

**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-001145**Date Inspected:** 01-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 2300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Lefeng**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:** Caltrans Mock-Up**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Ken Jobses, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, to randomly monitor welding and Quality Control (QC) functions. While on site, the QA Inspector observed and/or discovered the following:

The Caltrans QA Inspector randomly observed the manual Shielded Metal Arc Welding (SMAW) on the 77M Mock-Up Diaphragm Assembly, Weld Nos. MUA-MA1 E/F-2C, 3B, 16A and 17B. Weld No. MUA-MA1 E/F-16A was being welded by Cao Tao (I. D. 066163). Weld No. MUA-MA1 E/F-3B was being welded by Tan Xiangbo (I. D. 066459). Weld No. MUA-MA1 E/F-2C was being welded by Liang Yanhai (I. D. 066457). Weld No. MUA-MA1 E/F-17B was being welded by Ge Hongai (I. D. 037780). All four welders' qualifications for this welding are listed in ZPMC's Master List of Welders/Welding Operators/Tack Welders, Revision 7. ZPMC CWI, Xu Lenfeng (CWI No. 07031411) was present during this welding as was Bureau Veritas Inspector, Huang Li. There were two Welding Procedure Specifications (WPS's) being used for these partial joint penetration (PJP) groove welds. WPS-B-T 4313-TC-P5-1 was being used for Weld Nos. 16A and 17B in the horizontal groove (2G) welding position using 5.0 mm diameter electrodes. WPS-B-T 4312-TC-P5-1 was being used for Weld Nos. 2C and 3B in the vertical groove (3G) welding position with 5.0 mm diameter electrodes. The QA Inspector noted that documentation of preheat/interpass temperatures, voltage, amperage and travel speed by the CWI were within the specified ranges of the WPS up until the time of random observation. The QA Inspector also randomly measured the amperage and voltage by use of a calibrated Fluke amp/volt meter. The specified electrode, THJ506-Fe-1 (E7018-1) was being used and portable electrode ovens were in use and warm to the touch. A later random observation revealed that Weld Nos. 2C and 3B had been completed and Weld Nos. MUA-MA1 E/F-2B and 3D were being welded by Tan Xiangbo (I. D. 066459) and Liang Yanhai (I. D. 066457), respectively. The

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# WELDING INSPECTION REPORT

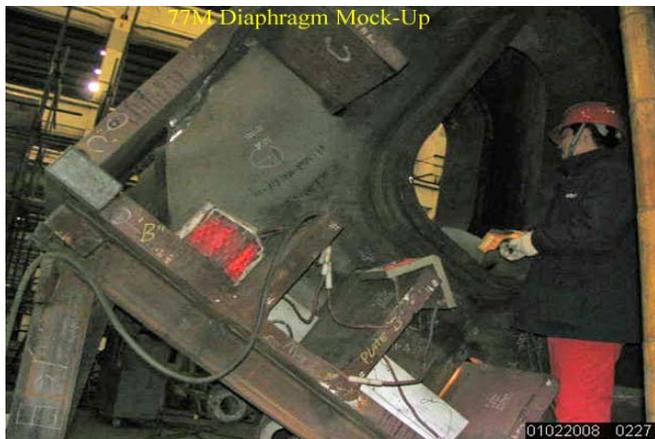
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QA Inspector noted that the same CWI was present and that documentation of parameters by the CWI was within the ranges specified on the WPS, and the specified electrode was being used from warm portable ovens. Weld Nos. MUA-MA1 E/F-16A and 17B had also been completed.

All observations appeared to meet the requirements of the job specifications.



## Summary of Conversations:

As identified within the contents of this report.

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## 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>	Jobes,Kenneth	Quality Assurance Inspector
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<b>Reviewed By:</b>	Cochran,Jim	QA Reviewer
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