

**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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022898**Date Inspected:** 22-Apr-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**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:** OBG**Summary of Items Observed:**

CWI Inspector: Mr. Cui Zheng Hua

On this date CALTRANS OSM 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. This QA Inspector observed the following:

**OBG Bay 14**

This QA Inspector observed ZPMC welder Mr. Wang Li, stencil 044772 used shielded metal arc welding procedure specification WPS-B-P-2214-TC-U4B-FCM-1 to make OBG segment 14E weld SEG3019\*-032 and SEG3019V-001. This QA Inspector observed a welding current of approximately 180 amperes (amps), the base material had been preheated with electric heaters and Mr. Wang Li appeared to be certified to make these welds. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Changfa, stencil 058102 used shielded metal arc welding procedure specification WPS-B-P-2214-TC-U4B-FCM-1 to make OBG segment 14E weld SEG3019\*-013. This QA Inspector observed a welding current of approximately 175 amps, the base material had been preheated with electric heaters and Mr. Wang Changfa appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

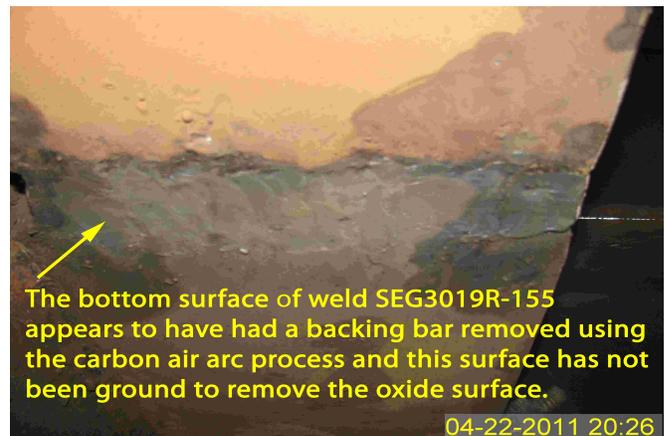
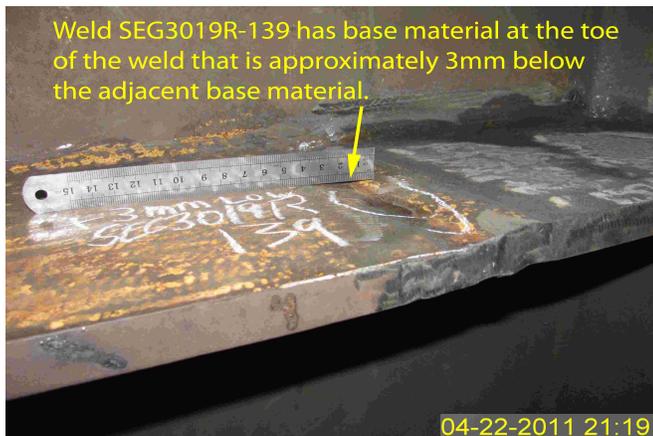
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ZPMC presented QA personnel with “Notification of Witness Inspection” document number 8905 item 1 that stated ZPMC was requesting Caltrans to perform visual (VT) and magnetic particle (MT) inspections of OBG segment 14E welds SEG3019Z-48, 86, 87, 88, 90, 91, 92, 93 and SEG3019R-134, 135, 138, 139, 142, 143, 146, 150, 151, 155, 158 and 159 in Bay 14. This QA Inspector performed random visual inspections of these welds and observed many of the weld terminations have not been ground smooth, several of the welds have not been welded flush with the end of the plates and weld SEG3019R-155 appeared to have had a backing bar that had been removed with an air arc gouge and the surface had not been ground to remove the oxide material. Weld SEG3019R-139 had base material adjacent to the weld crown that was approximately 3 mm below adjacent top surface of the plate. Weld SEG3019Z-091 weld termination had not been ground to remove overlap and the weld was not flush with the end of the plate. This QA Inspector showed ABF Inspector Mr. Zhang Qi Li these visually unacceptable areas and he informed this QA Inspector that he will have ABF supervisor Mr. Man Kit Li delete these welds from the inspection request and he will ask ZPMC dayshift workers to fix these problems and issue a new notification request form. Later in the shift ABF supervisor Mr. Man Kit Li deleted these welds from “Notification of Witness” Inspection document 8905. See the photographs below for additional information.



## Summary of Conversations:

See Above.

## Comments

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## WELDING INSPECTION REPORT

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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 James Devey +8615000026784, 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>	Riley,Ken	QA Reviewer

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