

**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-001175**Date Inspected:** 06-Jan-2008**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:** Cui Yi Rui**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 Mock Ups, OBG components**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.

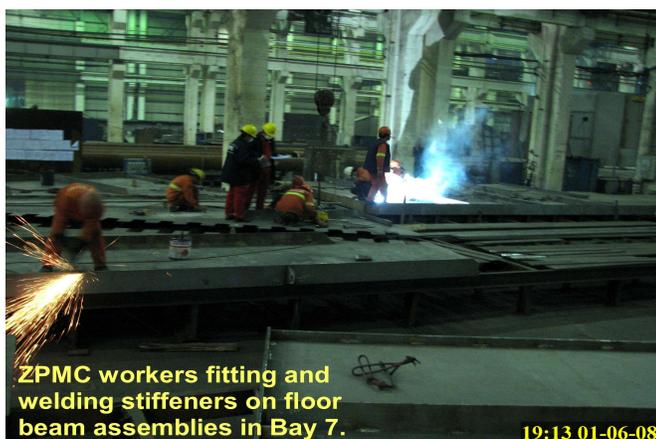
Bay 3: The QA inspector observed ZPMC personnel using flux cored arc welding (FCAW) to make complete joint penetration (CJP) welds of beams that will be split lengthwise to form T-stiffeners for side plate assemblies. The QA inspector noted that 1 half of the joint was welded and the parts were being turned over to access the other side of the flange CJP. There was no welding at the time of the QA inspector's observations. The QA inspector made random visual examinations of the welds that were partially completed. The QA inspector observed what appeared to be gouges in the base metal, on the back (bottom) side of the flanges. The QA inspector noted to return when the parts have been turned over. Upon the QA inspector's return to Bay 3, the QA inspector could clearly examine the un-welded portion of the flanges. The QA inspector observed gouges in the base metal that were measurable at 3mm deep. The location of the gouges makes accurate measurement difficult, as they appear to be in and near the weld access holes that are cut in the beam webs. The QA inspector observed a gouge in the base metal of the flange near joint SP020-01-002. The QA inspector noted that this gouge measures approximately 6mm deep and is 20mm long. The QA inspector noted that the ZPMC workers at this location were in the process of preparing to weld the CJP joint and there did not appear to be any approved repair of this base metal gouge. The QA inspector asked the workers if there was a CWI in the area. The ZPMC workers looked around, then went and got the attention of Hu Wei Qing. The QA inspector showed the base metal gouges to Hu Wei Qing, who then wrote "HOLD" on the part. The QA inspector was previously unaware of this person's name, and in the process of asking him what his name was, the QA inspector also asked him if he was a CWI or CAWI.

# WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

The QA inspector was informed that he was "temporary CWI." At this time, the QA inspector realized that there might not be any approved CWI/CAWI Quality Control (QC) personnel in Bay 3. The QA inspector noted that this person was present in Bay 3 for the majority of the time that the QA inspector was making observations. However, due to the multitude of ZPMC personnel in Bay 3 and the fact that ZPMC has internal "QC" personnel who are working through out Bay 3, the QA inspector could not determine if there were any approved CWI/CAWI QC personnel in Bay 3. See the attached photos of some of the observed base metal gouges.

Bay 7: The QA inspector made random observations of work in progress on floor beam assemblies. The QA inspector observed multiple ZPMC crews fitting and tack welding stiffeners and flanges on FB002-02, FB008-03 and FB016-02. The QA inspector also noted that submerged arc welding (SAW) appears to have just been completed on FB017-02 at welds 079 and 101. See the attached photos of work in progress.



## Summary of Conversations:

There were no other QA inspectors during this shift. The QA inspector Scott Croff wrote a summary shift turnover report and informed the QA inspector Paul Stovall of the status of the work in progress. 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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# WELDING INSPECTION REPORT

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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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