

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-002479**Date Inspected:** 28-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>CWI Name:</b>	Zhao Chen Sun and See Below			<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>	
<b>Inspected CWI report:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
				<b>Delayed / Cancelled:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Bridge No:</b>	34-0006			<b>Component:</b>	See Below		

**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector, M. Paul Stovall, was present at Zhenhua Port Machinery Company (ZPMC) on Changxing Island, Shanghai, China for the purpose of monitoring Quality Control (QC) functions during the fabrication of the Self Anchored Suspension (SAS) section of the San Francisco/Oakland Bay Bridge.

**New Tower Shop**

The QA Inspector observed ZPMC personnel heat straightening various Tower Skin plates and cutting bevels on Interior Tower Splice Connection plates using a tracked oxy-acetylene torch.

The QA Inspector observed ZPMC welding personnel Xu Yan, ID #052917 continue with the welding of Tower Skin plate weld number of SSD1-SA16-T/G-88B using the Submerged Arc Welding process and Welding Procedure Specification (WPS) WPS-B-T-2221-B-U3c-S. At several occasions, the QA Inspector verified the welding parameters as 637 amperes, 33.2 volts, and 618 amperes and 32.8 volts. The work observed appeared to comply with the WPS and the contract requirements.

The QA Inspector observed ZPMC welding personnel welding Chang Chuancang, ID #053870 performing Flux Cored Arc Welding (FCAW) on Internal Tower Splice Connection plates MUC-A116-1B/1A using WPS-B-P-2211-B-U2-FCM. The QA Inspector observed ZPMC welding personnel welding Bai Wenming, ID #040434 performing Flux Cored Arc Welding (FCAW) on Internal Tower Splice Connection plates MUC-A119-1 using WPS-B-P-2211-B-U2-FCM. The two (2) pieces are for the 114-meter Mock-Up.

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# WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

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## Bay 2

The QA Inspector observed ZPMC personnel drilling boltholes in diagonal tube steel braces for the Orthotropic Box Girder (OBG) Floor Beams (FB).

The QA Inspector observed ZPMC personnel cut macroetch samples for the 77-meter Mock-Up at Skin C.

## Bay 3

The QA Inspector observed ZPMC welding personnel Zhang Feng, ID #049769, Li Wenguo, ID #066261, and Guo Dengyun, ID #037919 fit and tack weld WT stiffeners on : BP084-001, SP331-001, and BP030-001.

The QA Inspector observed ZPMC QC personnel perform and accept the Magnetic Particle Testing (MT) on weld terminations at each end and areas approximately in the middle of SP019-001, BP015-001, and SP043-001. The work observed appeared to comply with the contract documents.

## Bay 4

The QA Inspector observed ZPMC personnel welding an Internal Tower Diaphragm plate weld number ESD1-SA234-A/B-10A. When side “A” was, approximately one-third complete ZPMC personnel halted turned the Diaphragm Plate onto the “B” side start back gouging.

The QA Inspector observed ZPMC personnel started fitting Diaphragm Plates P831 and SA317, 33-meter elevation for welding.

The QA Inspector observed ZPMC personnel heat straightening various Internal Tower Diaphragm Plates.

The QA Inspector observed ZPMC QC personnel perform and accept the MT inspection on Internal Tower Diaphragm Plate weld number SSD1-SA335-1A/1B. The work observed appeared to comply with the contract requirements.

### **Summary of Conversations:**

As noted above in the body of the report.

### **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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Stovall,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Hager,Craig	QA Reviewer

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