

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-022168**Date Inspected:** 28-Mar-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 12AW to Segment 12BW (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) 112.5 and PP 113 for Segment 12AW to Segment 12BW. 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. 00633 dated March 28, 2011.

The bolt sizes used were M22 x 65 RC Lot # DHGM220117 and the final torque value established was 327 N-m.

The bolt sizes used were M22 x 80 RC Lot # DHGM220094 and the final torque value established was 470 N-m.

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

Note: Retro-fit splice plates are installed at 3rd, 14th, 15th, 37th and 39th locations (numbering of U-Rib reference

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taken from work point W2 (Counter Weight side) towards work point W5 (Cross Beam side).

The Manual Torque wrench used was Serial No. XO2-777.

Please reference the pictures attached for more comprehensive details.

Cross Beam (CB) # 17

This QA Inspector performed Dimension Control Inspection along with Caltrans QA Inspector for measuring offset between the stiffeners at floor beam (FL3) extension at Segment 12AE to Cross Beam # 17 stiffeners at bottom panel, vertical web plate and deck plate at following locations:

At Panel Point (PP) 110, Segment 12AE offset measurement performed between floor beam stiffeners to west side Vertical Web Plate stiffeners of cross beam # 17 total 13 stiffeners.

At Panel Point (PP) 111, Segment 12AE offset measurement performed between floor beam stiffeners to centre Vertical Web Plate stiffeners of cross beam # 17, total 13 stiffeners.

At Panel Point (PP) 112, Segment 12AE offset measurement performed between floor beam stiffeners to east side Vertical Web Plate stiffeners of cross beam # 17, total 13 stiffeners.

Between Panel Points (PP) 110 to PP 111, Segment 12AE offset measurement performed between deck panel stiffeners to deck panel stiffeners of cross beam # 17, total 11 stiffeners.

Between Panel Points (PP) 111 to PP 112, Segment 12AE offset measurement performed between deck panel stiffeners to deck panel stiffener of cross beam # 17, total 11 stiffeners.

Between Panel Points (PP) 110 to PP 111, Segment 12AE offset measurement performed between bottom panel stiffeners to bottom panel stiffeners of cross beam # 17, total 5 stiffeners.

Between Panel Points (PP) 111 to PP 112, Segment 12AE offset measurement performed between bottom panel stiffeners to bottom panel stiffener of cross beam # 17, total 5 stiffeners.

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 12AE(Cantilever Bracket)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) weld. The weld joint was designated as OBW12C-033. The welder identification was 067752 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G (4F)-FCM-Repair-1. The piece mark was identified as Cantilever Brackets welded at Edge Panel at PP 113.5, Cross Beam side. ZPMC performed repair welding in accordance with Welding Repair Report B-WR20511 dated Mar 28, 2011.

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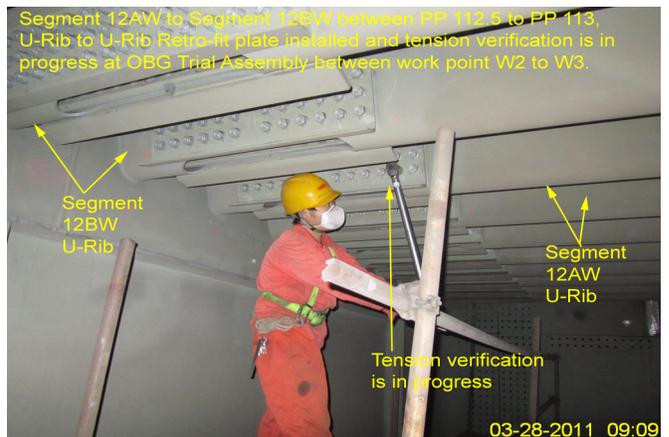
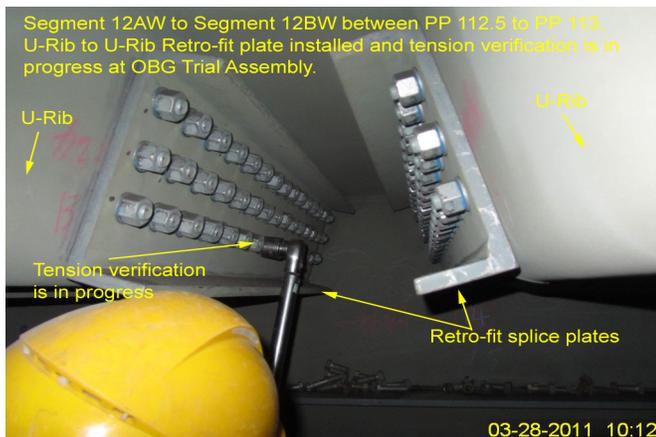
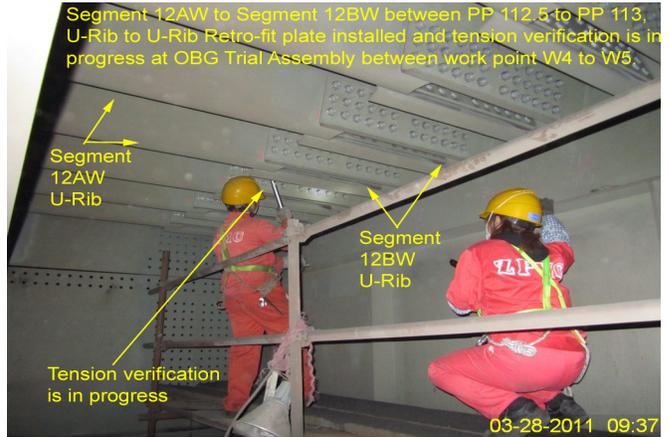
Please reference the pictures attached for more comprehensive details.

Segment 12AE(Service Platform Anchor Bracket)

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 OBE12B-024. The welder identification was 067752 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-Tc-U4b-FCM-1. The piece mark was identified as Service Platform Anchor Bracket welded at Edge Panel at PP 109.5, Cross Beam side.

Please reference the pictures attached for more comprehensive details.

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 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.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Miller,Mark	QA Reviewer
