

**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-004199**Date Inspected:** 10-Oct-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**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:** Zhang Bao**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 Assembly**Summary of Items Observed:**

This report serves to document the events occurring on this date at the following location. Caltrans Quality Assurance (QA) Inspector Robert Vatcher 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 Assembly Bay II

Mid bay-

A observed the in process joining of deck panels DP406-001 to DP455-001 by the SAW process. QA measured welding parameters in accordance with welding procedure specification WPS-B-T-2221-B-L2C-S-2 utilizing 4.0 mm diameter H14 electrode wire by qualified welding operator Wang Min 0438296. Measured amperage at 550.0. Voltage at 31.0, travel speed at 530 mm per minute. QA performed a cursory visual examination of the back grinding performed by ZPMC personnel prior to the welding process depositing further weld metal. ZPMC QC personnel Wang Jie was present for this welding evolution.

QA observed ZPMC Non Destructive Testing personnel Su Wei performing Magnetic Particle (MT) examinations on previously excavated U rib to deck panel crack locations on multiple deck panels located within the vicinity of the mid bay.

No diaphragm plate to deck to deck panel U rib repairs or initial joining being performed at this time. Only

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grinding of joint preparation where back gouging for complete joint penetration connections has occurred as well as cosmetic grinding for weld finish.

While performing a walk through of the west side of the OBG Assembly QA observed multiple locations where oxy acetylene flame torch cutting in an extremely uncontrolled manner was operated. The affected side plates are as follows; SP009A (3BW) and SP009B of 3AW. However QA later learned that these areas are in the wastage locations and will not affect the final product.

## Tower Bay I

QA was tasked with observing a final Visual Examination (VT) in Bay III by ZPMC translator Shen. QA arrived in Bay III and when no one appeared at 1348 QA phoned back Shen who said the inspection was on Tower Diaphragms in Bay I. QA walked over to Bay I with Shen and met with ZPMC QC personnel Ken Zhang. Mr. Zhang mentioned that he was waiting on Caltrans QA to hurry up and finish the VT of Tower Skin Plate "E" so that a green tag could be applied to the component. QA observed that the Green Tag form for AB/ F, ZPMC & Caltrans to sign had already been signed by both AB/ F & ZPMC. QA informed both parties available that under no circumstances would QA sign for the green tag with grinding, welding and NDT remaining on the part. QA performed a short unfinished visual examination prior to departing for the day. Swing shift representatives were apprised of the situation and directed to finish the final visual examination.

The above mentioned items as observed, corrected by contractor QC & documented by QA appear to conform to the contract documents.

### Summary of Conversations:

No relevant conversations this date.

### 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 138-1694-2685, who represents the Office of Structural Materials for your project.

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

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