

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-000163**Date Inspected:** 11-May-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Song Wei Min**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:** PQR Test**Summary of Items Observed:**

: Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe quality control functions related to welding, testing and fabrication procedures at the Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

At 0900 hours, ZPMC resumed PQR HP200777 weld test. Caltrans QA Inspector witnessed ZPMC welder, Mr. Zhu Hai Ping perform shield metal arc welding (SMAW) in the 3G position. The welding consumable is identified as a 4.0 mm electrode, classification E9018M-H4R. Caltrans QA observed ZPMC QA Inspectors, Mr. Xu Jijin, and American Bridge/Fluor (ABF) subcontractor for quality control, Bureau Veritas Inspector, Mr. Song Wei Min monitoring and supervising the testing per AWS 5.13 criteria; amperages, voltages, travel speeds, preheat and interpass temperatures. Caltrans QA verified that the welding parameters taken by ZPMC QC inspector, appeared to be accurate and in accordance with the contract documents. Caltrans QA observed that the ZPMC testing center for ambient temperature and wind velocity appear to be in conformance with AWS D1.5, paragraph 3.1 and 4.14.3 requirements.

Caltrans QA inspector recorded welding parameters for a total of 8 weld passes, 49 through 56. Caltrans QA Inspector observed that the welder was welding over partially cleaned weld passes and, not chipping and cleaning weld termination during the changing of electrodes. It appeared that Mr. Song was aware of the questionable weld cleaning and no action was taken by Mr. Song.

The completed PQR test plate was visually inspected by the QC inspectors, Mr. Song Wei Min and Mr. Wei Huang and accepted. QC informed Caltrans QA of the inspection results, at the conclusion of their inspection. Caltrans QA performed a visual inspection, and observed excessive weld reinforcement height, for about seventy-five percent of the weld length. The reinforcement height measured 4.5mm. AWS D1.5 2002, Figure 3.3

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specifies maximum reinforcement height of 3mm. Caltrans QA informed QC of the findings. QC confirmed the findings and directed the welder to grind down the reinforcement, to be within acceptable limits of AWS requirements. The weld was reinspected by Caltrans QA and appeared to be in conformance with the contract documents. Caltrans QA lot number B49-024-07 was assigned to the test plate for traceability. See Caltrans Welding Witness Report, TL-6032, dated May 11, 2007 for additional information.



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:	Hasler, Mike	Quality Assurance Inspector
Reviewed By:	McClary, David	QA Reviewer
