

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-011576**Date Inspected:** 22-Jan-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

<b>CWI Name:</b>	Li Yang and Wu Zhi Cheng	<b>CWI Present:</b>	Yes	No
<b>Inspected CWI report:</b>	Yes No N/A	<b>Rod Oven in Use:</b>	Yes	No N/A
<b>Electrode to specification:</b>	Yes No N/A	<b>Weld Procedures Followed:</b>	Yes	No N/A
<b>Qualified Welders:</b>	Yes No N/A	<b>Verified Joint Fit-up:</b>	Yes	No N/A
<b>Approved Drawings:</b>	Yes No N/A	<b>Approved WPS:</b>	Yes	No N/A
		<b>Delayed / Cancelled:</b>	Yes	No N/A
<b>Bridge No:</b>	34-0006	<b>Component:</b>	OBG Trail 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 6BW (Lower Chevron)

This Quality Assurance (QA) Inspector witnessed final tension verification for Lower Chevron (North side) at Panel Point (PP) 41 and PP 42 for Segment 6BW. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00239 Dated January 22, 2010.

Bolt sizes used were M22 x 70 RC Set# DHGM220020 and final torque required was 520 N-m.

Bolt sizes used were M22 x 80 RC Set# DHGM220012 and final torque required was 427 N-m and

Bolt sizes used were M22 x 75 RC Set# DHGM220005 and final torque required was 473 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-675 and Hydraulic Torque wrench was been used with Model No. MP582-2 and Sr. No. PW090331001.

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## WELDING INSPECTION REPORT

( Continued Page 2 of 4 )

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### Segment 6AE to 6BE

This QA Inspector performed Joint Inspection with ABF Survey Team and ZPMC Survey Team for the Longitudinal Diaphragm for Segment 6AE to 6BE (Shop Segment Splice) between Panel Point (PP) 40 and PP 41 North and South side. The measured readings were fed in spread sheet, generated the report and submitted to the Task Leader and Engineer for review.

### Segment 6BE to 6CE

This QA Inspector performed Joint Inspection with ABF Survey Team and ZPMC Survey Team for the Longitudinal Diaphragm for Segment 6BE to 6CE (Shop Segment Splice) between Panel Point (PP) 43 and PP 44 South side(Bike Path). The measured readings were fed in spread sheet, generated the report and submitted to the Task Leader and Engineer for review.

Note: Longitudinal Diaphragm for Segment 6BE to 6CE (Shop Segment Splice) between Panel Point (PP) 43 and PP 44 North side (Cross Beam side) Inspection not offered by ZPMC and ABF.

### Segment 7DW

This QA Inspector along with Caltrans QA Mr. Manoj Prabhune performed Joint Inspection for the Deck Panel to Deck Panel Diaphragm Offset/Distortion measured and recorded for 7DW at Panel Point (PP) 56. The measured readings generated the report and submitted to the Task Leader for review.

### Segment 7DW

This QA Inspector along with Caltrans QA Mr. Manoj Prabhune performed Joint Inspection for the Floor Beam to Floor Beam Flange Offset/Distortion measured and recorded for 7DW at Panel Point (PP) 56. The measured readings generated the report and submitted to the Task Leader for review.

### Segment 6BW (Upper Chevron)

This Quality Assurance (QA) Inspector witnessed final tension verification for Upper Chevron (North side) at Panel Point (PP) 41 and PP 42 for Segment 6AW. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00239 Dated January 22, 2010.

Bolt sizes used were M22 x 70 RC Set# DHGM220020 and final torque required was 520 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-675 and Hydraulic Torque wrench was been used with Model No. MP582-2 and Sr. No. PW090331001.

### Segment 6AW, 6BW to 6CW

This QA Inspector observed ZPMC welding personnel performing repair welding by Shielded Metal Arc Welding

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## WELDING INSPECTION REPORT

( Continued Page 3 of 4 )

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(SMAW) for Edge Panel to Deck Panel Weld Cross Beam side. The weld joints are identified as Seg027\*-044, Seg027\*-048, Seg031\*043, Seg031\*045 for Corner Assembly CA013-001, CA013-003 and CA013-005. The welder is identified as 045196 and 067764. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-2G (2F)-FCM-Repair-1. The repair welding was performed against Critical Welding Repair Report no. B-CWR 1138 Rev.0 Dated 01/19/2010. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

### Segment 6AE

This QA Inspector observed ZPMC welding personnel performing repair welding by Shielded Metal Arc Welding (SMAW) for Edge Panel to Deck Panel Weld Bike Path Side. The welding was performed at Corner Assembly CA028-002, CA028-004 and CA028-006. The welder is identified as 201087 and 048047. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-2G (2F)-FCM-Repair-1. The repair welding was performed against Critical Welding Repair Report no. B-CWR 1137 Rev.0 Dated 01/19/2010. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

### Segment 6CE

This QA Inspector observed ZPMC welding personnel performing repair welding by Shielded Metal Arc Welding (SMAW) for Edge Panel to Deck Panel Weld Bike Path Side. The welding was performed at Corner Assembly CA030-002, CA030-004 and CA030-006. The welder is identified as 044779 and 044772. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-2G (2F)-FCM-Repair-1. The repair welding was performed against Critical Welding Repair Report no. B-CWR 1139 Rev.0 Dated 01/19/2010. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

### Segment 7AE to 7BE

This QA Inspector observed ZPMC welding personnel performing repair welding by Flux Cored Arc Welding (SMAW) for Side Panel T-Ribs. The weld joints are identified as SP310-001-041~047 and SP461-001-031~035. The welder is identified as 019006. In process Flux Cored Arc Welding appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2233-B-U2-F. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

### Segment 6CE

This QA Inspector observed ZPMC personnel at Segment 6CE side panel T-Ribs between PP 45 to 45.5 bolts snug tightening is in progress.

### Segment 7AE to 7BE

This QA Inspector observed ZPMC personnel at Segment 7AE to 7BE Segment to Segment Fit-up was in progress.

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# WELDING INSPECTION REPORT

( Continued Page 4 of 4 )

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Segment 6CW

This QA Inspector observed ZPMC personnel at Segment at Panel Point (PP) 47 clips connecting Bottom Panel T-Ribs to floor beam ASTM A 325 bolts installation is in progress.

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 , 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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