

**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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-025518**Date Inspected:** 03-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai**CWI Name:** Tian Lei**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**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector R. Hernandez was present during the time noted above and conducted observations relative to the work being performed.

The QA Inspector randomly observed the following work in progress:

**Bay Number 1**

Performed verification VT for the component(s) identified as OBG Barrier Rails for component(s) listed as E2-SB1-036, E2-SB1D-024, E2SB1D-023, E2-SB1-040, E2-SB1C-008, E2-SB1D-044, E2-SB5-031, E2-SB1D-040, E2-SB2-006, E2-SB2-007, E2-SB1-034, E2-SB5-029, E2-SB1C-010. This QA inspector signed green tag #15386.

**Bay Number 2**

Performed verification VT for the component(s) identified as OBG Sub Assembly for component(s) listed as SA3402A, SA3402B, SA3403A, SA3403B, SA3404A, SA3404B, SA3405A, SA3405B, SA3406A, SA3407B, & SA3408A. This QA inspector signed green tag #15387.

FCAW welding of complete joint penetration weld joint(s) located on lift 14 OBG Segment component identified as SEG3020K weld number(s) 170 & 176. Welder is identified as welder no. 045209. The welding variables recorded by ZPMC QC identified as Tian Lei appeared to comply with applicable WPS-B-T-2233-ESAB.

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FCAW welding of complete joint penetration weld joint(s) located on lift 14 OBG Segment component identified as SEG3020K weld number(s) 187 & 193. Welder is identified as welder no. 045203. The welding variables recorded by ZPMC QC identified as Tian Lei appeared to comply with applicable WPS-B-T-2233-ESAB.

FCAW welding of complete joint penetration weld joint(s) located on lift 14 OBG Segment component identified as SEG3020K weld number(s) 166, 172, 168, & 174. Welder is identified as welder no. 067520. The welding variables recorded by ZPMC QC identified as Tian Lei appeared to comply with applicable WPS-B-T-2232-ESAB.

FCAW welding of complete joint penetration weld joint(s) located on lift 14 OBG Segment component identified as SEG3020K weld number(s) 153 & 159. Welder is identified as welder no. 045276. The welding variables recorded by ZPMC QC identified as Tian Lei appeared to comply with applicable WPS-B-T-2233-ESAB.

FCAW welding of complete joint penetration weld joint(s) located on lift 14 OBG Segment component identified as SEG3020K weld number(s) 136 & 142. Welder is identified as welder no. 058245. The welding variables recorded by ZPMC QC identified as Tian Lei appeared to comply with applicable WPS-B-T-2233-ESAB.

FCAW welding of complete joint penetration weld joint(s) located on lift 14 OBG Segment component identified as SEG3020K weld number(s) 061 & 059. Welder is identified as welder no. 068445. The welding variables recorded by ZPMC QC identified as Tian Lei appeared to comply with applicable WPS-B-T-2233-ESAB.

FCAW welding of complete joint penetration weld joint(s) located on lift 14 OBG Segment component identified as SEG3020K weld number(s) 113 & 115. Welder is identified as welder no. 066236. The welding variables recorded by ZPMC QC identified as Tian Lei appeared to comply with applicable WPS-B-T-2233-ESAB.

FCAW welding of complete joint penetration weld joint(s) located on lift 14 OBG Segment component identified as SEG3020K weld number(s) 121 & 123. Welder is identified as welder no. 070006. The welding variables recorded by ZPMC QC identified as Tian Lei appeared to comply with applicable WPS-B-T-2233-ESAB.

This QA inspector observed ZPMC QC MT technicians and ZPMC personnel removing cracks found under the guidelines of critical weld repair no. B-CWR-2314. This inspector monitored ZPMC personnel preheating all welds prior to performing grinding operations to remove cracks. This inspector also monitored excavation depths that entered into parent metal with a Bridge-cam inspection tool.

The following is a list of welds that contain transverse cracks and are being removed by ZPMC personnel by grinding. the number in parenthesis is the depth of excavation that entered into the parent metal on plate X5055A and X5055B.

282(4.5mm) 285(5mm) 376(3mm) 284(5mm) 284(4mm) 286(0mm) 834(4mm)  
835(0mm) 548(0mm) 549(0mm) 465(0mm) 553(0mm) 552(0mm) 930(0mm)  
738(0mm) 413(0mm) 414(0mm) 415(0mm) 416(0mm) 329(0mm) 373(0mm)  
644(0mm) 836(0mm) 692(0mm) 508(0mm) 328(0mm) 461(0mm) 551(0mm)  
690(0mm) 326(0mm)

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Bay Number 3

Performed verification VT for the component(s) identified as OBG Longitudinal Diaphragm for component(s) listed as LD3040-001. This QA inspector signed green tag #15222.

FCAW welding of complete joint penetration welds located on Longitudinal Diaphragm components identified as LD3041B-001 as identified on weld repair data sheet B-WR-17960 for weld no. 121. Welder is identified as welder no. 055564. The welding variables recorded by ZPMC QC identified as Tian Lei appeared to comply with applicable WPS(s) WPS-345-SMAW-3G(3F)-repair.

FCAW welding of complete joint penetration welds located on Longitudinal Diaphragm components identified as LD3041B-001 as identified on weld repair data sheet B-WR-17961 for weld no. 122. Welder is identified as welder no. 055564. The welding variables recorded by ZPMC QC identified as Tian Lei appeared to comply with applicable WPS(s) WPS-345-SMAW-3G(3F)-repair.

Unless otherwise noted above all items observed on this day appeared to be in general compliance with the applicable contract documents



## Summary of 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 1500-0042-02372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Hernandez,Rene

Quality Assurance Inspector

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**Reviewed By:** Hall,Steven

QA Reviewer