

**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-005455**Date Inspected:** 07-Feb-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**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 Fabrication**Summary of Items Observed:**

CWI: Mr. Sun Wei

On this date CALTRANS OSM Quality Assurance (QA) Inspector Mr. Paul Dawson arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

OBG Bay 9

The QA Inspector monitored welding of closed rib of deck plate DP275-001 using gantry #1. The QA Inspector observed four ZPMC welders using welding procedure specification WPS-B-T-2342-U1(Urib)-4 using the submerged arc welding process for the cover pass of four partial penetration groove welds on closed rib welds at the same time. ZPMC has multiple flux cored welding manipulators attached to a movable gantry that runs on a track along the length of the stiffener plates. ZPMC QC and ABF representatives were both monitoring this welding. The QA Inspector observed QC had documented a welding travel speed of 516 mm per minute for the root passes. As the welding commences, each of the welders is responsible for one of the welding heads. Welder Mr. Chen Jie, stencil 59468 completed the root pass of weld #1 with a welding current of approximately 685 amps and 25.1 volts. Welder Mr. Xhang Shao Hui stencil 59403 completed the root pass of weld #2 with a welding current of approximately 685 amps and 25.4 volts. Welder Mr. Tiang Shuang Chen, stencil 201788 completed the root pass of weld #5 with a welding current of approximately 680 amps and 24.9 volts. Welder Ms. Wang Xiao Rong, stencil 59445 completed the root pass of weld #6 with a welding current of approximately 680 amps and 25.

---

---

# WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

---

---

5 volts. Items observed by this QA Inspector appear to comply with project specifications.

The QA Inspector monitored welding of closed rib of deck plate DP219-001 using gantry #1. The QA Inspector observed two ZPMC welders using welding procedure specification WPS-B-T-2342-U1(Urib)-4 using the gas metal arc welding process for the root pass of two partial penetration groove welds on closed rib welds at the same time. ZPMC has multiple welding manipulators attached to a movable gantry that runs on a track along the length of the stiffener plates. ZPMC QC and ABF representatives were both monitoring this welding. As the welding commences, each of the welders is responsible for one of the welding heads. Welder Mr. Xhang Shao Hui stencil 59403 completed the root pass of weld #3 with a welding current of approximately 350 amps and 31.1 volts. Welder Mr. Chen Jie, stencil 59468 completed the root pass of weld #4 with a welding current of approximately 360 amps and 31.5 volts. Items observed by this QA Inspector appear to comply with project specifications.

## OBG Bay 6

This QA Inspector performed random ultrasonic (UT) inspections of OBG floor beam welds SP213-001-018, SP213-001-123, SP213-001-129, SP207-004-037, SP207-004-031 and SP207-004-064. These welds are listed on ZPMC Notification of Witness Inspection document 001937. The QA Inspector observed the welds that were ultrasonically inspected by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on this inspection see the TL6027 Ultrasonic Test Report and the photograph below.



## Summary of Conversations:

See above.

## 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 Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

---

<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Clifford,William	QA Reviewer

---