

**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 #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003033**Date Inspected:** 29-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** C.M. Chen**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 Deck Sections and Assemblies**Summary of Items Observed:**

The Quality Assurance (QA) Inspector, Mahlon Lindenmuth, arrived on site at the Zhenhua Port Machinery Company facility on Changxing island, China to periodically monitor welding and Quality Control functions. While on site the Quality Assurance Inspector observed and/or discovered the following:

QA Inspector, Lindenmuth, observed the work being performed in Bay 2 of the New OBG. ZPMC personnel were performing various functions related to the fabrication of the OBG Side Plates and Bottom Plates as well as the deck sections in the jig fixture. The fabrication performed includes but is not limited to the preparation of areas where temporary welds for strongbacks are located, bevel preparation and welding of the Complete Joint Penetration welds (CJP) on Side Plates and Bottom Plates, heat straightening of Side Plates and Bottom Plates.

**North Jig Fixture:**

\*Segment 3BW/Panel Point 23- Caltrans QA Inspector, Lindenmuth, observed ZPMC personnel erecting the floor beam segments FL1-1 South and FL2. The segments have not been welded to the side plates or bottom plate at the time of this review.

\*Segment 3AW- Caltrans QA Inspector, Lindenmuth, observed ZPMC personnel performing air carbon arc gouging of the Complete Joint Penetration (CJP) groove weld joining the segments 3AW-D6 and 3AW-C5. The gouging occurred on the root side of the joint and was performed in order to remove discontinuities discovered by ZPMC using Ultrasonic Testing (UT). This is a first time repair of the weld joint.

**South Jig Fixture:**

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# WELDING INSPECTION REPORT

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\*Segment 4AE- Caltrans QA Lindenmuth observed ZPMC personnel performing welding on the CJP weld joining the segments 4AE-E7 and 4AE-D6. ZPMC personnel were observed welding the root pass of the joint using the FCAW process.

\*Segment 3AE-Caltrans QA Inspector, Lindenmuth, observed ZPMC personnel welding the CJP weld joining the segments 3AE-C5 and 3AE-D6. Caltrans QA Lindenmuth noted and recorded the welding essential variables below.

Incident Reports issued today:

\*QA Inspector Lindenmuth issued an incident report for the misalignment between the floor beam cross bracing connection plates and the stiffeners located on two (2) FL2 segments. The areas of misalignment have been identified by the weld number. The weld numbers are SSD12A-PP028-135, SSD12A-PP028-134, SSD-12A-PP028-007, SSD19A-PP024-136, SSD19A-PP024-132 and SSD19A-PP024-133. The out of tolerance measurements vary for each area and have been recorded in an incident report on this date.

General Note: All work observed today, unless otherwise noted, appeared to comply with the contract documents.

| Item | Weld Identification | Applicable WPS  | CWI Name  | Amperage | Voltage | TravelSpeed | Preheat Temp | Remarks         |
|------|---------------------|-----------------|-----------|----------|---------|-------------|--------------|-----------------|
| 1    | 3AE-C5 to 3AE-D6    | WPS-B-T-2232-1T | C.C. Chen | 625      | 30      | 569mmpm     | 65 C         | Welder ID 04846 |

## 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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**Inspected By:** Lindenmuth,Mahlon Quality Assurance Inspector

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**Reviewed By:** Cuellar,Robert QA Reviewer