

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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-012209**Date Inspected:** 19-Feb-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:****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, 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) Trial Assembly Areas

Segment 6AW to 6BW (Longitudinal Diaphragm) Joint Survey

This QA Inspector performed Joint Inspection with ZPMC Survey Team and ABF Survey Team for the Longitudinal Diaphragm between Segment 6AW to 6BW (Shop Segment Splice) between Panel Point (PP) 40 and PP 41 North (Counter Weight side) and South (Cross Beam side) for Offset and Sweep. The offset was measured at 5 (five) different locations in which 2 (Two) locations were at Flange area and 3 (Three) locations were at Web area and Sweep was measured at 100 mm from both side from the Floor Beam and 800mm from both side of floor Beam and at Centre (Total 5 Locations). The measured readings were recorded on spread sheet, generated the report and submitted to the Task Leader and Engineer for review.

Segment 6BW to 6CW (Longitudinal Diaphragm) Joint Survey

This QA Inspector performed Joint Inspection with ZPMC Survey Team and ABF Survey Team for the Longitudinal Diaphragm between Segment 6BW to 6CW (Shop Segment Splice) between Panel Point (PP) 43 and

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PP 44 North(Counter Weight side) and South (Cross Beam side) for Offset and Sweep. The offset was measured at 5 (five) different locations in which 2 (Two) locations were at Flange area and 3 (Three) locations were at Web area and Sweep was measured at 100 mm from both side from the Floor Beam and 800mm from both side of floor Beam and at Centre (Total 5 Locations). The measured readings were recorded on spread sheet, generated the report and submitted to the Task Leader and Engineer for review.

### Segment 6BW to 6CW (Skin Flatness) Joint Survey

This QA Inspector performed Joint Inspection with ABF Survey Team for the Skin Flatness between Segment 6BW to 6CW (Shop Segment Splice) between Panel Point (PP) 43 and PP 44 North.

(Counter Weight side at B1 and B2 locations) and South (Cross Beam side at B3 and B4 Locations) at weld connecting Bottom Panel to Side Panel with 5000mm String line for overall deformation and 600mm and 630 mm Straight Edge for localized deformation and

(Counter Weight side at T1 location) and South (Cross Beam side T2 Location) at weld connecting Deck Panel to Edge Panel with 5000mm String line for overall deformation and 600mm and 630 mm Straight Edge for localized deformation.

The measured readings were recorded on spread sheet, generated the report and submitted to the Task Leader and Engineer for review.

### Segment 5AE 5BE and 5CE (Joint Survey)

This QA Inspector performed Joint Inspection with ABF Survey Team for the Surface Flatness Survey measured Transverse direction to the Longitudinal Weld connecting the Side Panel to Side Panel Corner Assembly between Segment 5AE, 5BE and 5CE (Shop Segment Splice) from Panel Point (PP) 29 and PP 36 Cross Beam and Bike Path side.

Observed Heat Straightening was been performed against for Segment 5AE for Side Panel SP304A+SP423A against HSR

(B)-352 Rev.0 Dated Feb 09, 2010 and SP419A+SP512A against HSR (B)-8145 Rev.0 Dated Feb 09, 2010.

Observed Heat Straightening was been performed against for Segment 5BE for Side Panel SP421B+SP523B, SP421A+SP523A and SP420B+SP522B against HSR (B)-354 Rev.0 Dated Feb 09, 2010 and SP305A+SP424A against HSR (B)-351 Rev.0 Dated Feb 09, 2010.

Observed Heat Straightening was been performed against for Segment 5CE for Side Panel SP306A+SP425A against HSR (B)-353 Rev.0 Dated Feb 09, 2010 and SP422A+SP524A against HSR (B)-8146 Rev.0 Dated Feb 09, 2010.

### Segment 5AW, 5BW and 5CW (Joint Survey)

This QA Inspector performed Joint Inspection with ABF Survey Team for the Surface Flatness Survey measured

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Transverse direction to the Longitudinal Weld connecting the Side Panel to Side Panel Corner Assembly between Segment 5AW, 5BW and 5CW (Shop Segment Splice) from Panel Point (PP) 29 and PP 36 Cross Beam and Counter Weight side.

Observed Heat Straightening was been performed against for Segment 5AW for Side Panel SP091A+SP409A against HSR (B)-348 Rev.0 Dated Feb 04, 2010.

Observed Heat Straightening was been performed against for Segment 5BW for Side Panel SP092A+SP410A against HSR (B)-349 Rev.0 Dated Feb 04, 2010.

Observed Heat Straightening was been performed against for Segment 5CW for Side Panel SP093A+SP411A against HSR (B)-350 Rev.0 Dated Feb 04, 2010.

For more comprehensive details please refer the attached pictures below.

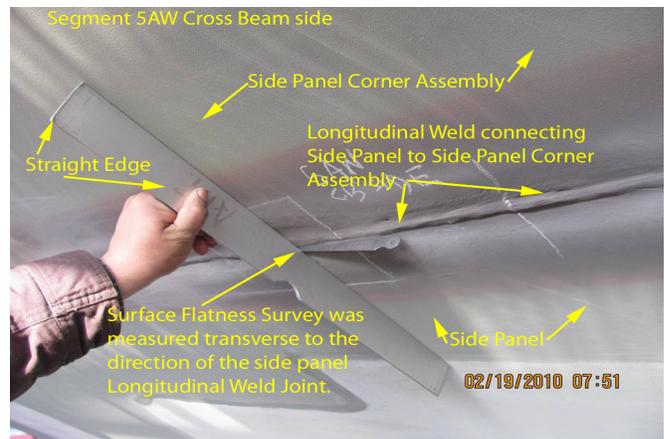
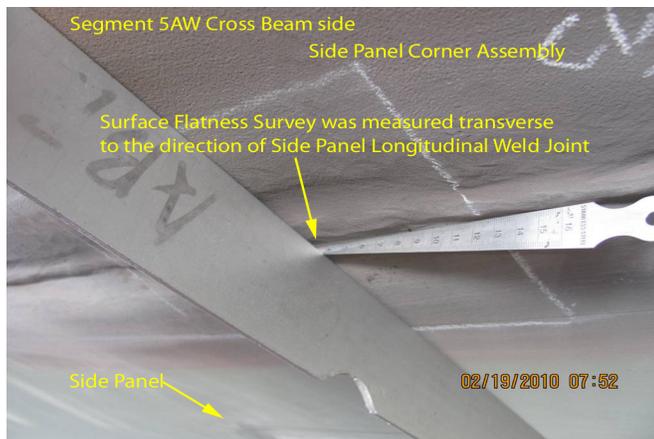
## Segment 6BE (Deck Diaphragm) Individual Survey

This QA Inspector performed Inspection along with Mr. Anand Upadhye for the Deck Panel Diaphragm to Deck Panel offset at every alternative U - Ribs (Total 20 Locations) for Segment 6AE at Panel Point (PP) 39 and PP 40 from North towards South side. The measured readings were recorded generated the report and submitted to the Task Leader and Engineer for review.

## Cantilever

This QA Inspector performed Inspection for the Cantilever with Serial Number identified as BK1A-018 for the stud location at two different locations i.e., at 3068mm and 5380mm respectively and deviation in the measurement notified to the engineer for further action.

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



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**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 T Sang 1500-0042-2372, who represents the Office of Structural Materials for your project.

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

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