

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-007375**Date Inspected:** 13-Jun-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**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:** OBG and Tower Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Wu Zhi Chen, Mr. Jin Dong Liang

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

OBG Bay 5

ZPMC representative Mr. Lay Tao requested that this QA Inspector perform followup ultrasonic inspections of Traveler Rail Bracket welds TR1E-PP22-010 and TR1E-PP26-010 which this QA Inspector had ultrasonically rejected on June 12, 2009. ZPMC ultrasonic inspection personnel provided their ultrasonic machine and related equipment and this QA Inspector verified the AWS calibration of ZPMC's ultrasonic equipment using a Caltrans IIW ultrasonic calibration block. The QA Inspector then scanned the two rejected locations of the Traveler Rail Bracket welds and this QA Inspector was not able to obtain a rejectable indication in the two welds with this equipment. Based on this examination the QA accepted these two welds. Mr. Lay Tao also informed this QA Inspector that even though weld TR1B-PP19-004 has dried ultrasonic couplant on the base material adjacent to the weld that ZPMC did not complete ultrasonic inspections of this weld. Based on this statement and after confirming that this traveler rail bracket is not identified by ZPMC as being ultrasonically accepted this QA Inspector is recommending that the previously issued incident report not be issued. See the June 12 TL6031 QA Inspection report for additional information.

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Tower Bay 10

The QA Inspector observed ZPMC welder Ms. Xu Xiushui, stencil 040489 using submerged arc welding procedure specification WPS-B-T-2221-B-U3C-S-2 to make groove weld NSD1-FESA4-3A/F-5B. The QA Inspector observed a welding current of approximately 650 amps and 30.0 volts. The base material appears to be between 110°C and 230°C. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Mr. Zhao Bin, stencil 206568 is using shielded metal arc procedure WPS-B-P-2312-TC-P5 to tack weld SSD1-FBSA4-1A/C-1A. The QA Inspector observed a welding current of approximately 155 amps and the base material where the weld is being made had been preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

The QA Inspector observed ZPMC welder Ms. Wang Shouqin, stencil 201750 is using welding procedure specification WPS-B-T-2221-B-S3C-S-2 to make submerged arc groove weld SSD1-FESA4-1A/F-10A. The QA Inspector observed ZPMC Quality Control personnel monitoring this welding and QC has recorded Ms. Wang Shouqin having a welding current of approximately 670 amps and 31.5 volts. Items observed on this date appeared to generally comply with applicable contract documents.

Segment Assembly

The QA Inspector observed ZPMC welder Mr. Fu Zhang Xiaochong is using shielded metal arc procedure WPS-B-P-2214-BU2-FCM(4G) to weld OBE5A-001 between segment 5AE and 5BE. The QA Inspector observed a welding current of approximately 170 amps and the base material where the weld is being made had been preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

See above.

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 Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
