

**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-004007**Date Inspected:** 09-Sep-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:** 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 1:**

The QA Inspector randomly observed ZPMC welder Dong Yiqun ID Number 059450, utilizing the Flux Cored Arc Welding (FCAW) Process in the 3F (Vertical Fillet) Position with Weld Procedure Specification (WPS) WPS-B-T-2133, to tack weld 8 mm diaphragms into U-Ribs for Deck Plate DP470-001 at Weld Joint (WJ) Numbers 138, 147, 156, 165 and 174.

**OBG Bay 2:**

The QA Inspector randomly observed 6 ZPMC machine operators utilizing magnetic drills and templates, to place bolt holes in Tower Skin Plate Longitudinal Stiffener sections.

**OBG Bay 3:**

The QA Inspector randomly observed ZPMC welders Zhao Shuming ID Number 046819, utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-2112-FCM, to tack weld W21 X 57 T-Ribs to End Plate EP036-001 WJ's 037/038. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Wu Ming Kai, monitoring weld parameters. The weld parameters

---

---

# WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

---

---

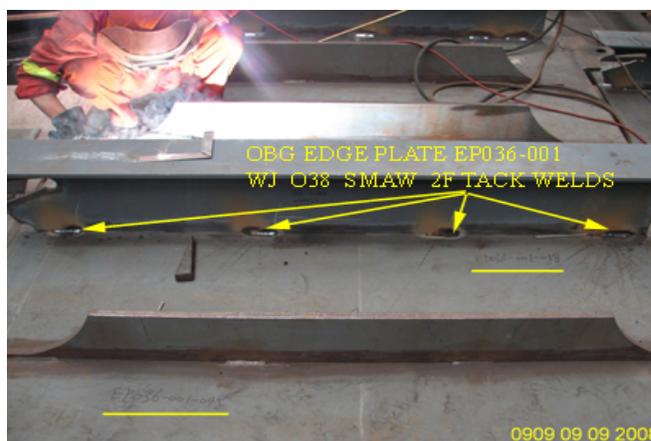
appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Zhao Shuming ID Number 046819, utilizing the SMAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-2112-FCM, to tack weld W21 X 57 T-Ribs to Side Plate SP036-001 WJ's 037/038. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Wu Ming Kai, monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

OBG Bay 4:

The QA Inspector randomly observed ZPMC welders Meng Tao ID Number 068918, Du Heng Hua ID Number 037779, Fu Yanjie ID Number 066268 and Ju Yaocai ID Number 068250, utilizing the SMAW Process in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-3312-TC-P5, to tack weld web plates to 43M Top(N) Tower Diaphragm SA234 at WJ's WSD1-SA234B/B-13, 16, and WSDI-268-11 and 10 respectively. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Zhao Chen Sun monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Wu Zhi Bin ID Number 049804, utilizing the Submerged Arc Welding (SAW) Process in the 1G (Flat Groove) Position with WPS-B-T-2221-U3c-2, to weld a butt splice between sections of 93M (W) Single Tower Diaphragm at WJ WD1-A5-1B. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Zhao Chen Sun monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 630 amps, 30.5 volts with a travel speed of 550 millimeters per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.



## 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

---

---

# WELDING INSPECTION REPORT

*( Continued Page 3 of 3 )*

---

---

your project.

---

**Inspected By:** Franco,Charlie

Quality Assurance Inspector

---

**Reviewed By:** Carreon,Albert

QA Reviewer