

**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-002245**Date Inspected:** 08-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 2300**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:** Tower & 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 3:**

The QA Inspector randomly observed ZPMC welder operators Sun Ti Yu ID Number 054459, Liu Zihong ID Number 062447, and Xin Meng ID Number 053742, utilizing the Flux Cored Arc Welding (FCAW) Process in the 2F (Horizontal Fillet) Position with a gantry mounted welding apparatus and ZPMC Weld Procedure Specification (WPS) WPS-B-T-2123-3, to weld T-Ribs to Deck Plate DP168-001 at WJ's 007/008, 011/012 and 015/016 respectively. The QA Inspector randomly observed ZPMC CWI Xu Xianping monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 301 amps, 30.2 volts (WJ 007); 295 amps, 29.7 volts (WJ 008); 305 amps, 30.2 volts (WJ 011); 296 amps, 30.3 volts (WJ 012); 306 amps, 30.3 volts (WJ 015) and 310 amps, 30.1 volts (WJ 016). Travel speed for all welds was randomly observed at 440 millimeters (mm) per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional information.

**OBG Bay 4:**

The QA Inspector randomly observed ZPMC welder Gu Caihong ID Number 053748, utilizing the Submerged Arc Welding (SAW) Process in the 1G Position (Flat Groove) with ZPMC WPS WPS-B-T-3221-B-U3c-S-1, to weld the root pass in WJ ESD1-SA318A/B-3B(4B) on 33 m Tower Diaphragm Top Plate Sub-Assembly

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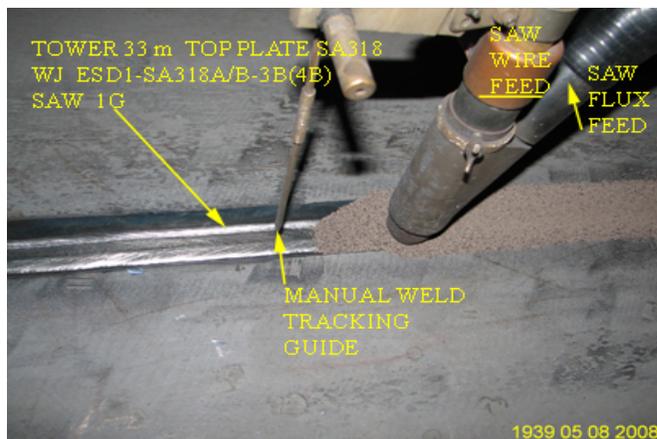
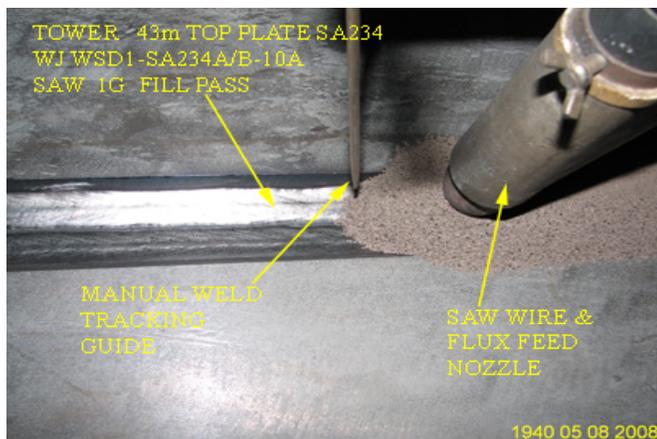
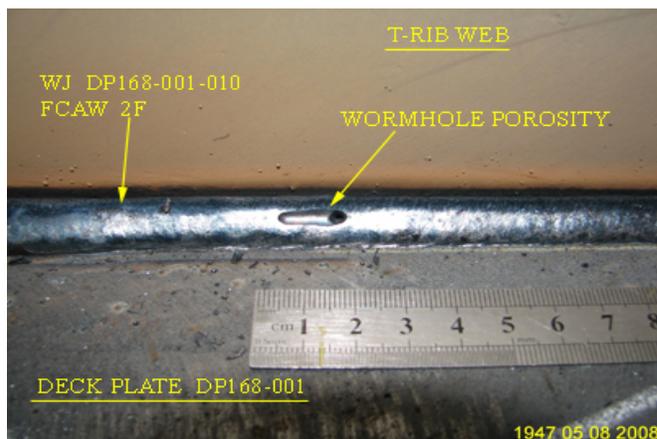
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SA31(E) piece marks SA318(E) + p830(E). The QA Inspector randomly observed ZPMC CWI Zhao Chen Sun monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 620 amps, 30.5 volts with a travel speed of 500 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Jiang Jingteng ID Number 046830, utilizing the SAW Process in the 1G Position (Flat Groove) with ZPMC WPS WPS-B-T-3221-B-U3c-S, to weld the fill pass in WJ WSD1-SA234A/B-10A on 43 m Tower Diaphragm Top PLate Sub-Assembly SA234(W) piece marks SA234(W) + p1297(W). The QA Inspector randomly observed ZPMC CWI Zhao Chen Sun monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 644 amps, 30.3 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.

OBG Bay 8:

The QA Inspector randomly observed a ZPMC Carbon Air Arc operator utilizing the Carbon Air Arc Gouging Process to back gouge the seam weld between 47.6 m Tower Diaphragm Top Plate Sub-Assembly SSD1-SA169A/B. The attached photograph provides additional detail.



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**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.

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<b>Inspected By:</b>	Franco,Charlie	Quality Assurance Inspector
<b>Reviewed By:</b>	Cochran,Jim	QA Reviewer

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