

**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-000733**Date Inspected:** 31-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sha Zhi, Arbin Huang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Caltrans Mock up**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Dan Hernandez was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Mock-up 89.00, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Item	Description	WBS	Dwg No.	Status
1	89M Longitudinal Stiffener plate splice			In Progress
	Caltrans QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of fill passes on longitudinal stiffener plate's mp534B-1 to mp534A-1 and mp535A-1 to mp535B-1. The weld joint is a Complete Joint Penetration (CJP) double bevel butt-joint in the 1G position. The approved welder Lei Lichao # 053619 was using approved welding procedure specification WPS-B-T-2231-B -U3-F. Caltrans QA Inspector measured current welding parameters at approximately 290 amps, 31.4 volts and 300 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 110 Celsius (230 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. FCAW welding consumable is verified and identified as Supercored 71H, classification E71T-1, diameter 1.4 mm (.055 inches). ZPMC Quality Control (QC) Certified Welding Inspector (CWI) Mr. Sha Zhi and Bureau Veritas Inspector Mr. Arbin Huang were observed monitoring welding activities at the work station.			

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- 2      77M Flange Reinforcement Ring      In Progress
- Caltrans QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of fill passes on Flange Reinforcement Ring splice weld of plate's p1086 to p583. The weld joint is a Complete Joint Penetration (CJP) double bevel butt-joint in the 3G position. The approved welder Wang Bing #048696 was using approved welding procedure specification WPS-B-T-2233-B-U3-F. Caltrans QA Inspector measured current welding parameters at approximately 220 amps and 24.5 volts. Preheat and interpass temperatures were verified during welding activities. The preheat temperature prior to the start of welding measures more than 110 Celsius (230 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. FCAW welding consumable is verified and identified as Supercored 71H, classification E71T-1, diameter 1.4 mm (.055 inches). ZPMC Quality Control (QC) Certified Welding Inspector (CWI) Mr. Sha Zhi and Bureau Veritas Inspector Mr. Arbin Huang were observed monitoring welding activities at the work station.



## 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.

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