

**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-002791**Date Inspected:** 27-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1330**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>CWI Name:</b>	N/A	<b>CWI Present:</b>	Yes	No
<b>Inspected CWI report:</b>	Yes No N/A	<b>Rod Oven in Use:</b>	Yes No N/A	
<b>Electrode to specification:</b>	Yes No N/A	<b>Weld Procedures Followed:</b>	Yes No N/A	
<b>Qualified Welders:</b>	Yes No N/A	<b>Verified Joint Fit-up:</b>	Yes No N/A	
<b>Approved Drawings:</b>	Yes No N/A	<b>Approved WPS:</b>	Yes No N/A	
		<b>Delayed / Cancelled:</b>	Yes No N/A	
<b>Bridge No:</b>	34-0006	<b>Component:</b>	Tower and OBG Fabrication	

**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

Orthotropic Box Girder (OBG) Fabrication:

Production Monitoring Tests Macro Etches

Around 2015 hours ABF QA Representative Mr. Kevin Dye informed the QA Inspector that weld macroetch specimens for deck plates DP-588-002 and DP-589-002 are ready for QA visual inspections. The QA Inspector performed visual and dimensional inspections of fifteen (15) each closed rib production monitoring tests (PMT) macro etch specimens representing deck plates DP-588-002 and DP-589-002 closed rib welds that were welded on May 26, 2008. Note: On May 26, 2008 Deck Plate DP589-002 was welded with one pass of GMAW and no submerged arc welds were completed on this Deck Plate. The macroetch specimens were not presented to the QA Inspector until today. ZPMC QC CWI Inspector Mr. Duan Yabing had previously inspected and accepted these macroetch specimens and American Bridge / Fluor CWI representative Mr. Kevin Dye had visually inspected and indicated that specimen 6-4 is rejected due to incomplete fusion, and the remaining fourteen specimens are acceptable. The QA Inspector agreed with Mr. Dye's evaluations of the weld specimens. The QA Inspector determined all fifteen macroetch specimens contain weld penetration greater than 80 percent. The results of these inspections are documented on an Excel spreadsheet titled "SAS OBG PMT Macroetch Log" and a copy of this

---

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

---

---

file is posted on the Caltrans “Team China” internal sever computer system. The QA Inspector also made digital photographs of each of the macroetch specimens and copies of these photographs are posted on the Caltrans “Team China” common drive which is accessible to Quality Assurance Task Leaders and Structural Materials Representatives. Below is a digital photograph showing weld specimen 6-4 that was rejected due to incomplete fusion.

The QA Inspector performed visual and dimensional inspections of fifteen (15) each closed rib production monitoring tests (PMT) macro etch specimens representing deck plates DP-603-001 and DP-589-002 closed rib welds that were welded today. ZPMC QC CWI Inspector Mr. Chen Shigong had previously inspected and accepted these macroetch specimens and American Bridge / Fluor CWI representative Mr. Kevin Dye had visually inspected and indicated accepted all fifteen macroetch specimens. The QA Inspector agreed with Mr. Dye’s evaluations of the weld specimens and determined the specimens contain weld penetration greater than 80 percent. The results of these inspections are documented on an Excel spreadsheet titled “SAS OBG PMT Macroetch Log” and a copy of this file is posted on the Caltrans “Team China” internal sever computer system. The QA Inspector also made digital photographs of each of the macroetch specimens and copies of these photographs are posted on the Caltrans “Team China” common drive which is accessible to Quality Assurance Task Leaders and Structural Materials Representatives.



### Summary of Conversations:

See 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.

---

<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

---