

**DEPARTMENT OF TRANSPORTATION**  
 DIVISION OF ENGINEERING SERVICES  
 Office of Structural Materials  
 Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4  
 Cty: SF/ALA Rte: 80 PM: 13.2/13.9  
 File #: 69.15

**SOURCE INSPECTION REPORT**

**Resident Engineer:** Pursell, Gary  
**Address:** 333 Burma Road  
**City:** Oakland, CA 94607

**Report No:** SIR-000025  
**Date Inspected:** 27-Mar-2007

**Project Name:** SAS Superstructure **OSM Arrival Time:** 800  
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV **OSM Departure Time:** 1530  
**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>Quality Control Contact:</b>	Dave McQuaid	<b>Quality Control Present:</b>	Yes	No
<b>Material transfer:</b>	Yes No N/A	<b>Sampled Items:</b>	Yes No N/A	
<b>Stock Transfer:</b>	Yes No N/A	<b>OK to Cut:</b>	Yes No N/A	
<b>Rebar Test Witness:</b>	Yes No N/A	<b>Delayed/Cancelled:</b>	Yes No N/A	
<b>Other:</b>	U-Rib Weld			
<b>Bridge No:</b>	34-0006	<b>Component:</b>	OBG U-Ribs	
<b>Bid Item:</b>	55	<b>Lot No:</b>	N/A	

**Summary of Items Observed:**

Caltrans Quality Assurance (QA), Welding Engineer Jim Merrill and ABF representative David McQuaid went to the shop location on Changxing Island where ZPMC has their U-rib Welding Gantry. ZPMC is currently conducting internal U-rib welding trials to commission their equipment, fix weld head tracking issues, and begin procedural development. QA observed that the Gas Metal Arc Welding (GMAW) heads are in-place and that 3 practice panels have been welded. It appears the majority of the panels were welded with manual GMAW for the root pass. Only 3 of the ribs on the last panel appear to have had the root pass welded using the dual head, GMAW root with trailing Submerged Arc Welding (SAW) fill. The welds observed exhibit pore profiles and melt-through. Mr. McQuaid estimates another at least another 3 weeks of internal trials before ZPMC begins producing acceptable welds.



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# SOURCE INSPECTION REPORT

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**Summary of Conversations:**

ABF representative David McQuaid informed QA that, since ZPMC decided not to use the Lincoln Electric Co. electrodes for performing the U-rib welding, Lincoln was not providing ZPMC with the research data and parameters they had spent several months developing for the U-rib welding. ZPMC will essential have to develop their welding procedures from the ground up.

**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>	McClary,David	Quality Assurance Inspector
<b>Reviewed By:</b>	Lowry,Patrick	QA Reviewer

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