

**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-022170**Date Inspected:** 26-Mar-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:** Li Yang and 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 Trial Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Traveler Rails at Bay # 11

This QA Inspector performed Dimension Control Inspection on the Traveler Rails 20TR2-034 for the following measurements and observed recorded dimensions within the tolerances. The inspection was performed against the Inspection Notification # 08636 dated Mar 26, 2011.

Traveler Rails Thickness at typical section,  
Traveler Rails Flange width at typical section,  
Traveler Rails Depth at typical section,  
Traveler Rails Flange curl at typical section,  
Traveler Rails Traveler Rail length.  
Traveler Rails Sweep.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the

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Lead Inspector and Engineer for review and disposition.

Please reference the pictures attached for more comprehensive details.

## Traveler Rails at Bay # 11

This QA Inspector performed Dimension Control Inspection on the Traveler Rails 20TR2-035 for the following measurements. The inspection was performed against the Inspection Notification # 08636 dated Mar 26, 2011.

Traveler Rails Thickness at typical section,  
Traveler Rails Flange width at typical section,  
Traveler Rails Depth at typical section,  
Traveler Rails Flange curl at typical section,  
Traveler Rails Traveler Rail length.  
Traveler Rails Sweep.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Note: Traveler Rail 20TR2-035, observed Sweep out of dimensional tolerance informed the same to ZPMC QC Mr. Wang Chuany Xin, ABF QA Mr. Zhao Xian He and Caltrans Mr. Steve Hall.

Please reference the pictures attached for more comprehensive details.

## Cross Beam (CB) # 17

This QA Inspector performed Dimension Control Inspection along with Caltrans QA Inspector for measuring offset between the stiffeners at floor beam (FL3) extension at Segment 12AW to Cross Beam # 17 stiffeners at bottom panel, vertical web plate and deck plate at following locations:

At Panel Point (PP) 110, Segment 12AW offset measurement performed between floor beam stiffeners to west side Vertical Web Plate stiffeners of cross beam # 17 total 13 stiffeners.

At Panel Point (PP) 111, Segment 12AW offset measurement performed between floor beam stiffeners to centre Vertical Web Plate stiffeners of cross beam # 17, total 13 stiffeners.

At Panel Point (PP) 112, Segment 12AW offset measurement performed between floor beam stiffeners to east side Vertical Web Plate stiffeners of cross beam # 17, total 13 stiffeners.

Between Panel Points (PP) 110 to PP 111, Segment 12AW offset measurement performed between deck panel stiffeners to deck panel stiffeners of cross beam # 17, total 11 stiffeners.

Between Panel Points (PP) 111 to PP 112, Segment 12AW offset measurement performed between deck panel stiffeners to deck panel stiffener of cross beam # 17, total 11 stiffeners.

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Between Panel Points (PP) 110 to PP 111, Segment 12AW offset measurement performed between bottom panel stiffeners to bottom panel stiffeners of cross beam # 17, total 5 stiffeners.

Between Panel Points (PP) 111 to PP 112, Segment 12AW offset measurement performed between bottom panel stiffeners to bottom panel stiffener of cross beam # 17, total 5 stiffeners.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 13AW (FL3 Floor Beam to Side Panel)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3013AD-003. The welder identification was 069683 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as weld connecting the Floor Beam (FL3) to Side Panel at PP 118, Cross Beam side.

Please reference the pictures attached for more comprehensive details.

Segment 13AW (Bottom Panel I-Stiffener)

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Fillet weld. The Weld joint was designated as Seg3013M-194/195. The welder identification was 203871 and observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2132-ESAB. The piece mark was identified as weld connecting the I-Stiffener at Bottom Panel at PP 118.35.

Cross Beam # 17 (Deck Panel to Vertical Web Plate)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CB3001A-017. The welder identification was 041713 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G(4F)-FCM-Repair-1. The piece mark was identified as weld connecting the Deck Plate to Vertical Web plate at PP 112 (East End).

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

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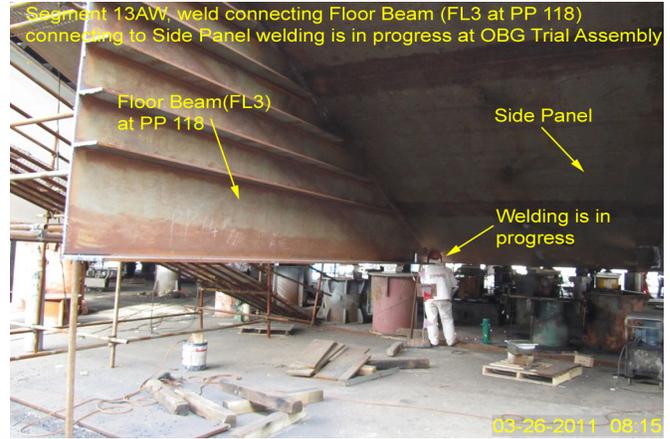
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## Summary of Conversations:

No relevant conversations were reported on this date.

## 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 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Math,Manjunath

Quality Assurance Inspector

**Reviewed By:** Miller,Mark

QA Reviewer

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