

**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-008233**Date Inspected:** 05-Aug-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:** Liu Fawen**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 & TOWER Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Sandeep Kumar was present during the times noted above for observations relative to the work being performed.

**BAY 2****Magnetic Particle Testing**

This QA inspector performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows:

1. LD017 - 017 - 002; 003; 004
2. LD016 - 032 - 002; 003; 004
3. LD016 - 031 - 002; 003; 004
4. LD018 - 018 - 002; 003; 004
5. LD016 - 030 - 002; 003; 008
6. LD018 - 017 - 002; 003; 004
7. LD015 - 032 - 002; 003; 004
8. LD015 - 031 - 002; 003; 004
9. LD017 - 018 - 002; 003; 004
10. LD015 - 030 - 002; 003; 004

This QA Inspector observed the following work in progress:

---

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 5 )

---

---

SAW process of weld joint #017 located on Floor Beam FB3082 – 002. Welder is identified as 250050. ZPMC QC is identified as Wang Liang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2221 – B – L2c – S – 2.

SAW process of weld joint #017 located on Floor Beam FB3082 – 003. Welder is identified as 207237. ZPMC QC is identified as Wang Liang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2221 – B – L2c – S – 2.

SAW process of weld joint #019 located on Floor Beam FB3093 – 001. Welder is identified as 045265. ZPMC QC is identified as Wang Liang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2221 – B – L2c – S – 2.

BAY 3

### Magnetic Particle Testing

This QA inspector performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows:

1. LD009 - 008 - 011
2. LD001 - 039 - 011
3. LD007 - 010 - 011
4. LD003 - 052 - 011
5. LD004 - 054 - 011
6. LD003 - 051 - 011
7. LD003 - 053 - 011
8. LD001 - 040 - 011
9. LD013 - 014 - 011
10. LD004 - 051 - 011
11. LD003 - 054 - 011
12. LD004 - 052 – 011
13. LD012 - 020 - 011
14. LD005 - 010 - 011
15. LD011 - 020 - 011
16. LD002 - 040 - 011
17. LD004 - 053 - 011
18. LD010 - 008 - 011
19. LD014 - 014 - 011
20. LD017 - 021 - 002; 003; 004
21. LD017 - 022 - 006; 007; 008
22. LD018 - 021 - 006; 007; 008
23. LD018 - 022 - 002; 003; 004

This QA Inspector observed the following work in progress:

FCAW process of Tack weld joint #002 located on Cross Beam CB202D – 014. Welder is identified as 208035.

---

---

## WELDING INSPECTION REPORT

( Continued Page 3 of 5 )

---

---

ZPMC QC is identified as Yang Qing Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – B – U2 – F – 1.

FCAW process of weld joint #001 located on Cross Beam CB202D – 014. Welder is identified as 208035. ZPMC QC is identified as Yang Qing Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – B – U2 – F – 1.

This QA Inspector observed the following work not in compliance:

During random verification Magnetic Particle Testing (MT) for the OBG Longitudinal Diaphragms, observed one (1) longitudinal linear indication approximately 11mm in length in the weld metal on LD002-039-011.

For Further details please see the incident report: - 040120F4\_TL-15\_B227\_08-05-09\_(MT) Longitudinal Indication.doc

### BAY 5

This QA Inspector observed the following work in progress:

SMAW process of Tack weld joint #002 located on Bike Path BK001 – 020. Welder is identified as 204733. ZPMC QC is identified as Wang Liang. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2112.

SMAW process of Tack weld joint #007 located on Traveler Rail TR1D – PP99. Welder is identified as 204733. ZPMC QC is identified as Wang Liang. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2112.

### BAY 6

#### Magnetic Particle Testing

This QA inspector performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows:

1. SP3007 – 001 – 013 – Green Tag # 009396
2. SP3022 – 001 – 048 – Green Tag # 009395

This QA Inspector observed the following work in progress:

SMAW process welding of weld joint #2A located on WD1 – A305 – 77M – 4. Welder is identified as 037780. ZPMC QC is identified as Wang Xiao Bing. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3212 – Tc – U5b – 1.

SMAW process welding of weld joint #47 located on WD1 – A305 – 65M – 4. Welder is identified as 066459. ZPMC QC is identified as Wang Xiao Bing. The welding variables recorded by QC appeared to comply with the WPS – B – T – 4113 – 1.

SMAW process welding of weld joint #54 located on WD1 – A305 – 65M – 4. Welder is identified as 066457.

---

---

## WELDING INSPECTION REPORT

( Continued Page 4 of 5 )

---

---

ZPMC QC is identified as Wang Xiao Bing. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2113.

SMAW process welding of weld joint #8B located on WD1 – A305 – 77M – 4. Welder is identified as 066481. ZPMC QC is identified as Wang Xiao Bing. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3212 – Tc – U5b – 1.

SMAW process welding of weld joint #22 located on WD1 – A305 – 65M – 4. Welder is identified as 066456. ZPMC QC is identified as Wang Xiao Bing. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2113.

SMAW process welding of weld joint #27 located on WD1 – A305 – 65M – 4. Welder is identified as 069493. ZPMC QC is identified as Wang Xiao Bing. The welding variables recorded by QC appeared to comply with the WPS – B – T – 4113 – 1.

### BAY 7

This QA Inspector observed the following work in progress:

FCAW process of weld joint #009 located on Bottom Plate BP3008 – 001. Welder is identified as 054459.

ZPMC QC is identified as Zhou Jie. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132 – 3.

FCAW process of weld joint #090 located on Side Plate SP3045 – 001. Welder is identified as 22396. ZPMC QC is identified as Zhong Dian Xing. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2133.

FCAW process of weld joint #018 located on Bottom Plate BP3008 – 001. Welder is identified as 051246. ZPMC QC is identified as Zhou Jie. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132 – 3.

### BAY 8

This QA Inspector observed the following work in progress:

SMAW process of weld joint #002 located on Floor Beam FB204A – X205B. Welder is identified as 203272.

ZPMC QC is identified as Xia Yong Zheng. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2112.

SAW process of weld joint #002 located on Cross Beam CB202D – 013. Welder is identified as 207463. ZPMC QC is identified as Zhang Jing Xin. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2221 – B – L2c – S – 2.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

---

---

# WELDING INSPECTION REPORT

( Continued Page 5 of 5 )

---

---

**Summary of Conversations:**

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 Eric Tsang - 15000422372, who represents the Office of Structural Materials for your project.

---

|                      |               |                             |
|----------------------|---------------|-----------------------------|
| <b>Inspected By:</b> | Kumar,Sandeep | Quality Assurance Inspector |
|----------------------|---------------|-----------------------------|

---

|                     |           |             |
|---------------------|-----------|-------------|
| <b>Reviewed By:</b> | Prue,Erik | QA Reviewer |
|---------------------|-----------|-------------|