

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-001309**Date Inspected:** 04-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 930**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**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**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 Orthotropic Box Girders (OBG).

Bay 7 OBG:

The QA Inspector randomly observed ZPMC welder Wang Li ID Number 044772, utilizing the Shielded Metal Arc Welding (SMAW) Process with ZPMC approved Weld Procedure Specification (WPS) WPS-B-P-2211-B-U2-FCM in the 1G position to tack weld Floor Beam Sub-Assembly FB022-02 Plates X20B + X20C (T=12 T2) to X31A + X29C (T=18 F2 SPCM) at Weld Joint (WJ) FB022-02-081, 101. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 184 amps, welding voltage 21.5 volts with a travel speed of 115 millimeters (mm) per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Ren Jinzhu ID Number 044837, utilizing the SMAW Process with ZPMC approved WPS WPS-B-P-2112(FCM) in the 2F position to tack weld Flange Plate X2M (WJ's FB008-03-009, 046) and Gusset Type Stiffeners X3K and X3L to Floor Beam Web FB008-03. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru, monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed a ZPMC helper utilizing a grinder to blend the welds attaching Stiffeners

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X2E, X2F, X2H, X3K and X3L to Floor Beam Web FB002-04.

The QA Inspector randomly observed ZPMC welder Yang Xuhe ID Number 057795, utilizing the SMAW Process with ZPMC approved WPS WPS-B-P-2113 in the 3F position weld Flange Plate X2F to Flange Plate X7K at WJ FB007-03-009 on Floor Beam Web FB007-03. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru, monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed a completely failed tack weld in WJ FB008-06-009 attaching Flange Plate X7M to Floor Beam Web FB008-06. The QA Inspector informed ZPMC CWI Cui Yi Ru of the situation. The QA Inspector randomly observed the complete removal of the failed tack weld in WJ FB008-06-009. The attached photographs provide additional detail.

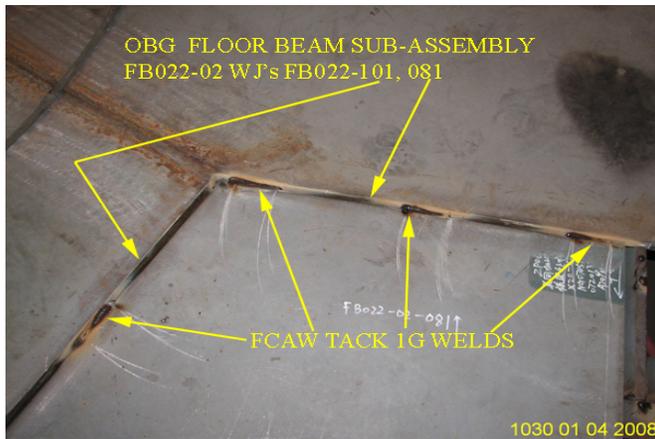
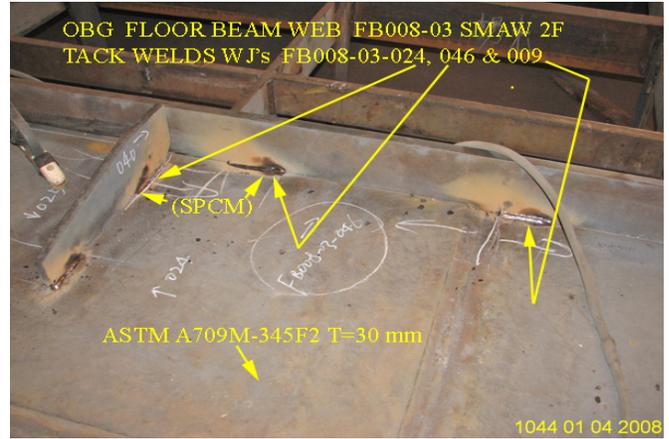
The QA Inspector randomly observed ZPMC welder Hong Shuili ID Number 044815, utilizing the Flux Cored Arc Welding (FCAW) Process with ZPMC approved WPS WPS-B-T-2132-3 in the 2F position with an HIT-18-1D Automatic Welding Carriage Flange Plate X7G to Floor Beam Web FB002-03 on WJ FBOO2-03-002. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 295 amps, welding voltage 29.6 volts with a travel speed of 419 mm per minute. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Yuan Wensong ID Number 055491, utilizing the FCAW Process with ZPMC approved WPS WPS-B-T-2132-3 in the 2F position with an HIT-18-1D Automatic Welding Carriage, to weld Flange Plate X7G to Floor Beam Web FB015-01 at WJ FB015-01-002. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 284 amps, welding voltage 30.8 volts with a travel speed of 421 mm per minute. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Li Hai Tao ID Number 044839, utilizing the FCAW Process with ZPMC approved WPS WPS-B-T-2231-B-U2-F-1 in the 1G position to weld the root pass in Floor Beam Sub-Assembly FB021-01 at WJ FB021-01-101. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 290 amps, welding voltage 27.6 volts with a travel speed of 505 mm per minute. The weld parameters appeared to comply with contract requirements.

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Summary of Conversations:

As noted in the above body 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: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Cochran,Jim

QA Reviewer