonic inspections of the following OBG floor beam welds: FB024-010-021, FB024-010-125, FB024-010-126, FB024-010-127, FB024-011-021, FB024-011-125, FB024-011-126, FB024-011-127 and FB023-010-146. This QA Inspector performed ultrasonic inspections of approximately 10 percent length on each of the welds listed above and items observed 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.

**Tower Bay 11**

This QA Inspector observed ZPMC welder Mr. Zhu Xuexin, stencil 053310 is using shielded metal arc procedure WPS-B-P-4112-2 to tack weld temporary stiffener plates on tower spare strut assembly WD1-A6001-7-3A. This QA Inspector observed a welding current of approximately 270 amps, Mr. Zhu Xuexin is qualified to make this

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weld and the E9018 shielded metal welding electrodes are in a heated portable electrode storage oven. This QA Inspector observed ZPMC QC Inspector Mr. Ma Qian Li using temperature indicating crayons to verify the base material where the weld is being made had been preheated with a torch to a minimum temperature of 180°C and is less than 230°C prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

### OBG Bay 13

ZPMC issued "Inspection Notification Sheet" number 3922 informing QA that ZPMC has completed ultrasonic inspections of the following OBG welds: SEG047\*-045 and SEG047\*-046.

This QA Inspector performed ultrasonic inspections of approximately 10 percent length on each of the welds listed above and items observed 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 observed ZPMC QC Inspector Mr. Guo Xing Hui has documented that ZPMC welder Mr. Hu Yacheng, stencil 049339 is using shielded metal welding process WPS-B-P-2214-B-U2-FCM-1 to make OBG weld SEG045A-010-152. This QA Inspector observed the QC document indicates a welding current of 150 amps. Items observed by this QA Inspector appear to comply with project specifications.

This QA Inspector observed ZPMC QC Inspector Mr. Guo Xing Hui has documented that ZPMC welder stencil 204339 is using shielded metal welding process WPS-B-P-2113-FCM to make OBG weld CSD-PP66-143. This QA Inspector observed the QC document indicates a welding current of 195 amps. Items observed by this QA Inspector appear to comply with project specifications.

### OBG Bay 14

This QA Inspector observed ZPMC QC Inspector Mr. Zhong Guo Hui has documented that ZPMC welder Mr. Hong Yongli, stencil 044801 is using flux cored welding process WPS-B-T-2233-B-U2-F to make OBG weld SSD18-PP76-014. This QA Inspector observed the QC document indicates a welding current of 216 amps and 25.7 volts. Items observed by this QA Inspector appear to comply with project specifications.

This QA Inspector observed ZPMC QC Inspector Mr. Zhong Guo Hui has documented that ZPMC welder Mr. Dan Deyin, stencil 044795 is using flux cored welding process WPS-B-T-2231-TC-U4b-F to make OBG weld SSD16A-PP74-126. This QA Inspector observed the QC document indicates a welding current of 313 amps and 29.7 volts. Items observed by this QA Inspector appear to comply with project specifications.

This QA Inspector observed ZPMC QC Inspector Mr. Zhong Guo Hui has documented that ZPMC welder Mr. Wang Jinjiu, stencil 043661 is using shielded metal welding process WPS-B-P-2214-B-U2-FCM-1 to make OBG weld SP543-001-078. This QA Inspector observed the QC document indicates a welding current of 153 amps. Items observed by this QA Inspector appear to comply with project specifications.

This QA Inspector observed ZPMC QC Inspector Mr. Zhong Guo Hui has documented that ZPMC welder Mr. Hong Liang, stencil 200113 is using shielded metal welding process WPS-B-P-2214-B-U2-FCM-1 to make OBG weld SP623-001-004. This QA Inspector observed the QC document indicates a welding current of 160 amps.

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Items observed by this QA Inspector appear to comply with project specifications.

**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>	Carreon,Albert	QA Reviewer

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