

**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-015414**Date Inspected:** 28-Jun-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

Incident Report for Segment 9BW

This Quality Assurance (QA) Inspector wrote an Incident Report for Excessive Root Opening at the Bottom Panel (BP) to the Longitudinal Diaphragm (LD) for Segment 9BW between Panel Point (PP) 73 and PP 74 more comprehensive details please refer the Incident Report 04-0120F4\_TL-15\_B278\_06-28-10\_LD\_W4\_Excessive Root Opening\_9BW Dated June 28, 2010. Please refer the attached pictures for more comprehensive details.

Segment 8CW

This QA Inspector observed welding by Shielded Metal Arc Welding (SMAW) in progress of Fillet weld joint. The Weld joint is designated as OBW8W-063/064. The welder number is identified as 067904 and was observed welding in the 4F (Overhead) position using approved Welding Procedure Specification WPS-B-P-2114-FCM-1. PMCK identified as Counter Weight Side Water diverter plate at W1 location.

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### Segment 8CW

This QA Inspector observed welding by Shielded Metal Arc Welding (SMAW) in progress of Complete Joint Penetration (CJP). The Weld joint is designated as OBW8W-039. The welder number is identified as 067904 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-P-2213-FCM-1. PMCK identified as Counter Weight Side Water diverter plate at W1 location.

### Segment 8BE

This QA Inspector observed welding by Flux Cored Arc Welding (FCAW) in progress of Fillet joint. The Weld joint is designated as Retro-G-01-8BE-B1-045/046 and Retro-G-01-8BE-B1-047/048. The welder number is identified as 220013 and was observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2132. PMCK identified as Retro-Plates installation between the Side Panel of Cross Beam Side.

### Segment 8BE

This QA Inspector observed welding by Flux Cored Arc Welding (FCAW) in progress of a Fillet joint. The Weld joint is designated as Retro-G-01-8BE-B2-045/046 and Retro-G-01-8BE-B3-045/046. The welder number is identified as 220013 and was observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2132. PMCK identified as Retro-Plates installation between the Side Panel of Cross Beam Side.

### Segment 9BE to 9CE

This QA Inspector observed welding by Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as OBE9B-009-010. The welder number is identified as 062092 and 048659 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. PMCK identified as Side Panel Bike Path side.

### Segment 9AE to 9BE

This QA Inspector observed welding by Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SP319-001-044~055. The welder number is identified as 220063 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233-B-U2-F. PMCK identified as T-Ribs Bike Path side.

### Segment 8CE

This QA Inspector observed welding by Flux Cored Arc Welding (FCAW) in progress of Fillet joint. The Weld joint is designated as Retro-G-01-8CE-B2-056/057 and Retro-G-01-8CE-B1-056/057. The welder number is identified as 220066 and was observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2132. PMCK identified as Retro-Plates installation between the Side Panel of Cross Beam Side.

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### Segment 9AW to 9BW

This QA Inspector observed welding by Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SP655-001-031~035. The welder number is identified as 045143 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233-B-U2-F. PMCK identified as T-Ribs Counter Weight side.

### Segment 9BE

This QA Inspector observed Bottom Plate installation is in progress at the FL3 location for Segment 9BE between Panel Point (PP) 74, PP 75 and PP 76.

### Segment 8BE to 8CE

This QA Inspector observed during random visual Inspection that ZPMC personnel Installed the Retro-fit plates between the Side Panel T-Ribs for the Segment 8BE to 8CE between Panel Point 67 and PP 68 Cross Beam Side and Fillet Welded.

The Installed of the Retro-fit Flange to T-Rib Web match drilling performed and bolted with temporary bolts against the ZPMC Doc. No. GGL-MQ-1666. The Retro-fit is Installed as the Skin Flatness at location recorded at B1=10mm, B1-1=6mm and B2=6mm.

### Segment 8AE to 8BE

This QA Inspector observed during random visual Inspection that ZPMC personnel Installed the Retro-fit plates between the Side Panel T-Ribs for the Segment 8AE to 8BE between Panel Point 64 and PP 65 Cross Beam Side and Fillet Welded.

The Installed of the Retro-fit Flange to T-Rib Web match drilling is been performed and bolted with temporary bolts against the ZPMC Doc. No. GGL-MQ-1666. The Retro-fit is Installed as the Skin Flatness at location recorded at B1=6mm and B2=9mm.

### Segment 9AW to 9BW

This QA Inspector observed during random Inspection that ZPMC welder Mr. Yun Chuansheng with welder card # 045221 been welding the T-Ribs hold back at Transverse Splice Joint for visual discontinuities rectified areas for Segment 9AW to 9BW between Panel Point (PP) 73 to PP 74.

### Segment 9AW to 9BW

This QA Inspector observed during random Inspection observed Deck Panel (DP) transverse weld splice flush grinding in progress for Segment 9AW to 9BW between Panel Point (PP) 73 to PP 74.

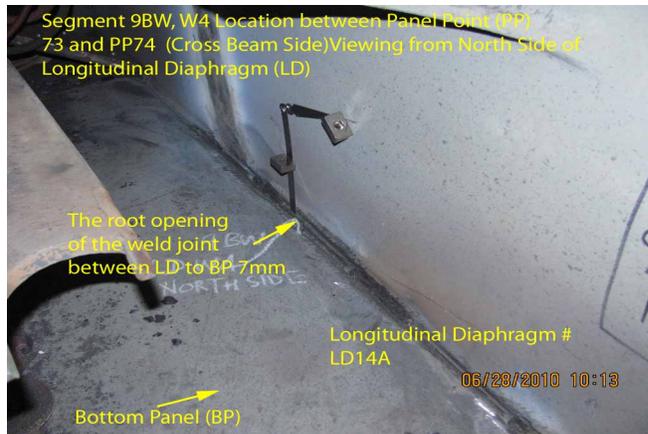
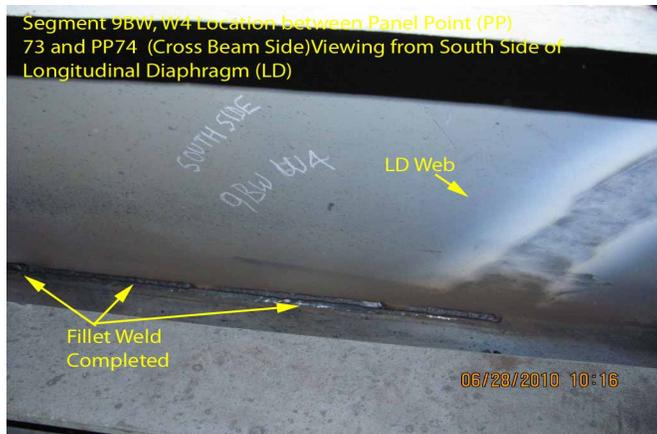
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## Segment 9BW

This QA Inspector observed Flatness before snug tightening the bolts installed at Lower Chevron for Segment 9BW at PP 74, PP 75 and PP 76 at W4 and W3 Locations on East and West side and found the flatness within the allowable tolerance.

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.

**Inspected By:** Math,Manjunath

Quality Assurance Inspector

**Reviewed By:** Carreon,Albert

QA Reviewer