

**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-010524**Date Inspected:** 15-Nov-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 Fabrication**Summary of Items Observed:**

CWI Inspector: Mr. Du Zhiqun

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 10**

This QA Inspector observed ZPMC welder Ms. Lu Haixian, stencil 040252 is using submerged arc welding procedure specification WPS-B-T-2221-C-U2b-S-2 to make weld SSTL4-1B/L-3A between south tower lift 4 skin plates A and skin plate E. This QA Inspector observed ZPMC Quality Control CWI Mr. Du Zhiqun monitoring this welding and this QA Inspector measured a welding current of approximately 670 amps and 31.5 volts. This QA Inspector observed ZPMC had preheated the base material using electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yun Chuanjin, stencil 503060 is using submerged arc welding procedure specification WPS-B-T-2221-C-U2b-S-2 to make weld SSTL4-1B/L-3A between south tower lift 4 skin plates A and skin plate E. This QA Inspector observed ZPMC Quality Control CWI Mr. Du Zhiqun monitoring this welding and this QA Inspector measured a welding current of approximately 675 amps and 31.5 volts. This QA Inspector observed ZPMC had preheated the base material using electric heating elements. Items observed on

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# WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

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this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Xu Kauzhen, stencil 051413 is using submerged arc welding procedure specification WPS-B-T-2221-C-U2b-S-2 to make groove weld SSSL4-1B/L-3A between south tower lift 4 skin plates A and skin plate E. This QA Inspector observed ZPMC Quality Control CWI Mr. Du Zhiquan monitoring this welding and this QA Inspector measured a welding current of approximately 680 amps and 32.5 volts. This QA Inspector observed ZPMC had preheated the base material using electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Wang Shouqin, stencil 201750, is using submerged arc welding procedure specification WPS-B-T-2221-C-U2b-S-2 to make groove weld SSSL4-1B/L-3A between south tower lift 4 skin plates A and skin plate E. This QA Inspector observed ZPMC Quality Control CWI Mr. Du Zhiquan monitoring this welding and this QA Inspector measured a welding current of approximately 680 amps and 32.4 volts. This QA Inspector observed ZPMC had preheated the base material using electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

Yard, South of Blast Shop

ZPMC issued "Inspection Notification Sheet" number 4646 informing QA that ZPMC has completed visual and magnetic particle (MT) inspections of various OBG segment 7AW welds. This QA Inspector performed random visual and magnetic particle inspections of the following welds: Tag#5: Corner assembly welds, CSD2-046, -052, -075, -076, -073, -074, -087, -088, -045, -129, -130, -143, -147 and Tag #6 side plate/bottom plate welds SSD13-071, -073, -075, -091, -093, -095, -050, -052, -113, -114, -054 and 052. Three welds appear to have areas where the start and stop points of the weld melted base material on the edges of the plate and these locations are visually rejectable. After this QA Inspector marked these areas, ZPMC workers numbered and identified these areas as needing to be repaired. All the welds that were MT'd by this QA Inspector appear to comply with AWS D1.5 magnetic particle inspection requirements. For additional information on these inspections see the TL6028 Magnetic Particle Test Report.

**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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