

**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-015905**Date Inspected:** 21-Jul-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:** Li Yang**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 Segment**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 9BW

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a fillet weld joint. The Weld joint is designated as SP770-001-034, Side Plate WT stiffener hold back weld. The welder is identified as #207645 and was observed welding in the 2F (horizontal) position using approved Welding Procedure Specification WPS-B-T-2132.

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SEG051\*-044, Side Plate to Edge Plate hold back weld. The welder is identified as #067765 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-P-2214-TC-U4b-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 as CA059-006, Side Plate to Edge Plate hold back weld. The

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welder is identified as #068097 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-P-2214-TC-U4b-FCM-1.

### Segment 9BW/9CW

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SP292-001-048, Side Plate WT stiffener web splice. The welder is identified as #045143 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-B-T-2233-B-U2-F.

### Segment 9CW

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a fillet weld joint. The Weld joint is designated as SP771-001-010, Side Plate WT stiffener hold back weld. The welder is identified as #207645 and was observed welding in the 2F (horizontal) position using approved Welding Procedure Specification WPS-B-T-2132.

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as CA062-006, Side Plate to Edge Plate hold back weld. The welder is identified as #067765 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-P-2214-TC-U4b-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 as CA061-002, Side Plate to Edge Plate hold back weld. The welder is identified as #068097 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-P-2214-TC-U4b-FCM-1.

### Segment 9AW/9BW

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 Deck Plate transverse CJP splice. The welder is identified as #066062 and was observed welding in the 1G (flat) position using approved Welding Procedure Specification WPS-345-SMAW-1G (1F)-FCM-repair-1 for CWR1679-R1.

### Segment 9CE

This QA Inspector observed Shielded Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SEG054B-024, Longitudinal flange to Floor Beam web. The welder is identified as #053742 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-B-T-2233-TC-U4b-F.

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

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## Segment 9BW

This QA Inspector observed match drilling of bolt holes in the Bottom Plate WT stiffener flange and bolted splice plate.

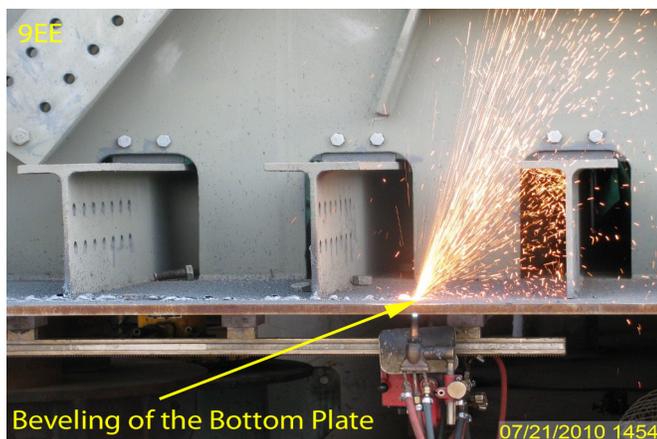
## Segment 9EE

This QA Inspector observed beveling of the Bottom Plate with a mechanical guided torch at the 9E/10E field splice location.

## Segment 9DW

This QA Inspector observed torquing of high strength bolts using the turn of nut method with the use of a pneumatic impact wrench, cross beam side panel point 82.

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



### 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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**Inspected By:** Hernandez, Dan

Quality Assurance Inspector

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**Reviewed By:** Peterson, Art

QA Reviewer