

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-003051**Date Inspected:** 02-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1430**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**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 and OBG Fabrication**Summary of Items Observed:**

Caltrans 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:

CWI Inspector: Mr. Sun Wei, Li Zhijiang, Huang Wen-pang

The QA Inspector observed ZPMC personnel installing clear tape over the closed rib tack welded joints of several deck plates. See the photograph below for additional information.

Orthotropic Box Girder (OBG) Fabrication:

No closed rib Production Monitoring Tests Macro Etch specimens were presented to the QA Inspector for inspections this shift.

Bay 7

The QA Inspector observed ZPMC welder Mr. Liu Long Xian stencil 44786 is using welding procedure specification WPS-B-T-2132-3 to make flux cored floor beam fillet weld FB016-009-13. The QA Inspector observed a welding current of approximately 330 amps, 30.5 volts and a welding travel speed of 420 mm per minute. On the opposite side of this same plate ZPMC welder Mr. Hong Shuili stencil 44815 is welding

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FB016-009-14. The QA Inspector observed a welding current of approximately 300 amps, 29.6 volts and a welding travel speed of 420 mm per minute. Both welders are using motor driven welding machines to progress along opposite sides of the same plate that is being welded. Items observed by the QA Inspector appear to comply with project specifications. See the photograph below for additional information.

The QA Inspector observed ZMPC personnel performing heat straightening of longitudinal diaphragm LD006 as directed by document HSR1(B)1012. The QA Inspector observed ZPMC personnel monitoring the maximum heat temperature of these plates and the QA Inspector observed the plates being flame straightened do not appear to be exceeding the maximum temperature as listed on the HSR1(B)1012 document.

The QA Inspector observed ZPMC personnel have used the air carbon arc process to remove portions of floor beam FB011-007 welds 9, 17, 21 and FB009-002 welds 1, 9, and 17. American Bridge / Fluor (ABF) representative Mr. Kevin Dye indicated these welds have been gouged to remove weld porosity, and that ABF is going to have weld engineers evaluate the cause of this porosity. See the photograph below for additional information.

Bay 8

The QA Inspector observed ZPMC welder Ms. Xu Peipei stencil 050323 is using welding procedure specification WPS-B-T-3221-B-L3G-S-1 to make submerged arc skin plate groove weld SSDI-SA270 1B - 2B. The QA Inspector observed a welding current of approximately 625 amps, 31.0 volts, a travel speed of 480 mm per hour, and the base material has been preheated to a minimum of 230°C. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Mr. Xie Chun Fu welder number 045236 using welding procedure specification WPS-B-T-2331-TC-P4-F to weld the partial penetration groove weld of edge plate EP003-007 weld 12. The QA Inspector observed a welding current of approximately 290 amps and 29.2 volts. Items observed by the QA Inspector appear to comply with project specifications.



Summary of Conversations:

See above.

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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 Patrick Lowry (858) 344-2712, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
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Reviewed By:	Carreon,Albert	QA Reviewer
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