

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-001115**Date Inspected:** 05-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sha Zhi, Xu Xianping**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, OBG**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 observed the Machine Flux Cored Arc Welding (FCAW) of WT stiffeners, RS8C's to side plate SP18 on the Orthotropic Box Girder (OBG). It was observed that all six of the WT stiffeners were attached to the side plate and three of them were being welded simultaneously on both sides in the horizontal fillet (2F) welding position. This made six (6) welds being made at the same time on the gantry machine in Bay No. 3. The weld numbers were SP018-01-13, 14, 17, 18, 21, and 22. The three welding operators were Li Zhao Qian (I. D. No. 048810), Xim Meng (I. D. No. 053742) and Lui Shuying (I. D. No. 037998), all of whose qualifications for semi-automatic FCAW in the 2F welding position are listed in ZPMC's Master List of Welders/Welding Operators/Tack Welders, Revision 6. Welding Procedure Specification (WPS) No. WPS-B-T-2132-3 was being used for this weld. ZPMC CWI, Xu Xianping (CWI No. 07072071) was present during this welding. The QA Inspector also noted that documentation of minimum/maximum 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 checked the amperage on three of the arcs using a calibrated fluke amp/volt meter and found all three within the ranges specified on the WPS.

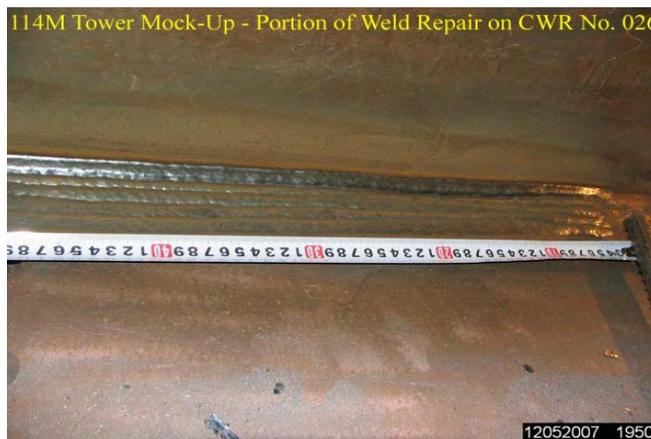
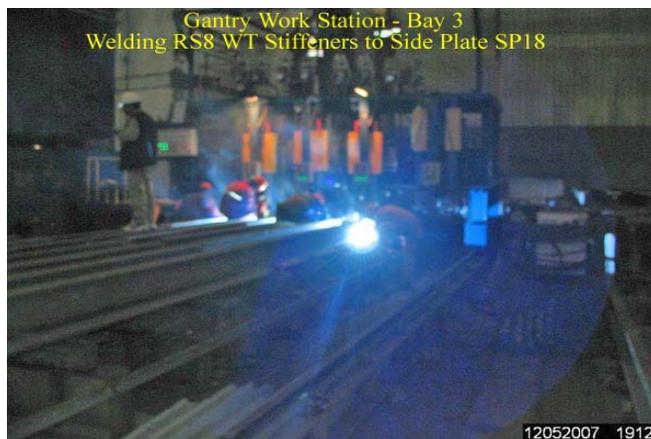
The QA Inspector also observed the semi-automatic FCAW repair welding on Critical Welding Repair (CWR) No. 026 on the 114M Tower Mock-Up. This is Weld No. MUC-A75-3, joining stiffener Piece Mark p920 to Piece Mark A75 on Interior Splice Assembly, MUC-A75. Per Drawing No. MUC-A75, both base materials are ASTM

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A709 Grade 50 (345)-2 and both are 70 mm thick. The QA Inspector observed that WPS No. WPS-345-FCAW-1G (1F)-Repair was being used for this repair welding. The welder was Bai Wen Ming (I. D. No. 040434), whose qualifications for this welding are listed in ZPMC's Master List of Welders/Welding Operators/Tack Welders, Revision 6. The QA Inspector also noted that documentation of minimum/maximum preheat/interpass temperatures, voltage, amperage and travel speed by CWI, Sha Zhi (AWS CWI No. 07081551), 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:

As identified within the contents of this report.

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.

Inspected By: Jobs, Kenneth

Quality Assurance Inspector

Reviewed By: Cochran, Jim

QA Reviewer
