

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-002086**Date Inspected:** 30-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1730**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 800**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**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

Bay 7 OBG:

The QA Inspector randomly observed ZPMC welder Sun Gu Zuo ID Number 058100, utilizing the Submerged Arc Welding (SAW) Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-B-L2c-S-1, to weld the fill pass on Floor Beam Diaphragm Sub-Assembly FB015-005 at Weld Joint (WJ) Number FB015-005-026. The QA Inspector randomly observed ZPMC CWI Hu Wei Qing monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 528 amps, 30.5 volts with a travel speed of 436 millimeters (mm) per minute. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC Welder Ren Jinzhu ID Number 044837, utilizing the Shielded Metal Arc Welding (SMAW) Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-P-2211-B-U2-FCM, to tack weld various Floor Beam Diaphragm (T=30 mm to T=12 mm) sections. The QA Inspector randomly observed ZPMC CWI Hu Wei Qing, monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Zhang Qing Quan ID Number 044774, utilizing the Flux Cored Arc Welding (FCAW) Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-T-2132-3,

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

on WJ 092 on Floor Beam Sub-Assembly FB021-02. The QA Inspector randomly observed ZPMC CWI Hu Wei Qing monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 298 amps, 29 volts with a travel speed of 433 mm per minute. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Zhang Chen Chuanzong ID Number 044824, utilizing the FCAW Process in the 2G/2F (Horizontal Groove/Horizontal Fillet) Positions with ZPMC WPS WPS-345-FCAW-2G(2F)Repair-1, on a repair to WJ 009 on Floor Beam Diaphragm Web Sub-Assembly FB007-01, in accordance with ZPMC Critical Weld Repair (CWR) B-CWR040. The QA Inspector randomly observed ZPMC CWI Hu Wei Qing monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 292 amps, 29.7 volts with a travel speed of 525 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC Non-Destructive Technician Bo Tingrei, utilizing the Magnetic Particle Testing (MT) Method, to examine excavations on Floor Beam Diaphragm Web Sub-Assemblies FB002-04 (9 excavations in WJ 001), FB007-01 (WJ 001 3 excavations), FB007-05 (WJ 003 13 excavations/ WJ 009 3 excavations) and FB015-04 (WJ 003 7 excavations). There appeared to be no indications and ZPMC QC accepted the MT Inspection of the above welds. This work was being performed in accordance with ZPMC CWR B-CWR040.

Bay 8 Tower:

The QA Inspector randomly observed ZPMC welder Ma Ying ID Number 045270, utilizing the SAW Process in the 1G Position (Flat Groove) with ZPMC WPS WPS-B-T-3221-B-U3c-S-1, to weld the fill pass in WJ WSD1-SA32A/B-10A on Tower Diaphragm Sub-Assembly SA32(W) to p1424(W). The QA Inspector randomly observed ZPMC CWI Ye Yongjun monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 615 amps, 30.8 volts with a travel speed of 500 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.



WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Summary of Conversations:

There were no relevant 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:	Franco,Charlie	Quality Assurance Inspector
Reviewed By:	Hager,Craig	QA Reviewer
