

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-007135**Date Inspected:** 09-May-2009**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 and Tower Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Wu Zhi Feng, Mr. Wu Zhi Cheng, Mr. Liu Wei Wei

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. The QA Inspector observed the following:

Prior to Caltrans QA Inspectors' concurring with issuance of OBG deck plate closed rib green tag releases a review of the ultrasonic inspection database is performed to verify all closed rib tack weld repair locations have been ultrasonically accepted. Today this QA Inspector, Mr. Paul Dawson, performed data entry of ultrasonic inspection information from the field generated Ultrasonic inspection data sheets onto the common drive computer database for the following OBG deck panels: DP206-001, DP368-001, DP315-001, DP152-001, DP342-001, DP123-001, DP123-002, DP422-001, DP342-002, DP295-001, DP178-001, DP124-002, DP339-002, DP126-002 and DP396-001.

**Outside Yard**

On May 7, 2009 this QA Inspector had observed ultrasonic class "A" rejectable indications in Cross Beam CB1 welds CB203D-001-002, CB203F-001-002, CB203A-001-005 and SP215-001-042. ZPMC has now completed weld repairs of these welds and ZPMC personnel have completed / accepted ultrasonic inspections of these four weld repairs. Today this QA Inspector performed random ultrasonic inspections of the repair areas in all four

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welds listed above along with an additional portion of the welds near where the weld repairs had been completed. All welds appear to comply with project specifications. For additional information on these inspections see the TL6027 Ultrasonic Test Report and the photograph below.

### OBG Bay 7

The QA Inspector observed ZPMC welder Mr. Jin Anquan, stencil 201725 is using shielded metal arc process WPS-B-P-2112 to make fillet tack welds on OBG Side Plate stiffener weld SP205-015-005. The QA Inspector observed a welding current of approximately 150 amps and a ZPMC QC Inspector is monitoring the welding and preheating of the base material. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Mr. Zhu Jialiang, stencil 200583 is using shielded metal arc process WPS-B-P-2112 to make fillet tack welds on OBG Floor Beam stiffener weld FB003-199-003. The QA Inspector observed a welding current of approximately 180 amps and a ZPMC QC Inspector is monitoring the welding and preheating of the base material. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed side plate SP203-013 appears to have had oil spilled on top of this side plate in the locations where stiffeners are to be welded. The QA Inspector contacted ZPMC QA representative Mr. Fu Yuhong and ZPMC Certified Welding Inspector (CWI) Mr. Wu Zhi Feng that the project specifications require all areas where welds are to be made shall be free of oil and grease and that the plate surface needs to be cleaned prior to welding of any of the stiffener plates. Mr. Feng said the oil will be removed from the plate surface prior to tack welding of the stiffener plates.

### OBG Bay 6

The QA Inspector observed ZPMC welder Mr. Lei Hanjie, stencil 215672 is using welding procedure WPS-B-P-2112 to make shielded metal arc weld fillet tack welds between Side Plate SP205-019 and Floor Beam FB205-019. The QA Inspector measured a welding current of approximately 180 amps and the QA Inspector observed the base material had been preheated with a torch where the tack welds were to be made. The QA Inspector observed ZPMC QC personnel monitoring this welding. Items observed by the QA Inspector appear to comply with project specifications.



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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 Eric Tsang phone: 150-0042-2372 , 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>	Clifford,William	QA Reviewer

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