

**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-001510**Date Inspected:** 27-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1430**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>CWI Name:</b>	Xu Le Feng, Ye Yong Jun, Sha Zi Cui, Wu Jie, Wang			<b>CWI Presenting</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>	Tower Mock-ups and OBG		

**Summary of Items Observed:**

The Quality Assurance (QA) Inspector Gregory Bertlesman arrived on site at the Zhenhua Port Machinery Company facility on Changxing island, China to periodically monitor welding and Quality Control functions. While on site the Quality Assurance Inspector observed and/or discovered the following.

**Tower Fabrication Facility****89M Mock-up Assembly**

The Quality Assurance Inspector observed a ZPMC welder performing in process welding of a complete joint penetration weld joining Skins B to C. The welder was using the submerged arc welding process to produce the weld in the flat position from the exterior of the assembly. The Quality Assurance Inspector observed that approximately 75% of the skin welds were completed to date.

The Quality Assurance Inspector observed a ZPMC worker removing the weld tabs from complete joint penetration weld joining skins D to C. The worker was using a torch and grinder to complete the task.

The Quality Assurance Inspector observed no cutting was taking place of material today on the cutting table.

**Bay 1**

The Quality Assurance Inspector observed ZPMC squaring the length of closed ribs on the milling machine. Eight ribs were stacked and being milled simultaneously. The Quality Assurance Inspector measured the ribs to be approximately five meters in length, 12 millimeters in thickness and 790 millimeters in width. The Quality Assurance Inspector observed ZPMC Quality Control personnel measuring the bevel angle of the partial joint penetration weld to the deck plate on a practice rib assembly. Quality Control recorded several areas along the

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length of the rib within the tolerance of 27.2 degrees +-1.

## Bay 2

### 114M Mock-up Upper Shaft Assembly

The Quality Assurance Inspector observed ZPMC drilling bolt holes at skin D. The bolt hole layout template had been removed. Three 50 ton hydraulic jacks are still in place and pressurized.

The Quality Assurance Inspector observed ZPMC cutting diaphragm plates for the 43 meter elevation and the 47.6 meter elevation. Below is a digital photograph illustrating the cutting operation in progress.

## 77M Mock-up Assembly

The Quality Assurance Inspector observed ZPMC fitting up a diaphragm insert plate. The Quality Assurance Inspector measured the root opening and bevel angle and found the results to be in compliance with the applicable welding procedure specification.

## Bay 3

The Quality Assurance Inspector observed no ZPMC personnel working in Bay 3.

## Bay 7

The Quality Assurance Inspector observed no ZPMC personnel working in Bay 7.

## Bay 8

The Quality Assurance Inspector observed no ZPMC personnel working in Bay 8.



## Summary of Conversations:

As stated in the contents of the above 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>	Bertlesman, Greg	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar, Robert	QA Reviewer

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