

**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-023000**Date Inspected:** 24-Apr-2011**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:** Zhu 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 13AW

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 SEG3013AA\*-025, DP I-rib. The welder is identified as #066326 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-B-P-2213-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 SEG3013AA\*-004, DP I-rib. The welder is identified as #066179 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-B-P-2213-TC-U4b-FCM-1.

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a fillet weld joint. The Weld joint is designated as SP3092-001-027, 028, Side Plate WT stiffener. The welder is identified as #066773 and was

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observed welding in the 2F (horizontal) position using approved Welding Procedure Specification WPS-345-SMAW-2G (2F)-FCM-repair-1 for WR20674 correction of misalignment.

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a UT repair on a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SEG3013L-100, Side Plate I-rib to Floor Beam. The welder is identified as #067572 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-345-SMAW-3G (3F)-FCM-repair-1 for WR20693.

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a UT repair on a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SEG3013N-176, Side Plate I-rib to Floor Beam. The welder is identified as #067765 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-345-SMAW-3G (3F)-FCM-repair-1 for WR20693.

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a fillet weld joint. The Weld joint is designated as SEG3013V-524, 525. The welder is identified as #048696 and was observed welding in the 3F (vertical) position using approved Welding Procedure Specification WPS-B-T-2133-ESAB.

### Segment 12CW

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a fillet weld joint. The Weld joint is designated as SP3044-001-022, 023, Side Plate WT stiffener. The welder is identified as #066773 and was observed welding in the 2F (horizontal) position using approved Welding Procedure Specification WPS-345-SMAW-2G (2F)-FCM-repair-1 for WR20674 correction of misalignment.

### Bike Path Cantilever 15

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a UT repair on a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as BK015B-001-003, connection plate. The welder is identified as #040367 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-345-FCAW-3G (3F)-ESAB-repair for WR20753.

### Bike Path Cantilever 17

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a UT repair on a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as BK017-001-015, connection plate. The welder is identified as #053869 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-345-FCAW-3G (3F)-ESAB-repair for WR20777.

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

### Traveler Rail Brackets for Lift 12

This QA Inspector observed ABF personnel performing Magnetic Particle Testing on the Traveler Rail Bracket

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tube steel post to connection plate, Traveler Rail Brackets were not installed at time of QC NDT.

Segment 13AE

This QA Inspector observed ABF personnel performing Ultrasonic Testing on the Edge Plate to Deck Plate hold back weld, bike path side at west end of segment.

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:** Miller, Mark

QA Reviewer