

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-001112**Date Inspected:** 15-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** ZPMC - Ye Yong Jun**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:** 89m-Skin E-MA38 to SA 215 and SA24 Criti**Summary of Items Observed:**

Bay 1 operations: The Caltrans Quality Assurance (QA) Representative, John P. Tracy, had the following list of activities to report:

Submerged Arc Weld (SAW) gantry welder is in process of set-up. No thermal operations were observed by the Caltrans representative.

Bay 2 operations: The Caltrans QA representative observed the following list of activities:

SA215 to MA38 for MUB-MA21 B/J weld#s 1, 2, 3, 4, 5 and 6. Weld#s 5 and 6 are tack welds for the plate being welded to the top of the skin plate E. The remaining welds are a periphery, root pass on the outside edge. Weld#s 3 and 6 had noted cracks and were rejected by ZPMC. For each location, the discontinuity was removed and the areas were Dry Magnetic Particle Testing (DMT) examined and accepted by ZPMC personnel. ZPMC - Ye Yong Jun was the Certified Welding Inspector (CWI) on site for these operations. No repair welding was observed for weld #6.

Weld# 3 used WPS-B-T-4312-TC-P4-2 (Shielded Metal Arc Weld [SMAW]). The 160 degree preheat was established and verified by the Caltrans representative via Tempilstik brand temperature indicator. Welding parameters were taken and recorded as: 225 average amps, 24.1 volts, 142mm/min. travel speed. Operations appear to be in accordance with the criteria set forth with the contractual documents.

Critical Weld Repair (CWR) number CWR(CT)027 on SA24-angle connection plate for weld#

MUB-MA21F/J-10A/10B (330mm) was in a state of ceramic heater coil preheat for

WPS-485-SMAW-2G(2F)-repair, upon the arrival of the Caltrans representative. The area of repair was excavated and ground to bright metal. ZPMC CWI-Ye Yong Jun was present for these observations.

Dimensional inspection was performed by ZPMC personnel for the 114m Tower Mock-up, upper and lower

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sections.

Bay 3 operations: The Caltrans QA representative observed the following list of activities:

Plate numbers SP65 and SP71-were ZPMC QC inspected and accepted for Final Visual Testing, Magnetic Particle Testing and Ultrasonic Testing. Plates were transferred to Bay 4 for storage and Non Destructive Evaluation (NDE). The Caltrans representative notified the second shift QA representative, Ms. Sherri Brannon, of this event.

Remainder of the Bay 3 and Bay 7 operations were covered by Caltrans QA representative Mr. Charlie Franco.

Electrode Storage Room- The consumable electrode issue logs are still completely written in Chinese characters and after several attempts to rectify them. Temperatures appear to be within parameters for storage. No drying temperatures have been observed.

Included below are digital pictures that support the observations recorded within this report.



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Summary of Conversations:

At the completion of the above stated NDE examinations and welding topics relating to discontinuities and disposition, the ZPMC CWI, Ye Yong Jun, reported that the issues and remedies were found to be in accordance with the criteria set forth within the contractual documents.

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: | Tracy,John | Quality Assurance Inspector |
| Reviewed By: | Cuellar,Robert | QA Reviewer |
