

**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-001124**Date Inspected:** 09-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sha Zhi**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:** 114 meter mock up assembly**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) inspector, Scott Croff, was present at Zhenhua Port Machinery Company, Ltd (ZPMC) to observe the scheduled mock up construction and production construction of the SAS Superstructure.

Bay 2: The QA inspector witnessed ultrasonic testing (UT) being conducted by ZPMC technician Xue Hai Rong and Li Li Ming. The UT was being conducted on 114 meter skin plate assembly MUC-A58. The Quality Control Liaison (QCL) "Tom" Li Xiu Yang was present and assisted the QA inspector in translating questions that the QA inspector was asking the UT technicians. The QA inspector noted that during the UT observations, there was apparently no "X" axis or "Y" axis marked and the QA inspector asked the UT technicians which side of the T joint (that were being inspected by UT) was face "A" located. As previously mentioned, these questions were being translated by the QCL "Tom." The UT technicians and several other ZPMC personnel had conversations regarding the questions that the QA inspector asked. The QA inspector was informed of the side of the T joint they decided was face "A" and where the "X" axis and "Y" axis were. The QA inspector noted that the position of the "X" and "Y" axis's appear to be backwards then described in AWS D1.5, 2002. The QA inspector attempted to show the UT technicians the AWS requirements, as the QA inspector has previously observed these markings that appear to be backwards. There were conversations between the QA inspector, the QCL "Tom" and the UT technicians to which there was no agreement on what is required by AWS D1.5, 2002.

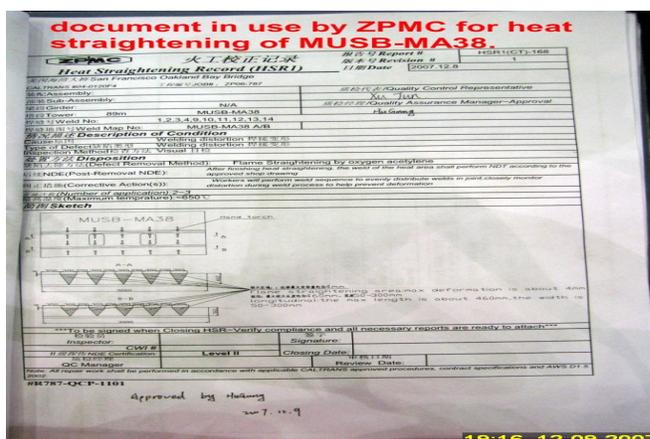
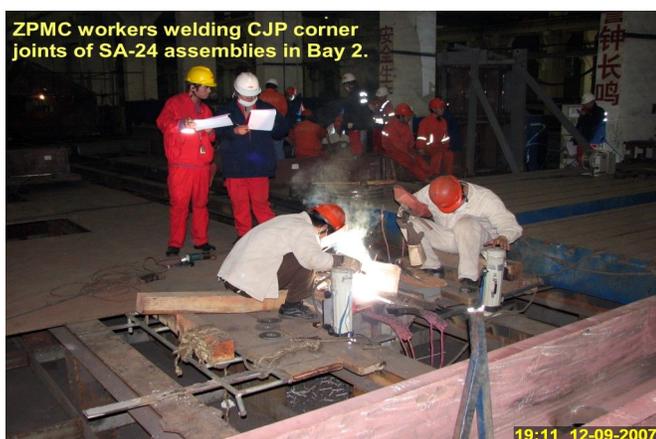
The QA inspector observed ZPMC workers conducting heat straightening of the 89 meter mock up, skin plate assembly MUSB-MA38. The QA inspector noted that heat straightening is being conducted in a "V" pattern on the stiffener plates of the assembly. At the time of observation, the QA inspector could not determine the original

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warp/ deformation of the parts being straightened. The QA inspector could not locate an approved heat straightening procedure for the observed work, but the QA inspector did observe that heat straightening report (HSR)1(CT)-168 was being filled out by Sha Zhi. The QA inspector also noted that the actual recording of the temperatures of the heat straightening are being measured by Xu Jin Long. The QA inspector reviewed the list of approved CWI/CAWI QC personnel. The QA inspector could not identify Xu Jin Long as an approved CWI/CAWI.

Bay 3: The QA inspector observed ZPMC workers making complete joint penetration (CJP) butt splice welds on split T stiffeners that will be used for side plate assembly SP029-01 weld 005. The QA inspector observed flux cored arc welding (FCAW) being conducted by Li Zhao Qian being monitored by "QC" person Zhang Qiang. The QA inspector reviewed the list of approved CWI/CAWI QC personnel and could not identify the "QC" person Zhang Qiang as being an approved CWI/CAWI. The QA inspector asked the "QC" person if there was a CWI present. The "QC" person looked around Bay 3 and motioned to the QA inspector that he did not know where a CWI was. The QA inspector was unable to ask the "QC" person any other questions because there was no translator or QCL present.



## Summary of Conversations:

As noted above, the QA inspector Scott Croff, the Quality Control Liaison "Tom" and the ZPMC technicians Xue Hai Rong and Li Li Ming had conversations regarding the inspections that were observed by the QA inspector. These conversations and questions are generally described above. The QA inspector also had general conversations with other ZPMC personnel, as they were observed throughout the shift. The notable conversations

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are described above.

The QA inspector generated a summary report of the above mentioned items to be included in the daily shift notes. There were no other notable conversations during this shift.

**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, (818) 292-0659, who represents the Office of Structural Materials for your project.

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