

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-002854**Date Inspected:** 03-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei**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:** Tower and OBG**Summary of Items Observed:**

The Quality Assurance (QA) Inspector Gregory Bertlesman arrived on site at the Zhenhua Port Machinery Company facility on Changxing island, China to periodically monitor welding and Quality Control functions. While on site the Quality Assurance Inspector observed and/or discovered the following.

**Bay 4**

The Quality Assurance Inspector observed ZPMC welding operator Zhang Ji, welder identification number 046830, performing in process welding of a complete joint penetration weld joining Diaphragm Plates half sections, weld number SD1-SA261. Quality Control Inspector Ye Yong Jun was monitoring the welder. The welder was using the submerged arc welding process to produce the weld in the flat position. The parts were stationary while the welding machine was tracks to facilitate welding along the length of the part. The Quality Assurance Inspector witnessed the Quality Control Inspector measure the welding parameters at the welder's station and found the parameters to meet the minimum requirements of welding procedure specification WPS-B-T-2221-B-U3c-S-1. The Quality Assurance Inspector witnessed Quality Control measuring the interpass temperature using a calibrated infra-red temperature measuring device.

The Quality Assurance Inspector witnessed ZPMC heat straightening Side Plate SP-83B. ZPMC Quality Control was observed measuring the base metal temperature using a calibrated infra-red temperature measuring device.

The Quality Assurance Inspector witnessed ZPMC performing magnetic particle testing to Side Plate SP-413A. No indications were marked for repair.

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# WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

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## Bay 1

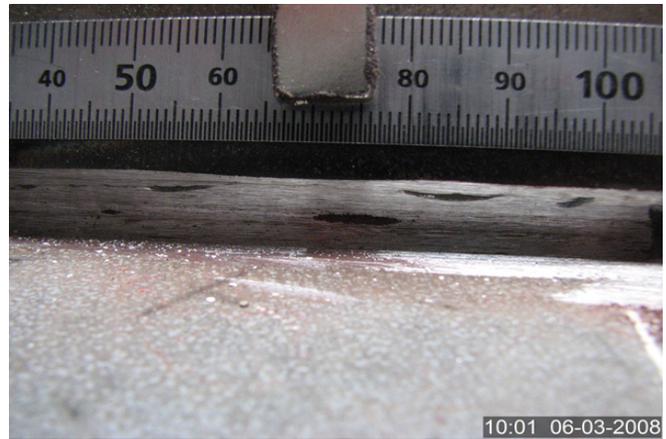
### Magnetic particle testing of deck panel closed rib tack welds

The Quality Assurance Inspector was informed that ZPMC was not performing magnetic particle inspection to the tack welds on Deck Panel DP-609-001. With the assistance of Quality Assurance Inspector Timothy McClendon, the Quality Assurance Inspector performed Magnetic Particle Inspection of the closed rib PJP gas metal arc welded tack welds on Deck Panel DP-609-001. ABF representative Mr. Warren Buehler joined the Caltrans QA Inspector's performing magnetic particle testing. Of one hundred and fifty (150) GMAW tack welds, forty-nine (49) were identified by Caltrans QA Inspector's and Mr. Buehler as having crack like indications. These crack like indications were ground by ZPMC personnel and retested by ZPMC NDT personnel. ZPMC's activities were periodically monitored by the Caltrans QA Inspector's. Included below is a digital photograph illustrating a typical linear indication located by the magnetic particle testing method.

## Bay 2

### 114M Tower Mock-up Assembly

The Quality Assurance Inspector observed ZPMC personnel removing temporary high strength bolts from the upper 114M Tower Mock-up Assembly. Below is digital photograph illustrating the work in progress.



### Summary of Conversations:

As stated in the contents of the above report.

### 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 Mazen Wahbeh (916) 227-5719, who represents the Office of Structural Materials for your project.

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