

**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-013120**Date Inspected:** 17-Apr-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 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 7CW (Lower Chevron)

This Quality Assurance (QA) Inspector witnessed final tension verification for Lower Chevron (North and South side) at Panel Point (PP) 53, PP 54 and PP 55 for Segment 7CW. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00321 Dated January 17, 2010.

Bolt sizes used were M22 x 70 RC Set# DHGM220017 and final torque required was 520 N-m.

Bolt sizes used were M22 x 75 RC Set# DHGM220034 and final torque required was 453 N-m and

Bolt sizes used were M22 x 80 RC Set# DHGM220029 and final torque required was 447 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-779 and Hydraulic Torque wrench was been used with

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Model No. MP582-2 and Sr. No. PW090331001.

### Segment 7DW (Lower Chevron)

This Quality Assurance (QA) Inspector witnessed final tension verification for Lower Chevron (North and South side) at Panel Point (PP) 55, PP 57 and PP 58 for Segment 7DW. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00321 Dated January 17, 2010.

Bolt sizes used were M22 x 70 RC Set# DHGM220017 and final torque required was 520 N-m.

Bolt sizes used were M22 x 75 RC Set# DHGM220034 and final torque required was 453 N-m and

Bolt sizes used were M22 x 80 RC Set# DHGM220029 and final torque required was 447 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-779 and Hydraulic Torque wrench was been used with Model No. MP582-2 and Sr. No. PW090331001.

### Segment 7CW (Upper Chevron)

This Quality Assurance (QA) Inspector witnessed final tension verification for Upper Chevron (North and South side) at Panel Point (PP) 53, PP 54 and PP 55 for Segment 7CW. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00321 Dated January 17, 2010.

Bolt sizes used were M22 x 70 RC Set# DHGM220017 and final torque required was 520 N-m.

Bolt sizes used were M22 x 75 RC Set# DHGM220034 and final torque required was 453 N-m and Manual Torque wrench was been used with Sr. No. XQ2-779.

### Segment 7DW (Upper Chevron)

This Quality Assurance (QA) Inspector witnessed final tension verification for Upper Chevron (North and South side) at Panel Point (PP) 56, PP 57 and PP 58 for Segment 7DW. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00321 Dated January 17, 2010.

Bolt sizes used were M22 x 70 RC Set# DHGM220017 and final torque required was 520 N-m.

Bolt sizes used were M22 x 75 RC Set# DHGM220034 and final torque required was 453 N-m and

Manual Torque wrench was been used with Sr. No. XQ2-779.

### Segment 7AW

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This QA Inspector performed Inspection along with Caltrans QA Mr. Manikandan for the following Segment 7AW from Panel Point (PP) 49 for the following items.

Deck Panel Diaphragm to Deck Panel Plumbness and Flatness measured from the East side and the recorded measurements submitted to lead as well to the engineer for further action.

### Segment 7BW

This QA Inspector performed Inspection along with Caltrans QA Mr. Manikandan for the following Segment 7BW from Panel Point (PP) 52 for the following items.

Deck Panel Diaphragm to Deck Panel Plumbness and Flatness measured from the East side and the recorded measurements submitted to lead as well to the engineer for further action.

### Segment 7DW

This QA Inspector observed ZPMC welding personnel performing welding for weld joint Seg03C-001/024/052 and 022. Welder is identified as 045280. PMCK located on Longitudinal Diaphragm (LD) for Segment 7DW at PP 49. In process

Flux Cored Arc Welding (FCAW) appears to be progressing in compliance with Caltrans Engineer Approved welding procedure WPS-345-FCAW-3G (3F)-FCM-Repair. Welding was in progress against Critical Weld Repair Record no. B-CWR12045.

### Segment 7BW

This QA Inspector observed ZPMC welding personnel performing welding for weld joint DP647-001-021. Welder is identified as 044779. PMCK located on Deck Panel Stiffener Cross Beam Side for Segment 7BW. In process Shielded Metal Arc Welding (SMAW) appears to be progressing in compliance with Caltrans Engineer Approved welding procedure WPS-485-SMAW-3G (3F)-Repair.

### Segment 7EE

This QA Inspector observed ZPMC welding personnel performing welding for weld joint CA045-004. Welder is identified as 058087. PMCK located on Deck Panel to Edge Panel for Segment 7EE. In process Shielded Metal Arc Welding (SMAW) appears to be progressing in compliance with Caltrans Engineer Approved welding procedure WPS-345-FCAW-2G (2F)-FCM-Repair-1. Welding was in progress against Critical Weld Repair Record no. B-CWR1385.

### Segment 8BW

This QA Inspector observed ZPMC welding personnel performing welding for weld joint CA049-004. Welders are identified as 056232 and 048047. PMCK located on Deck Panel to Edge Panel for Segment 8BW. In process

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Shielded Metal Arc Welding (SMAW) appears to be progressing in compliance with Caltrans Engineer Approved welding procedure WPS-345-FCAW-2G (2F)-FCM-Repair-1. Welding was in progress against Critical Weld Repair Record no. B-CWR1387.

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 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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