

**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-002816**Date Inspected:** 05-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>CWI Name:</b>	Chen Chih-Ming/ An Qingxiang			<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>

**Bridge No:** 34-0006**Component:** OBG side and bottom panels and tower skin p**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG new assembly bay 2

QA observed ZPMC personnel fitting center section of floorbeam FL2-1 and FL2-2 at panel point PP-025 SEG-4AE. This floorbeam is not yet tacked in place only supported by temporary braces.

QA observed ZPMC qualified welding personnel perform FCAW fillet welds joining floorbeam FL1 to side panel at panel point PP-023 SEG-3BW north side of OBG following the guide lines of WPS# WPS-B-T-2133. QC monitored the welding process continuously throughout the evening. The welding parameters as measured with Quality Controls calibrated instruments appeared to be in conformance with the posted WPS's and were as follows:

Volts: 26 Amps: 218 Travel speed: 117mm/min

QA noted that side panel to bottom panel joints SEG-017A-007 SP-027 to BP-013 and SEG-017A-008 SP-072 to BP-015 SEG 17 4A west were tacked together without the 6mm root opening as specified on the shop drawings (joint was fit tight). ZPMC CWI identified as Mr. Chen Chih-Ming informed QA that the above mentioned joints would be welded without the specified ceramic backing following the guide lines of WPS-B-T2231-B-U2-F-1 for

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the FCAW root and WPS-B-T-2221-B-L2c-S-1 SAW intermediate and cap passes. After further investigation QA discovered that ZPMC had submitted a field change order to Caltrans concerning this issue.

Other general observations include ZPMC personnel grinding side and bottom panels and weld bevel prep.

New Tower Bay 1

QA performed 10% Ultrasonic Testing (UT) verification on the following tower skin plate joints: SSD1-40A/E-18B, SSD1-17A/G-26B and SSD1-SA179D/E-07A. All welds that were scanned appeared to compliant with AWS D1.5 2002 and the contract documents



### Summary of Conversations:

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

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<b>Inspected By:</b>	Hall,Steven	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer

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