

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-003449**Date Inspected:** 24-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

<b>CWI Name:</b>	Sun Wei, Huang Wen Pang	<b>CWI Present:</b>	Yes	No
<b>Inspected CWI report:</b>	Yes No N/A	<b>Rod Oven in Use:</b>	Yes	No N/A
<b>Electrode to specification:</b>	Yes No N/A	<b>Weld Procedures Followed:</b>	Yes	No N/A
<b>Qualified Welders:</b>	Yes No N/A	<b>Verified Joint Fit-up:</b>	Yes	No N/A
<b>Approved Drawings:</b>	Yes No N/A	<b>Approved WPS:</b>	Yes	No N/A
		<b>Delayed / Cancelled:</b>	Yes	No N/A
<b>Bridge No:</b>	34-0006	<b>Component:</b>	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 Zhang Li Ping ID Number 201840, Zhao Cheng Shuang ID Number 059400, Jiang Shung Cheng ID Number 201788, Wang Xiao Yong ID Number 059445 and Xu Guo Yin ID Number 059443, utilizing Gantry 2 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 7EW-DP199-001 at Weld Joint (WJ) Numbers DP199-001-001/002(U-262), 005(U-264) and 009/010(U-266). The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 365/375 amps, 30.8/30.7 volts (WJ's 001/002) for Mr. Zhang/Mr. Zhao; 358 amps, 30.9 volts (WJ 005) for Mr. Jiang and 356/367 amps, 31.0/30.8 volts (WJ's 009/010) for Mr. Wang/Mr. Xu with a travel speed of 525 millimeters (mm) per minute for all welders. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welders Zhang Li Ping ID Number 201840, Zhao Cheng Shuang ID Number 059400, Jiang Shung Cheng ID Number 201788, Wang Xiao Yong ID Number 059445, Song Yin Shu ID Number 059421 and Xu Guo Yin ID Number 059443, utilizing Gantry 2 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

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the root pass of the U-Ribs to 5 Rib Deck Plate Sub-Assembly DP226-001 at WJ Numbers DP266-001-001/002(U-281), 005/006(U-17) and 009/010(U-23). The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 373/368 amps, 30.9/31.9 volts (WJ's 001/002) for Mr. Zhang/Mr. Zhao; 375/365 amps, 30.3/30.6 volts (WJ 005/006) for Mr. Jiang/Mr. Song and 378/366 amps, 30.5/30.7 volts (WJ's 009/010) for Mr. Wang/Mr. Xu with a travel speed of 535 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 Zhang Li Ping ID Number 201840, Zhao Cheng Shuang ID Number 059400, Jiang Shung Cheng ID Number 201788, and Song Yin Shu ID Number 059421, utilizing Gantry 2 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 5 Rib Deck Plate Sub-Assembly DP226-001 at WJ Numbers DP266-001-003/004(U-24), and 007/008(U-16). The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 374/366 amps, 30.8/31.8 volts (WJ's 003/004) for Mr. Zhang/Mr. Zhao; 383/379 amps, 30.7/30.6 volts (WJ 007/008) for Mr. Jiang/Mr. Song with a travel speed of 535 mm per minute for all welders. The weld parameters appeared to comply with contract requirements.

OBG Bay 2; No contract welding being performed.

OBG Bay 3:

