

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-001069**Date Inspected:** 13-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**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:** 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:** Tower Fabrication**Summary of Items Observed:**

Caltrans 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:

CWI Names: Xu Xian Ping, Zhang Xu Liang, Wu Ming

Orthotropic Box Girder (OBG) and Tower Mock Up:

Bay 3:

The QA Inspector observed ZPMC welder Mr. Sun Tiyu stencil 54459 is using welding procedure specification WPS-B-T-2132-2 to make flux cored fillet tack welds on OBG side plate 057 stiffener welds BP057-01-019 and BP057-01-020. The QA Inspector observed a welding current of approximately 280 amps 28.3 volts and a gas flow of approximately 18 cubic liters per hour. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Mr. Han Jianshe is using welding procedure WPS-B-P-2112-FCM to make shielded metal arc tack welds on OBG side plate 040 stiffener weld SP040-001-005 and weld SP040-001-006. The QA Inspector observed arc E7018 4.0 mm diameter electrodes and a welding current of approximately 180 amps and a minimum base material preheat temperature of 65° C. Items observed by the QA

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Inspector appear to comply with project specifications.

The QA Inspector observed three ZPMC welders using welding procedure specification WPS-B-T-2132-2 to make flux cored fillet welds on six OBG side plate 006 stiffener welds at the same time. ZPMC has multiple flux cored welding manipulators attached to a movable gantry that runs on a track that straddles the length of the stiffener plates. The QA Inspector observed a minimum base material preheat of 60° C, and a welding travel speed of approximately 460 mm per minute. As the welding commences, each of the welders is responsible for two of the flux cored welding heads. All welders are using 1.4 mm diameter E71T-1 electrodes that have been marked as being installed earlier today. Welder Mr. Li Zhaogian stencil 48810 completed weld SP006-01-001 with a welding current of approximately 2650 amps and 30.0 volts and weld SP006-01-002 with a welding current of approximately 270 amps and 29.80 volts. Welder Mr. Xin Meng stencil 53742 completed weld SP006-01-005 with a welding current of approximately 285 amps and 30.0 volts and weld SP006-01-006 with a welding current of approximately 290 amps and 28.5 volts. Welder Lisau Liang stencil 48801 completed weld SP006-01-009 with a welding current of approximately 295 amps and 29.5 volts and weld SP006-01-010 with a welding current of approximately 276 amps and 30.5 volts. Items observed by the QA Inspector appear to comply with project specifications. See the photograph below for additional information.



Summary of Conversations:

See above for summary of conversations.

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:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Cochran,Jim	QA Reviewer
