

**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-004408**Date Inspected:** 29-Oct-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1430**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>	NA	<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>	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:

**OBG Bay #4**

ZPMC notification of witness inspection documents #01307 and #01303 dated 10-29-2008 states that ZPMC inspection personnel will be conducting ultrasonic (UT) inspections of tower and OBG welds in OBG bay #4 today. See below for the weld numbers and the status of the welds that were observed by this QA Inspector today.

SSD1-SA356 welds 3 through 10: ZPMC has marked welds 4 and 8 as being UT accepted. It appears ZPMC performed ultrasonic inspection of 100% length of two welds instead of performing 25% length inspections of each of welds 3 through 10. The Special Provisions allow one weld to be inspected for the full length of the weld instead of inspecting a 25% length of four separate welds. The QA Inspector performed random AWS D1.5 visual and ultrasonic inspections of 100% lengths of welds 4 and 8. Items observed appear to comply with project specifications.

The QA Inspector observed SSD1-SA356 welds 3, 6 and 9 each have run off plates on the bottom ends of these complete joint penetration welds and the welds have been marked as being QC accepted. The QA Inspector asked

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ABF Lishi You why these plates were accepted by QC prior to the removal of the plates. Mr. Lishi You said he does not know but he will ask the dayshift QC Inspector this question. See below for a photograph of a typical run off plate that is attached to one of the CJP welds.

SSD1-SA95- welds 3 through 8: ZPMC has marked welds 5 and 7 as being UT accepted. It appears ZPMC performed ultrasonic inspection of 100% length of two welds instead of performing 25% length inspections of each of welds 3 through 8. The QA Inspector observed ZPMC has tack welded this assembly into a triangular hole that is cut into another plate and ZPMC appears to be ready to weld this assembly together. The QA Inspector performed random AWS D1.5 visual and ultrasonic inspections of 25% length of welds 5 and 7. Items observed appear to comply with project specifications.

SSD1-SA369- welds 3 through 10: ZPMC has marked welds 3 and 4 as being UT accepted. It appears ZPMC performed ultrasonic inspection of 100% length of two welds instead of performing 25% length inspections of each of welds 3 through 10. The QA Inspector observed ZPMC has tack this assembly into a triangular hole that is cut into another plate and ZPMC appears to be ready to weld this assembly together. The QA Inspector performed random AWS D1.5 visual and ultrasonic inspections of 25% length of welds 3 and 4. Items observed appear to comply with project specifications.

OBG Bay #7

ZPMC notification of witness inspection document #01288 dated 10-29-2008 states that ZPMC inspection personnel will be conducting ultrasonic (UT) inspections of floor beam welds in OBG bay #7 today. The QA Inspector observed ZPMC has marked the following floor beam welds as being ultrasonically accepted and the QA Inspector also performed random ultrasonic inspections of approximately 10% length of each of these welds:

FB019-004-117 & FB019-004-122

FB023-003-117 & FB023-003-122

FB027-005-117 & FB027-005-122

FB027-003-117 & FB027-003-122

FB027-004-117 & FB027-004-122

FB028-006-117 & FB028-006-122

FB023-002-117 & FB023-002-122

FB019-003-122 ZPMC identified weld FB019-003-117 as having a UT rejection.

Note: ZPMC appears to be performing ultrasonic inspections of 100% length of welds 117 and 122 instead of a 25% inspection of welds 101, 108, 117 and 122.

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## 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 Ady Velasco 13816942685, who represents the Office of Structural Materials for your project.

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

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