

**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-007369**Date Inspected:** 02-Jun-2009**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 Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Lin Dong Liang, Mr. Lin Li

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 Ms. Zhang Lingling, stencil 207746 using submerged arc welding procedure specification WPS-B-T-2221-C-U2C-S to make groove weld SSDI-FESA4-1A/F-9A. The QA Inspector observed Quality Control personnel monitoring the base material temperature and other welding attributes. This QA Inspector measured a welding current of 675 amps, 31.0 volts and a welding travel speed of 490 mm per minute. Items observed on this date appeared to generally comply with applicable contract documents.

The QA Inspector observed ZPMC welder Ms. Liu Zhenping, stencil 044775 using submerged arc welding procedure specification WPS-B-T-2221-C-U2C-S to make groove weld SSDI-FESA4-1A/F-7A. The QA Inspector observed Quality Control personnel monitoring the base material temperature and other welding attributes. This QA Inspector measured a welding current of 670 amps and 31.0 volts. Items observed on this date appeared to generally comply with applicable contract documents.

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# WELDING INSPECTION REPORT

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The QA Inspector observed ZPMC welder Mr. Feng Leilei, stencil 052889 is using welding procedure specification WPS-B-T-4211-B-U3b-2 to complete shielded metal arc tack weld ESD1-FASA4-2A/E-4B. The QA Inspector observed that the base material where the tack weld was made had been preheated to above 180 degrees Celsius and a ZPMC QC Inspector is monitoring this welding. The QA Inspector measured a welding current of approximately 260 amps. Items observed on this date appeared to generally comply with applicable contract documents.

## Tower Bay 11

The QA Inspector performed random observations of ZPMC magnetic particle (MT) Inspector Mr. Fu Zhingang performing magnetic particle inspections of the root pass weld material in welds ESD1-FDSA4-2A/D-1, -4,-6 and -1. Earlier in the day Caltrans QA Inspectors had observed some sections of these welds appear to have a crack and this QA Inspector observed several areas in this weld have been ground and two areas have been ground to a depth where the mechanical opening between the two plates are visible. Mr. Fu Zhingang indicated that the welds are MT acceptable. Items observed on this date appeared to generally comply with applicable contract documents.

## OBG Assembly

The QA Inspector observed ZPMC welder Mr. Bi Laishu, stencil 045280 is using flux cored welding procedure WPSB-T-2233-B-U2-F to make OBG weld OBE1A-006. The QA Inspector observed a welding current of approximately 160 amps, 29.0 volts and QC personnel were monitoring this welding. Items observed on this date appeared to generally comply with applicable contract documents.

The QA Inspector observed ZPMC welder Mr. Yun Chuan Shan, stencil 050316 is using flux cored welding procedure WPSB-T-2233-B-U2-F to make OBG weld OBE1A-010. The QA Inspector observed a welding current of approximately 225 amps, 25.8 volts and QC personnel were monitoring this welding. Items observed on this date appeared to generally comply with applicable contract documents.

### 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.

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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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