

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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-000739**Date Inspected:** 04-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>CWI Name:</b>	Hua Li wei & Ye Yong Jun	<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>	Caltrans Mockup		

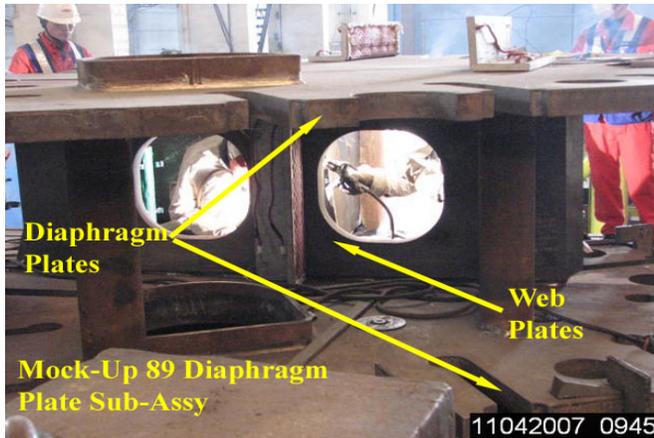
**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Mock-up, 77M, 89M, 114M and U-Rib Trial Assembly, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

<b>Item</b>	<b>Description</b>	<b>WBS</b>	<b>Dwg No.</b>	<b>Status</b>
1	89M Diaphragm Plate	NA	NA	Work in Progress
	Mock-Up 89M, Diaphragm Plate Sub-Assembly: Caltrans QA Inspector observed shield metal arc welding (SMAW) in progress. Caltrans QA Inspector observed four welders welding partial joint penetration (PJP) fill weld pass at web plate to web plate (p842 to p721 & p138 to p720), welds W61, W58, W59 and W55. The welders are observed welding in the vertical position. The welders are identified as Mr. Liu guoxuan, welder stamp 066279, Mr. Xu Wei, welder stamp 066253, Mr. Shen Yong, welder stamp 066257, Mr. Guo Dengyun, welder stamp 0370997. The welders are using welding procedure specification WPS-B-T-3313-TC-P5. Caltrans QA Inspector observed ZPMC Quality Control (QC), Certified Welding Inspector (CWI), Mr. Ye Yong jun and Mr. Xu Lefeng monitoring welding activities at the workstation. Caltrans QA Inspector measured current welding parameters at approximately 160 amps and 85 millimeters per minute (mm/min) travel speed. Preheat and interpass temperatures were verified during welding activities. The preheat temperature prior to the start of welding measures more than 160 Celsius (320 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. SMAW consumable is verified and identified as Excalibur 9018M MR, classification E9018M-H4R, specification AWS A5.5, and diameter 4.0 mm (.157 inch). Following digital picture illustrates welding in progress in progress.			

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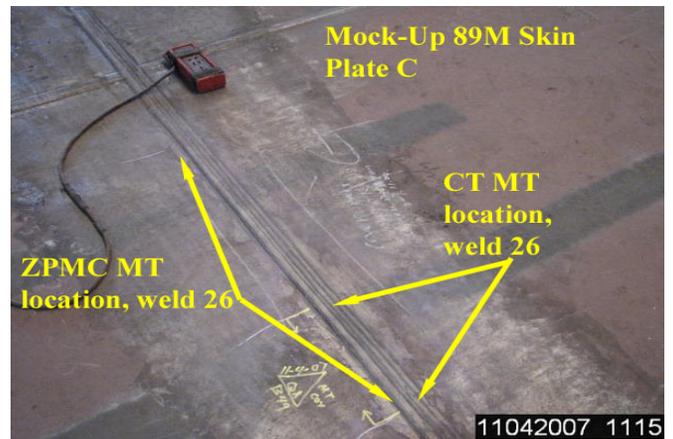
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2 Skin Plate C NA NA ZPMC MT

Mock-Up 89M, Skin Plate C: Caltrans QA Inspector witnessed ZPMC QC inspector, Mr. Zhou Dongyun perform magnetic particle test (MT) and Visual Test (VT) inspection at complete joint penetration (CJP), butt-joint weld, joining the upper and lower plates, weld cover pass, weld 25 and weld 25. ZPMC MT coverage appeared to be 25 percent of the weld cover pass and 100 percent of the ends. The MT appeared to be in compliance with the project specification and found to be in compliant by QC.

Caltrans QA Inspector performed MT and VT inspection of welds 25 and 26. See Caltrans Magnetic Particle Test Report, TL6028, generated on this date for additional information. Following digital pictures illustrate ZPMC MT inspection.



## Summary of Conversations:

As identified within the contents of this 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.

Inspected By: Hasler, Mike

Quality Assurance Inspector

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**Reviewed By:** Cuellar,Robert

QA Reviewer