

**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-010378**Date Inspected:** 19-Oct-2009**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, China**CWI Name:** Chen Xi**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 Crossbeams**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

**OBG CROSS BEAM CB1**

This crossbeam appears to be complete and has been loaded on the ship.

**OBG CROSS BEAM CB2**

This crossbeam appears to be complete and has been loaded on the ship.

**OBG CROSS BEAM CB3**

This crossbeam appears to be complete and has been loaded on the ship.

**OBG CROSS BEAM CB4**

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

---

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 4 )

---

---

### OBG CROSS BEAM CB5

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG CROSS BEAM CB6

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG CROSS BEAM CB7

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG CROSS BEAM CB8

This QA observed ZPMC qualified welding personnel identified as 048800 perform SMAW repair welding on various weld joints. ZPMC QC identified as Mr. Li Chuang Gang was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-345-SMAW-3G (3F)-repair.

### OBG CROSS BEAM CB9

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG CROSS BEAM CB10

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG CROSS BEAM CB11

This QA observed ZPMC qualified welding personnel identified as 215185 perform FCAW welding on weld joint identified as CB202G-029-117. ZPMC QC identified as Mr. Zheng Zhi Wei was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2132-3.

This QA observed ZPMC qualified welding personnel identified as 217185 perform FCAW welding on weld joint identified as CB202G-032-117. ZPMC QC identified as Mr. Zheng Zhi Wei was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2132-3.

This QA observed ZPMC qualified welding personnel identified as 215185 perform FCAW welding on weld

---

---

## WELDING INSPECTION REPORT

( Continued Page 3 of 4 )

---

---

joint identified as CB202G-030-065. ZPMC QC identified as Mr. Zheng Zhi Wei was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2132-3.

This QA observed ZPMC qualified welding personnel identified as 215185 perform FCAW welding on weld joint identified as CB202G-031-065. ZPMC QC identified as Mr. Zheng Zhi Wei was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2132-3.

### OBG CROSS BEAM CB12

This QA observed ZPMC qualified welding personnel identified as 069118 perform FCAW welding on weld joint identified as CB201A-012-017. ZPMC QC identified as Mr. Guo Yan Fei was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2232-Tc-U4b-F.

### OBG CROSS BEAM CB13

This QA observed the contractors personnel fitting and tack welding floor beam sections to the east side panel. No other significant work was observed during the time QA was present.

### OBG CROSS BEAM CB14

This QA observed the contractors personnel fitting and tack welding floor beam sections to the intermediate panel. No other significant work was observed during the time QA was present.

### OBG CROSS BEAM CB15

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG CROSS BEAM CB16

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### BIKE PATH CANTILEVER BRACKETS

This QA observed that the contractor did not appear to have performed the required Complete Joint Penetration (CJP) welds at the backing bar splice joints prior to fitting the final plate on the assembly making these joints inaccessible for welding and NDT. This condition exists in two locations on BK001-035. AWS D1.5 2002 section 3.13.2 states "Groove welds made with the use of steel backing shall have the weld metal thoroughly fused with the backing. Steel backing shall be continuous for the full length of each weld made with backing. A continuous length of backing may be made by welding shorter sections together under the following conditions: (i) All welds shall be CJP groove welds made with the same controls as similar CJP groove welds in the structure. (2) RT or UT

---

---

# WELDING INSPECTION REPORT

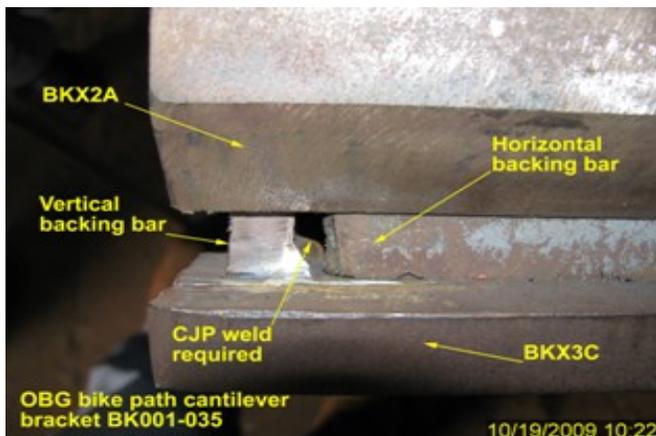
( Continued Page 4 of 4 )

---

---

shall be used to assure weld soundness. (3) All welding and testing of the backing shall be complete before the backing is used to make the structural weld". This QA notified ZPMC QA identified as Mr. Zhang Wei and ABF inspector identified as Mr. Yu Kum Ming of the above mentioned issue and that an incident report would be generated.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



### Summary of Conversations:

As mentioned 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 (15000422372), who represents the Office of Structural Materials for your project.

---

<b>Inspected By:</b>	Hall, Steven	Quality Assurance Inspector
<b>Reviewed By:</b>	Patterson, Rodney	QA Reviewer

---