

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-003448**Date Inspected:** 23-Jul-2008**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:** Sun Wei**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 Tower and Orthotropic Box Girders (OBG).

OBG Bay 1:

The QA Inspector randomly observed ZPMC welders Xiang Huan Feng ID Number 059416, Xiang Jie ID Number 059378, Gao Xindong ID Number 059361, Jiang Ting Guang ID Number 062265, Zhang Shao Hui ID Number 059403 and Chen Jie ID Number 059468, utilizing gantry mounted welding apparatus with the Gas Metal Arc Welding (GMAW) Process in the 2G (Horizontal Groove) Position with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2342-U1(U-Rib)-3, to weld the root pass of the U-Ribs to 5 Rib Deck Plate Sub-Assembly DP387-001 at Weld Joint (WJ) Numbers DP387-001-001/002(U-27), 005/006(U-183) and 009/010(U-11). The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 374/367 amps, 30.1/30.3 volts (WJ's 001/002) for Mr. Xiang Huan Feng/Mr. Xiang Jie; 380/363 amps, 30.9/30.4 volts (WJ's 005/006) for Mr. Gao/Mr. Jiang and 357/363 amps, 30.1/30 volts (WJ's 009/010) for Mr. Zhang/Mr. Chen with a travel speed of 535 millimeters (mm) per minute for all welders. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welders Xiang Huan Feng ID Number 059416, Xiang Jie ID Number 059378, Gao Xindong ID Number 059361 and Jiang Ting Guang ID Number 062265, utilizing gantry mounted welding apparatus with the GMAW Process in the 2G (Horizontal Groove) Position with ZPMC WPS

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WPS-B-T-2342-U1(U-Rib)-3, to weld the root pass of the U-Ribs to 5 Rib Deck Plate Sub-Assembly DP387-001 at WJ Numbers DP387-001-003/004(U-3), 007/008(U-36). The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 360/359 amps, 30.5/30.5 volts (WJ's OO3/004) for Mr. Xiang Huan Feng/Mr. Xiang Jie; 381/374 amps, 30.1/30.4 volts (WJ's 007/008) for Mr. Gao/Mr. Jiang. with a travel speed of 534 mm per minute for all welders. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welders Don Yi Gun ID Number 059450 and Gong Zhi Wu ID Number 059405, utilizing the Flux Cored Arc Welding (FCAW) Process in the 3F (Vertical Groove) Position to weld diaphragms in U-Ribs U-285, U-293, U-294 and U-287 for Deck Plate Assembly DP344-002. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 225 amps, 28.7 volts for Mr. Dong and 205 amps, 29.5 volts Mr. Gong. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welders Xiang Huan Feng ID Number 059416, Xiang Jie ID Number 059378, Gao Xindong ID Number 059361 and Jiang Ting Guang ID Number 062265, utilizing gantry mounted welding apparatus with the GMAW Process in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2342-U1(U-Rib)-3, to weld the root pass of the U-Ribs to 3 Rib Deck Plate Sub-Assembly DP278-001 at WJ Numbers DP278-001-001/002(U-5), 005/006(U-10). The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 375/372 amps, 30.4/30.4 volts (WJ's OO1/002) for Mr. Xiang Huan Feng/Mr. Xiang Jie; 370/372 amps, 30.6/30.7 volts (WJ's 005/006) for Mr. Gao/Mr. Jiang with a travel speed of 534 mm per minute for all welders. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

OBG Bay 2; No contract welding being performed.

OBG Bay 3:

The QA Inspector randomly observed ZPMC welder Wang Zhonghua ID Number 053753 utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-P-2112-FCM, to weld T-Ribs to Bottom Plate Sub-Assembly BP300-001 WJ's 043 through 046. The QA Inspector randomly observed ZPMC CWI Huang Wen Pang monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Du Henghua ID Number 037790, utilizing the SMAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-T-2132-3, to tack weld 35 mm I-Ribs to Bottom Plate Sub-Assembly BP305-001. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welders Ge Hongqi ID Number 037780 and Cao Tao ID Number

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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 Ady Velasco 13816942685, who represents the Office of Structural Materials for your project.

Inspected By:	Franco,Charlie	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
