

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-001293**Date Inspected:** 16-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**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, Zhu Zhanghai**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 Jobes, 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 two welders welding on Weld Nos. MUB-MA21 A/J-13 and 14; and MUB-MA21 G/J-62 and 66 on the 89M Tower Mock-Up during the course of the third shift starting on this date. The manual Shielded Metal Arc Welding (SMAW) process was being used and Welding Procedure Specification (WPS) WPS-B-T-3312-TC-P4 was being used. The base materials were A709M Grade 485 to ASTM A709M Grade 485 using 4.8 mm E9018 H4R electrodes in the horizontal groove (2G) welding position. The welders were Yang Shui Wei (I.D. No. 066280) and Tan Xiaobo (I.D. No. 066459). Both welders' qualifications for this welding are listed in ZPMC's Master List of Welders/Welding Operators/Tack Welders, Revision 7. ZPMC CWI, Xu Lefeng (AWS CWI No. 07031461) was present during this welding. The QA Inspector noted that documentation of preheat/interpass temperature, 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 electrodes, E9018 H4R, 4.8 mm diameter, was being used and portable electrode ovens were in use.

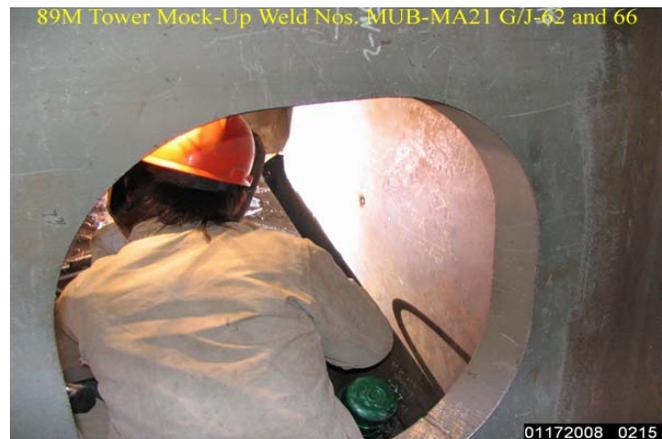
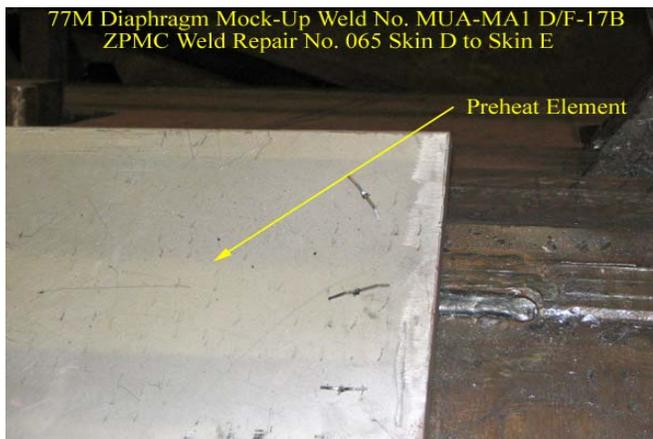
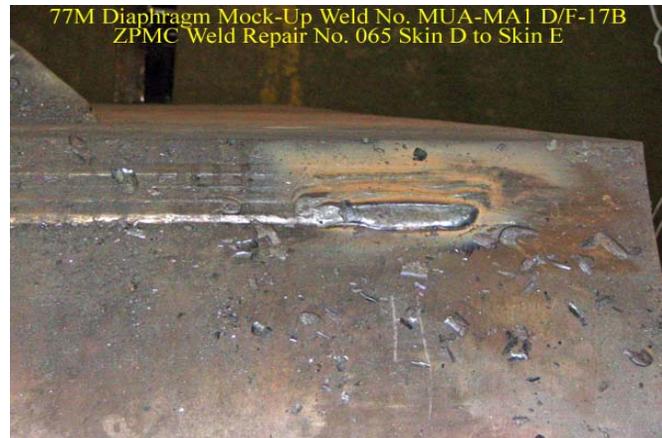
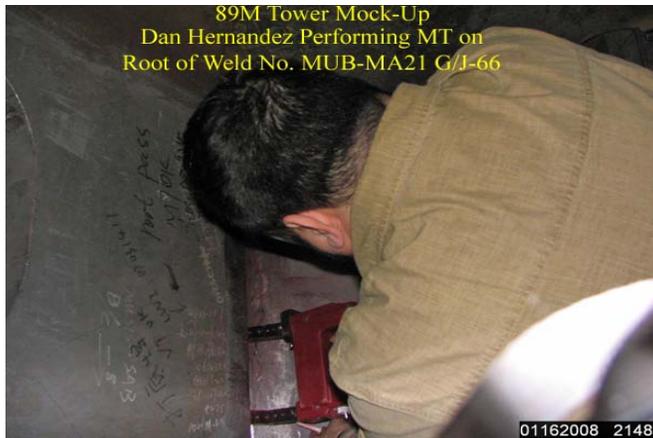
The QA Inspector also observed the semi-automatic FCAW repair welding on ZPMC Welding Repair No. 065 on the 77M Diaphragm Mock-Up. This is Weld No. MUA-MA1 D/F-17B, joining Piece Mark MA1 Skin E Sub-Assembly to MA5 Skin D Sub-Assembly. Both base materials are ASTM A709 Grade 50 (345)-2 and both are 75 mm and 60 mm in thickness. The QA Inspector observed that WPS No. WPS-345-FCAW-1G (1F)-Repair

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was being used for this repair welding. The welder was Wang Bing (I. D. No. 048696), whose qualifications for this welding are listed in ZPMC's Master List of Welders/Welding Operators/Tack Welders, Revision 7. The QA Inspector also noted that documentation of minimum/maximum preheat/interpass temperatures, voltage, amperage and travel speed by CWI, Zhu Zhonghai (AWS CWI No. 07072121), were within the specified ranges of the WPS up until the time of random observation.

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



Summary of Conversations:

At approximately 8:50 P. M., I was informed by Mr. Xu Jun "Eric", ZPMC QA Coordinator, that ZPMC was going to perform MT on the root passes of Weld Nos. MUB-MA21 D/J-62 and 66 on the 89M Mock-Up in fifteen minutes. I told him I definitely wanted to witness that MT and that only 15 minutes notification was unacceptable to me. When I got to his office at 9:10 P. M., I was informed that the MT was complete. Dan Hernandez subsequently MT'd both root passes and found them acceptable.

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: Jobses, Kenneth

Quality Assurance Inspector

Reviewed By: Cochran, Jim

QA Reviewer