

**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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018769**Date Inspected:** 20-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, China**CWI Name:** Zhou Zhong Hai**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 Segments**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Dan Hernandez was present during the times noted above to observe the fit up, welding and related activities associated with the fabrication of the San Francisco Oakland Bay Self Anchored Suspension Bridge at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

OBG Trial Assembly Yard

Segment 12AW/12BW

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated OBW12D-002, Side Plate transverse splice. The welder is identified as #040656 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1.

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated OBW12D-003, Side Plate transverse splice. The welder is identified as #046709 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1.

This QA Inspector observed Base Metal Repair using the Shielded Metal Arc Welding (SMAW) process at locations of removed fit up plates along the exterior of the Side Plate transverse CJP splice. The welder is

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identified as #046709 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G (4F)-FCM-repair-1 for CWR2126.

### Segment 12AW

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a fillet weld joint. The Weld joint is designated SEG3004X-051, Longitudinal Diaphragm to Bottom Plate. The welder is identified as #046704 and was observed welding in the 2G (horizontal) position using approved Welding Procedure Specification WPS-B-P-2212-TC-U4b-FCM-1.

### Segment 12BW

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a fillet weld joint. The Weld joint is designated SEG3005M-090, Longitudinal Diaphragm to Bottom Plate. The welder is identified as #046704 and was observed welding in the 2G (horizontal) position using approved Welding Procedure Specification WPS-B-P-2212-TC-U4b-FCM-1.

### Segment 12AE/12BE

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated OBE12D-002, Side Plate transverse splice. The welder is identified as #044504 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1.

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated OBE12B-001, Bottom Plate transverse splice. The welder is identified as #040320 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1.

### Segment 12AE

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated CA6501-005, Edge Plate to Side Plate hold back weld. The welder is identified as #047353 and was observed welding in the 1G (flat) position using approved Welding Procedure Specification WPS-B-T-2231-ESAB.

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated SEG3001X-051, Longitudinal Diaphragm to Bottom Plate. The welder is identified as #052763 and was observed welding in the 2G (horizontal) position using approved Welding Procedure Specification WPS-B-T-2232-ESAB.

### Segment 12BE

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP)

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weld joint. The Weld joint is designated CA3003-001, Edge Plate to Side Plate hold back weld. The welder is identified as #047353 and was observed welding in the 1G (flat) position using approved Welding Procedure Specification WPS-B-T-2231-ESAB.

For the above mentioned welding activities ZPMC Quality Control (QC) Inspectors are identified as Li Hua Jie and Shi Lei. The welding variables recorded by QC appeared to comply with the Applicable WPS.

## Segment 12AW/12BW

This QA Inspector observed the back gouging of the Bottom Plate transverse CJP splice root pass.

## Segment 11EW

This QA Inspector observed drilling of bolt holes in the Side Plate for the connection of the Suspender Bracket a panel point 112.

## Segment 12CE

This QA Inspector observed the placement of 12CE in the Trial Assembly east line up.

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



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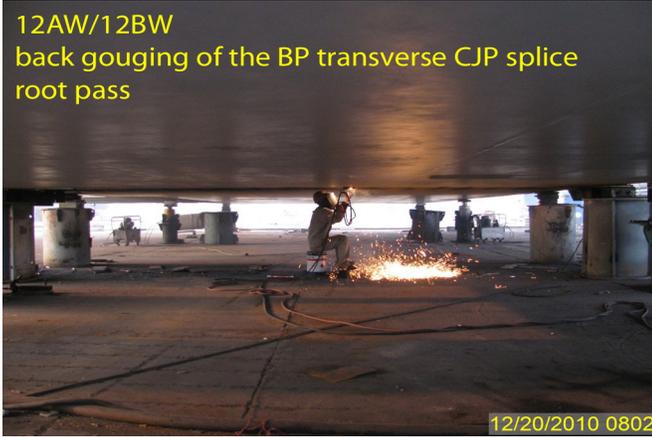
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12AW/12BW  
back gouging of the BP transverse CJP splice  
root pass



12AW/12BW  
SMAW 4G SP transverse CJP splice



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

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<b>Inspected By:</b>	Hernandez,Dan	Quality Assurance Inspector
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<b>Reviewed By:</b>	Dsouza,Christopher	QA Reviewer
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