

**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-017287**Date Inspected:** 11-Oct-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 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 10BE

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Partial Joint Penetration (PJP) weld joint. The Weld joint is designated as LB4-001-075, Light Bracket to Edge Plate. The welder is identified as #040581 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-T-2314-TC-P4.

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Partial Joint Penetration (PJP) weld joint. The Weld joint is designated as LB4-001-044, Light Bracket to Deck Plate. The welder is identified as #052763 and was observed welding in the 2G (horizontal) position using approved Welding Procedure Specification WPS-B-T-2332-TC-P4-F.

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Partial Joint Penetration (PJP) weld joint. The Weld joint is designated as LB4-001-058, Light Bracket to Deck Plate. The welder is identified as

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#052763 and was observed welding in the 2G (horizontal) position using approved Welding Procedure Specification WPS-B-T-2332-TC-P4-F.

### Segment 11AW

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 OBW11-025, top counter weight connection plate. The welder is identified as #053486 and was observed welding in the 1G (flat) position using approved Welding Procedure Specification WPS-B-T-2231T.

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 #062935 and was observed welding in the 1G (flat) position using approved Welding Procedure Specification WPS-345-SMAW-1G (1F)-FCM-repair-1 for CWR1842.

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

### Lift 11W

This QA Inspector observed lift 11W was relocated in the Trial Assembly Line up, the lift was separated from Lift 10W and brought to the end of the Trial Assembly Yard to begin fit up of consecutive segments and Cross Beams.

### Segment 10BE

This QA Inspector observed ZPMC personnel performing Magnetic Particle Testing on the Light Bracket to Deck Plate and Edge Plate root pass.

### Segment 10CW/11AW

This QA Inspector observed ABF personnel performing Magnetic Particle Testing on the Deck Plate at location of removed fit up plate along the transverse CJP splice at 10CW/11AW file splice location.

### Segment 10CE

This QA Inspector observed ABF personnel performing Ultrasonic Testing on the Side Plate to Bottom Plate Splice, bike path side east of panel point 94.

This QA Inspector observed ZPMC personnel performing Magnetic Particle Testing on the Side Plate WT stiffener hold back fillet welds, bike path side.

### Segment 10BW

This QA Inspector observed ABF personnel performing Magnetic Particle Testing on the Light Bracket to Deck

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Plate PJP weld.

## QA Verification

This QA Inspector performed Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC MT personnel. The following items were tested:

10BW:

OBW11-007

10CW:

OBW11-009

OBW11-011

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

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