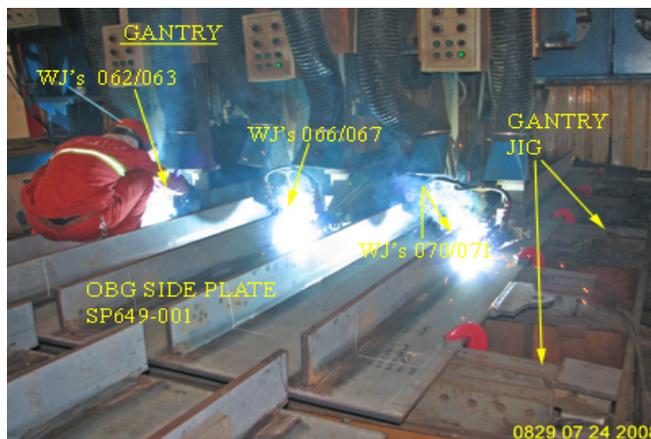
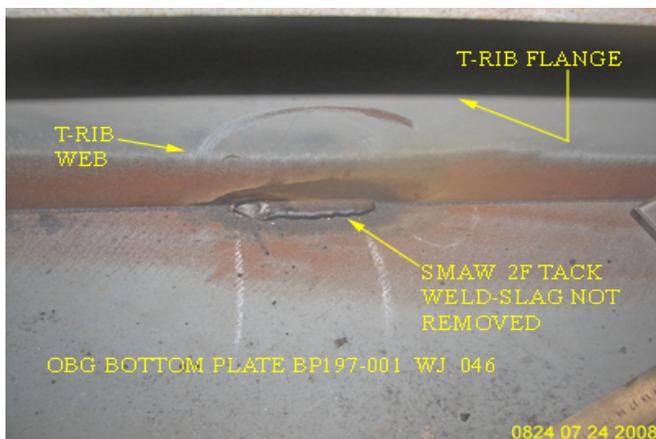
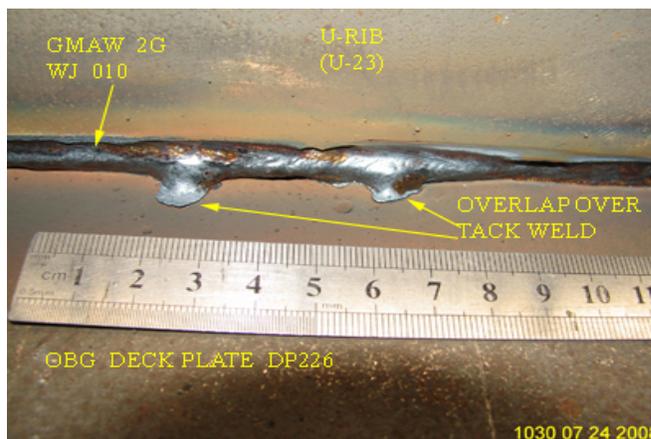
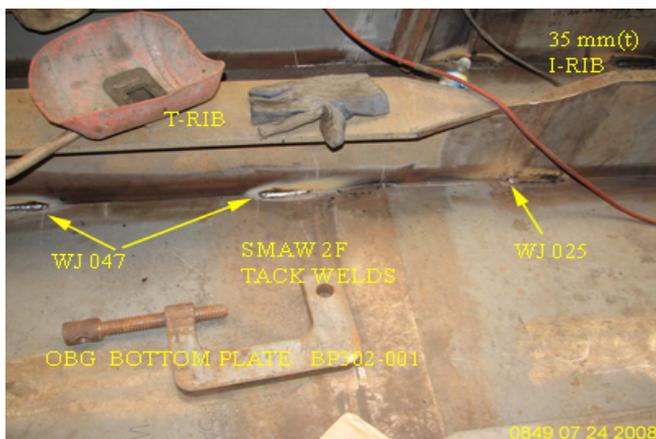
The QA Inspector randomly observed ZPMC welder Ge Hongqi ID Number 037780 utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-P-2112-FCM, to tack weld T-Ribs to Bottom Plate Sub-Assembly BP197-001 WJ's 043 through 054. The QA Inspector randomly observed ZPMC CWI Wu Zhi Feng 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 Cao Tao ID Number 066163 and Guo Deng Yun ID Number 037997, utilizing the SMAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-P-2112-FCM, to tack weld T-Ribs and 35 mm I-Ribs to Bottom Plate Sub-Assembly BP302 Yellow Tag Number 245 WJ's BP302-001-043 through 054. The QA Inspector randomly observed ZPMC CWI Wu Zhi Feng 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 Wei Da Shuai ID Number 051246, Xin Meng ID Number 053742 and Li Zhaoqian ID Number 048810, utilizing gantry mounted welding apparatus with the FCAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-T-2132-3, to weld T-Ribs to Side Plate Sub-Assembly SP649-001. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 301/294 amps, 30.2/30 volts (WJ's 062/063) for Mr. Wei; 297/286 amps, 30.2/29.7 volts (WJ 066/067) for Mr. Xin and 289/294 amps, 30.2/30.5 volts (WJ's 070/071) for Mr. Li with a travel speed of 446 mm per minute for all welders. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

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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