

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-007415**Date Inspected:** 04-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. Zou Liu Hai, Mr. Wu Zhi Feng

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 7

The QA Inspector observed ZPMC welder Ms. Jiang Jingteng, stencil 046830 using submerged arc welding procedure specification WPS-B-T-2221-B-L2C-S-2 to make groove weld SP3034-001-077. The QA Inspector observed Quality Control personnel monitoring the base material temperature and other welding attributes. This QA Inspector measured a welding current of 555 amps, and 30.2 volts. Items observed on this date appeared to generally comply with applicable contract documents.

The QA Inspector observed ZPMC welder Mr. Wang Zhong Hua, stencil 053753 is using welding specification WPS-B-T-4211-B-U3b-2 to complete shielded metal arc tack weld WSDI-DPSA4-60. The QA Inspector observed that the base material where the tack weld was made had been preheated with a torch and a ZPMC QC Inspector is monitoring this welding. The QA Inspector measured a welding current of approximately 175 amps. Items observed on this date appeared to generally comply with applicable contract documents.

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OBG Bay 6

The QA Inspector observed ZPMC welder Mr. Du Henghua, stencil 037779 is using shielded metal arc process WPS-B-P-3312-TC-P5 to make tower double diaphragm weld ESD1-DPSA4-24 in the 3G position. The QA Inspector observed a welding current of approximately 150 amps and the base material where the weld is being made had been preheated with an electric heating element to a temperature above 140 degrees Celsius. Items observed by the QA Inspector appear to comply with project specifications.

OBG Bay 3

In OBG bay #3 CWI Mr. Liu Weiwei informed this QA Inspector that QC does not need to measure or record welding current for tack welding, and that QC Inspectors do not know the SMAW welding current being used for tack welding of cross beam CB202D-010-012 by Mr. Zhu Mingsong, stencil 204339. The QA Inspector remained in this location for approximately ten minutes and it appears that Mr. Liu Weiwei is not going to perform any additional welding in the near future and the QA Inspector was not able to obtain any welding parameters. Items observed on this date do not appear to fully comply with applicable contract documents.

The QA Inspector observed ZPMC welder Mr. Chen Chuanzong, stencil 044824 is using flux cored welding procedure WPS-B-T-2232-TC-U4b-F to make OBG floor beam weld FB010-040-045. The QA Inspector observed a welding current of approximately 300 amps, 31.5 volts and QC personnel had measured a welding speed of 314 mm per minute. Items observed on this date appeared to generally comply with applicable contract documents.

The QA Inspector performed random visual and magnetic particle inspections of approximately two meter length of the bottom backgouged / ground surface of weld OBW1A-008 and no linear indications were observed. This inspection was performed as a 'target of opportunity' basis since last night QA personnel had observed linear indications in the similar butt weld OBE1A-008 on the eastbound side. For additional information on these inspections see the TL6028 Magnetic Particle Test Report. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 3

The QA Inspector observed ZPMC welder Mr. Song Yinshu, stencil 059421 is using the flux cored welding process make repairs to bolt hole welds on traveler rail TR6C-PP15, TR6C-PP16, TR6C-PP20, TR6C-PP26, TR5D-PP27 and TR5D-PP28 that had been ultrasonically rejected by ZPMC Inspectors. The QA Inspector observed a welding current of approximately 240 amps and 25.0 volts. The QA Inspector did not observe any QC / CWI Inspectors in OBG Bay 9 for a period of several hours where this welding was taking place. The Special Provisions, Section 8-3.01 states; "QC inspections shall be provided to ensure continuous inspection when any welding is being performed. Continuous inspection, as a minimum, shall include (1) having QC Inspectors continually present on the shop floor or project site when any welding operation is being performed, and (2) having a QC Inspector within such close proximity of all welders or operators so that inspections by the QC Inspector of each operation, at each welding location, shall not lapse for a period exceeding 30 minutes." Items observed on this date do not appear to generally comply with applicable contract documents and an incident report was issued to document this violation.

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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
