

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-022588**Date Inspected:** 16-Apr-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 12AE to Segment 12CE (U-Rib to U-Rib)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the U-Rib to U-Rib at the transverse splice between Panel Points (PP) 114.5 and PP 115 for Segment 12BE to Segment 12CE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00653 dated April 16, 2011.

The bolt sizes used were M22 x 65 RC Lot # DHGM220131 and the final torque value established was 380 N-m.

The bolt sizes used were M22 x 80 RC Lot # DHGM220118 and the final torque value established was 467 N-m.

The bolt sizes used were M22 x 85 RC Lot # DHGM220121 and the final torque value established was 393 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

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## WELDING INSPECTION REPORT

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Note: U-Rib located at 3rd, 9th (between work point E5 towards E4); 17 (located between work point E4 towards E3); 36th, 37th, 38th and 39th (located between work point E3 towards E2) was not offered for inspection by ZPMC QC Mr. Zhang Hai Jung as bolt assembly tensioning is balance.

Please reference the pictures attached for more comprehensive details.

Segment 13BE to Segment 13CE (U-Rib to U-Rib Dimensional Inspection)

This QA Inspector performed Dimension Control Inspection for measuring offset on the U-Rib to U-Rib from Cross Beam side towards Bike Path side at a total of 30 locations on Segment 13BE to Segment 13CE between Panel Points (PP) 122 to PP 122.5 at the following locations:

The offset was measured within 50mm from the Deck Panel on U-Rib on the South and North side. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

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 12CW to Segment 13AW (U-Rib to U-Rib Dimensional Inspection)

This QA Inspector performed Dimension Control Inspection for measuring offset on the U-Rib to U-Rib from Counter Weight side towards Cross Beam side at a total of 37 locations on Segment 12CW to Segment 13AW between Panel Points (PP) 117 to PP 117.5 at the following locations:

The offset was measured within 50mm from the Deck Panel on U-Rib on the South and North side. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

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 12CW (full height Longitudinal Diaphragm to Deck Panel Diaphragm)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) weld. The weld joint was designated as DP3065-001-026. The welder identification was 066443 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-P-2213-Tc-U4b-FCM-1. The piece mark was identified as the weld connecting the full height Longitudinal Diaphragm to Deck Panel diaphragm at work point W4 at PP 117.

Segment 12CW (full height Longitudinal Diaphragm to Deck Panel Diaphragm)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) weld. The weld joint was designated as DP3067-001-026. The welder identification was 066443 and observed welding in the 3G (Vertical) position using approved Welding Procedure

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# WELDING INSPECTION REPORT

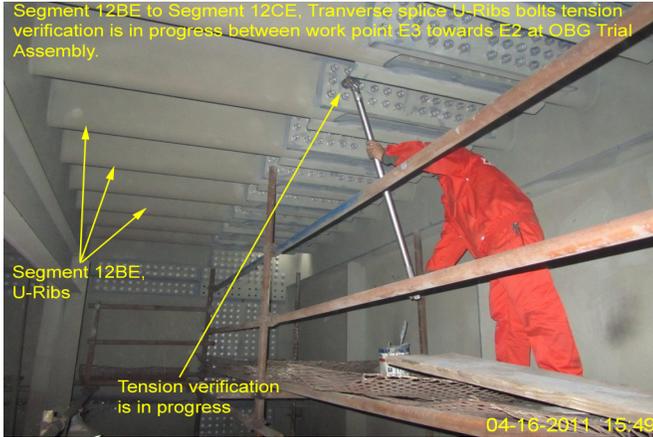
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Specification WPS-B-P-2213-Tc-U4b-FCM-1. The piece mark was identified as the weld connecting the full height Longitudinal Diaphragm to Deck Panel diaphragm at work point W3 at PP 117.

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
<b>Reviewed By:</b>	Miller,Mark	QA Reviewer

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