

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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019006**Date Inspected:** 30-Dec-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)**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

Tower Lift 4 North (at Bay 11)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Tower Lift 4 North. Bolts are installed for Diaphragm holding Angles and Grating channel at Single Diaphragm. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00586 Dated December 30, 2010.

Diaphragm holding Angles and Grating channels bolts are installed at Single Diaphragm at elevation 116 meter.

The bolt sizes used were M22 x 55 RC Lot # DHGM220011 and final torque required was 457 N-m.

The bolt sizes used were M22 x 110 RC Lot # DHGM220067 and final torque required was 500 N-m.

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

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Please reference the pictures attached for more comprehensive details.

Tower Lift 4 North (at Bay 11)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Tower Lift 4 North. Bolts are installed at Angles connecting Grating Channels and 3 (three) Stiffeners welded on Tower Skin Plate “Face A” and Angles connecting Grating Channels and 2 (two) Stiffeners welded on Tower Skin Plate “Face B” at Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00586 Dated December 30, 2010.

Angles connecting Grating Channels are installed at each side of Double Diaphragm at elevation 119 meters, 123 meters, 127meters, 131 meters, 135 meters, 139 meters and 143 meters.

The bolt sizes used were M22 x 50 RC Lot # DHGM220026 and final torque required was 293 N-m.

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

Bike Path at Bay # 11

This QA Inspector performed Dimension Control Inspection on the Bike Path bottom plate for flatness check across the longitudinal butt weld. Flatness check was performed on following mentioned Bike Paths and Bike Path are identified as:

BK005A-003.

The QA Inspector measured the flatness using 600mm long straight edge across the Butt (CJP) weld and using 1500mm long straight edge between the stiffeners which are plug weld to bottom plate.

Observed flatness within the allowable tolerance.

The result of the inspection was informed to ZPMC QC Supervisor Mr. Xu Le Feng, ABF Mr. Man Kam Hon and Caltrans Lead Inspector Mr. Mark Miller and Mr. Hiranch Patel.

Lift 11 East (X37B Brackets, Road Barrier)

This QA Inspector performed Dimension Control Inspection for the Segment 11AE, Segment 11BE, Segment 11CE, Segment 11DE and Segment 11EE and measured the distance between Road Barrier bolt holes drilled at X37B from deck panel to the cope hole at X37B bracket installed at Corner Assembly Cross Beam and Bike Path side at east and west side of the X37B brackets at following locations.

At Panel Points(PP) 95.25 and PP 95.75, Bike Path side.

At Panel Points(PP) 95.25 and PP 95.75, Cross Beam side.

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At Panel Points(PP) 96.25 and PP 96.75, Bike Path side.
At Panel Points(PP) 96.25 and PP 96.75, Cross Beam side.

At Panel Points(PP) 97.25 and PP 97.75, Bike Path side.
At Panel Points(PP) 97.25 and PP 97.75, Cross Beam side.

At Panel Points(PP) 98.25 and PP 98.75, Bike Path side.
At Panel Points(PP) 98.25 and PP 98.75, Cross Beam side.

At Panel Points(PP) 99.25 and PP 99.75, Bike Path side.
At Panel Points(PP) 99.25 and PP 99.75, Cross Beam side.

At Panel Points(PP) 100.25 and PP 100.75, Bike Path side.
At Panel Points(PP) 100.25 and PP 100.75, Cross Beam side.

At Panel Points(PP) 101.25 and PP 101.75, Bike Path side.
At Panel Points(PP) 101.25 and PP 101.75, Cross Beam side.

At Panel Points(PP) 102.25 and PP 102.75, Bike Path side.
At Panel Points(PP) 102.25 and PP 102.75, Cross Beam side.

At Panel Points(PP) 103.25 and PP 103.75, Bike Path side.
At Panel Points(PP) 103.25 and PP 103.75, Cross Beam side.

At Panel Points(PP) 104.25 and PP 104.75, Bike Path side.
At Panel Points(PP) 104.25 and PP 104.75, Cross Beam side.

At Panel Points(PP) 105.25 and PP 105.75, Bike Path side.
At Panel Points(PP) 105.25 and PP 105.75, Cross Beam side.

At Panel Points(PP) 106.25 and PP 106.75, Bike Path side.
At Panel Points(PP) 106.25 and PP 106.75, Cross Beam side.

At Panel Points(PP) 107.25 and PP 107.75, Bike Path side.
At Panel Points(PP) 107.25 and PP 107.75, Cross Beam side.

At Panel Points(PP) 108.25 and PP 108.75, Bike Path side.
At Panel Points(PP) 108.25 and PP 108.75, Cross Beam side.

