

**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-001332**Date Inspected:** 22-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**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:** Fu Yu Hong**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-up**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the fabrication scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

The QA inspector performed visual weld inspection to the MA12 subassembly on the 114 M, weld joints 9, 10 and 11 corner plate connections. The QA inspector found an undersized weld. The QA inspector had a conversation with ZPMC QA inspector Mr. Xu Jun. The QA inspector informed ZPMC that the weld joint # 10 was undersized.

The required fillet weld size was 30 mm and the actual size was 27 mm including the undersize of the effective throat. ZPMC agreed and added more weld at weld joint # 10.

The QA inspector observed that ZPMC was performing magnetic particle inspection to the weld joints 16, 17, 19 and 20 from drawing # MUA-MA-1-FF Tower mock-up 77 M.

The QA inspector performed alignment verifications at the bolted connection before drilling operations at the junction of the 114 M lower and upper shafts. The QA inspector found that a maximum of approximately 5 mm offset between skins D lower and upper prior drilling operations. However, the QA inspector observed that ZPMC was locating (2) two 80 Tons jacks on the interior to assist the alignment operations which were not noted on the fabrication procedure. The QA inspector witnessed ZPMC verifying the control lines and leveling the tower splice with a laser beam. The digital photographs below show some of the ZPMC's assembling operations. The QA inspector had a conversation with Caltrans Task Leader Robert Cuellar. The QA inspector brought to Mr. Robert Cuellar attention that ZPMC was using hydraulic jacks to assist the alignment operations. An incident report was issued on this date because ZPMC was using methods that were not addressed in ZPMC's fabrication procedures.

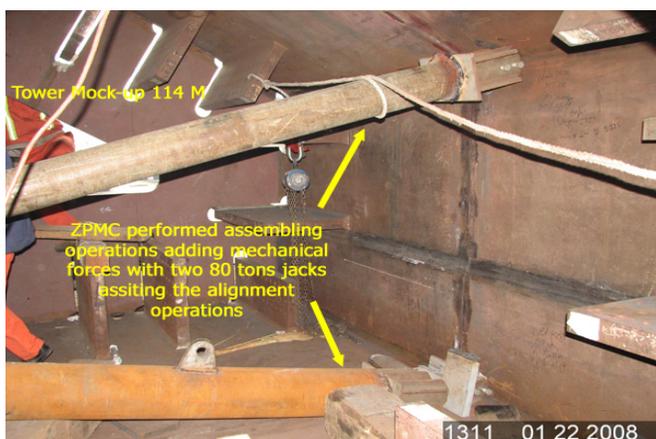
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# WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

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The QA inspector had a conversation with ZPMC QC representative Mr. Xu Jun. The QA inspector informed to Mr. Xu Jun that an incident report was going to be issued because ZPMC did not follow their fabrication procedure. After, Mr. Xu Jun had a conversation with ZPMC representative Lu Jian Hua; Mr. Xu Jun relayed to the QA inspector that ZPMC did not intend to list every step in detail in their fabrication procedures. The QA inspector informed that it was Caltrans representatives concern how much stresses will be added to the bolting connections by the 80 Tons hydraulic jacks.



## Summary of Conversations:

As noted 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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**Inspected By:** Acuna,Alfredo

Quality Assurance Inspector

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**Reviewed By:** Cuellar,Robert

QA Reviewer