

**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-021788**Date Inspected:** 12-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

Segment 12BW to Segment 12CW (Skin Flatness)

This QA Inspector performed Joint Inspection along with Caltrans QA Inspector Mr. Murugan Manikandan to check the skin flatness between Segment 12BW to Segment 12CW between Panel Points (PP) 114 and PP 115 at the following locations:

The skin flatness was measured on North side (Counter Weight Side at B1 and B2 locations) and South side (Cross Beam side at B3 and B4 locations) at 100mm from the weld connecting Bottom Panel to Side Panel using 5000mm string line to verify overall flatness. The straight edges of 600mm and 630 mm of length were also used to measure the localized flatness.

The skin flatness was measured on North side (Counter Weight side at T1 location) and South side (Cross Beam side at T2 location) at 100mm from the weld connecting Deck Panel to Edge Panel using 5000mm string line to verify overall flatness. The straight edges of 600mm and 630 mm length were also used to measure the localized

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flatness.

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 12BE (Full Height Longitudinal Diaphragm to Bottom Panel connecting weld)

This QA Inspector observed the repair welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3002M-090. The welder identification was 040367 and was observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-345-FCAW-2G(2F)-ESAB-Repair. The piece mark was identified as weld connecting Longitudinal Diaphragm to Bottom Panel at work point E4. ZPMC performed repair welding in accordance with Welding Repair Report B-WR20266.

Segment 12BE (Full Height Longitudinal Diaphragm to Bottom Panel connecting weld)

This QA Inspector observed the repair welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3002N-090. The welder identification was 040367 and was observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-345-FCAW-2G(2F)-ESAB-Repair. The piece mark was identified as weld connecting Longitudinal Diaphragm to Bottom Panel at work point E4. ZPMC performed repair welding in accordance with Welding Repair Report B-WR20266.

Segment 12CE (Full Height Longitudinal Diaphragm to Bottom Panel connecting weld)

This QA Inspector observed the repair welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3003S-035. The welder identification was 040367 and was observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-345-FCAW-2G(2F)-ESAB-Repair. The piece mark was identified as weld connecting Longitudinal Diaphragm to Bottom Panel at work point E4. ZPMC performed repair welding in accordance with Welding Repair Report B-WR20266.

Segment 12CW (Floor Beam to Side Panel connecting weld)

This QA Inspector observed the in-progress welding by Shielded Metal Arc Welding (SMAW) process on a Fillet weld. The Weld joint was designated as Seg3006D-118. The welder identification was 057333 and was observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-P-2112-FCM-1. The piece mark was identified as weld connecting Floor Beam to Side Panel.

Please reference the pictures attached for more comprehensive details.

Segment 12BW (Match Drilling)

This QA Inspector observed ZPMC personnel performing match drilling at Bottom Panel T-Ribs flange for

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installation of Cable Tray structure for Segment 12BW between Panel Points(PP) 114 to PP 114.5.

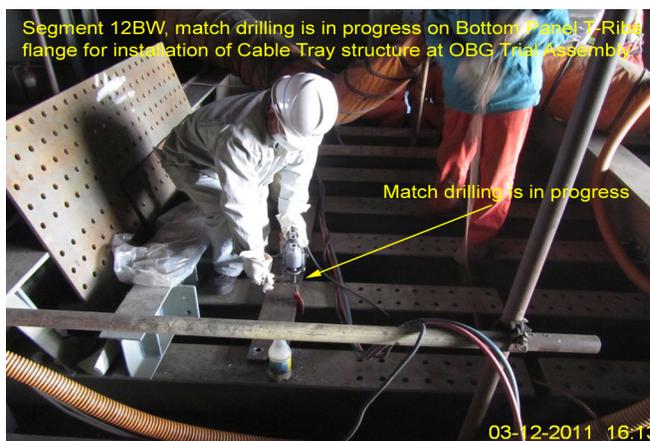
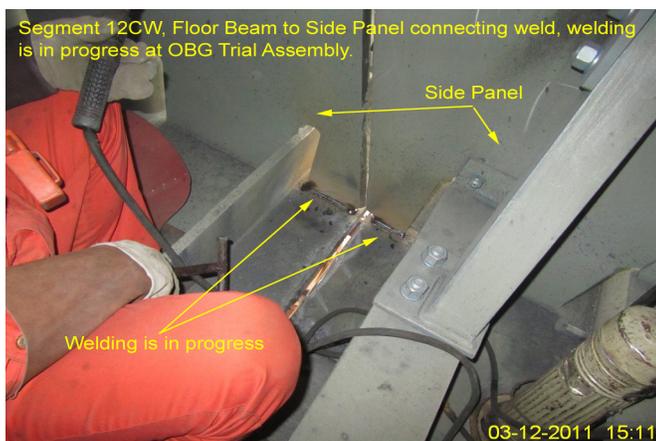
Please reference the pictures attached for more comprehensive details.

## Segment 12CE (Bolts Installations)

This QA Inspector observed ZPMC personnel performing bolts installations on Side Panel T-Ribs at Bike Path for Segment 12CE between PP 116 to PP 116.5.

Please reference the pictures attached for more comprehensive details.

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



## 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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<b>Inspected By:</b>	Math,Manjunath	Quality Assurance Inspector
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<b>Reviewed By:</b>	Miller,Mark	QA Reviewer
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