Note: After performing the Dimensional Inspection, 9(Nine) locations was identified for installing the Retro-fit plates at Cross Beam side and at 10 (Ten) locations was identified for installing the Retro-fit plates at Counter Weight side for X37B brackets.

The measurements were recorded in the Dimension Control Plan (DCP) generated by the QA Inspector and

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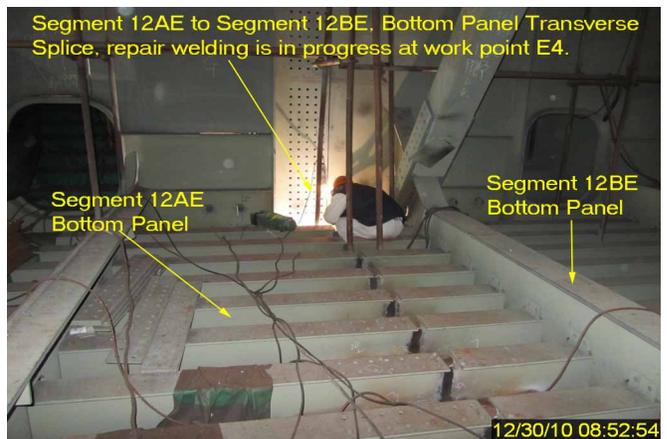
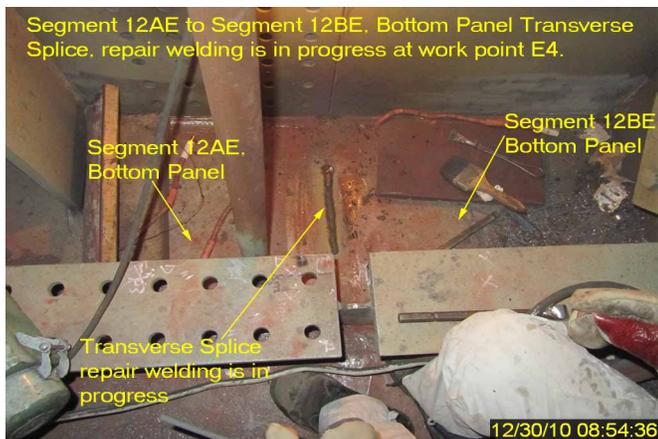
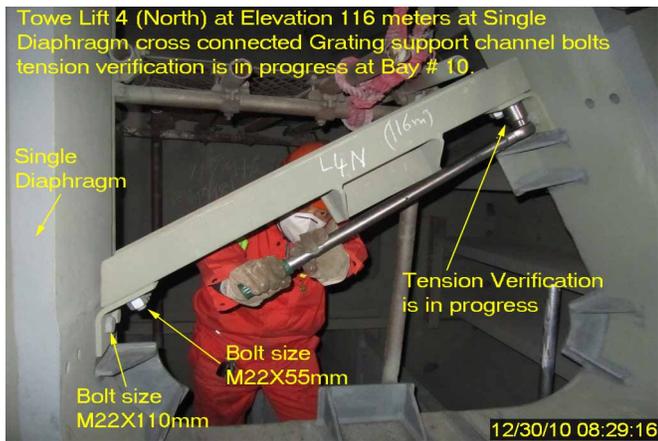
submitted to the Lead Inspector and Engineer for review and disposition.

Segment 12AE to Segment 12BE (Bottom Panel, Transverse Splice weld)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBE12B-001. The welder identification was 050289 and observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-345-SMAW-1G(1F)-FCM-Repair-1. The piece mark was identified as the Bottom Panel, at transverse splice. ZPMC performed repair welding in accordance with Welding Repair Report B-WR-19699 dated Dec 28, 2010.

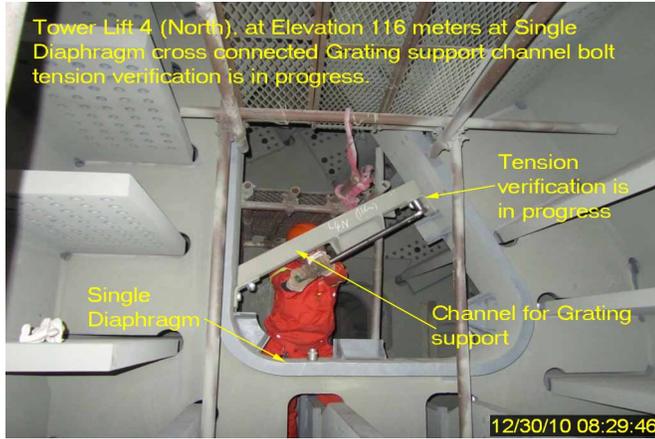
Please reference the pictures attached for more comprehensive details.

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 150000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Dsouza,Christopher	QA Reviewer
