

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-018081**Date Inspected:** 13-Nov-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:	N/A	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 11BE (Side Panel T-Ribs at FL3 location)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the T-Rib to T-Rib at Side Panel Cross Beam side at Panel Points (PP) 98, PP 99 and PP 100 for Segment 11BE. 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. 00549 dated November 13, 2010. The QA inspector observed reinforced splice plates are installed at following locations.

At PP 98: 6th T-Rib, 9th T-Rib, 10th T-Rib, 11th T-Rib and 18th T-Rib.

At PP 100: 18th T-Rib and 19th T-Rib.

Note: T-Ribs numbering reference taken from Work Point E4 towards E6.

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The bolt sizes used were M22 x 65 RC Lot # DHGM220116 and the final torque value established was 333 N-m.

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

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

Please reference the pictures attached for more comprehensive details.

Segment 11BE (Side Panel T-Ribs at FL3)

This QA Inspector performed Dimension Control Inspection on the side panel T-Rib at FL3 areas after bolting for the Segment 11BE at Panel Points (PP) 98, PP 99 and PP 100 at the following locations:

Work Point E4 towards Work Point E6 (Side Panel Cross Beam Side) total 19 T-Ribs.

The QA Inspector measured the Vertical Offset using 1(One) Meter Straight Edge at each Panel Points.

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 11EW (Chevron)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Lower Chevron, Upper Chevron, X3D Bracket connected to floor beam flange and to the splice plate and H-Beam connecting the floor beam and splice plate at Panel Point (PP) 107 and PP 108 for Segment 11EW at Counter Weight and Cross Beam side. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00550 Dated November 13, 2010.

Bolt sizes used were M22 x 65 RC Set# DHGM220105 and final torque required was 690 N-m.

Bolt sizes used were M22 x 70 RC Set# DHGM220038 and final torque required was 480 N-m.

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

Bolt sizes used were M22 x 80 RC Set# DHGM220094 and final torque required was 470 N-m.

The Manual Torque wrench used was Serial No. XO2-776.

Segment 11AE (Connection Plates)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the T-Rib connections plates at Side Panel (Cross Beam and Bike Path side) and at Bottom Panel at the Panel Points (PP) 95, PP 96 and PP 97 for Segment 11AE. 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. 00550 dated November 13, 2010.

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The bolt sizes used were M16 x 45 RC Lot # DHGM160008 and the final torque value established was 200 N-m.

The bolt sizes used were M16 x 50 RC Lot # DHGM160004 and the final torque value established was 180 N-m.

The bolt sizes used were M16 x 65 RC Lot # DHGM160006 and the final torque value established was 180 N-m.

The Manual Torque wrench used was Serial No. XO2-776.

Please reference the pictures attached for more comprehensive details.

Segment 11BE (Connection Plates)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the T-Rib connections plates at Side Panel (Cross Beam and Bike Path side) and at Bottom Panel at the Panel Points (PP) 98, PP 99 and PP 100 for Segment 11BE. 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. 00550 dated November 13, 2010.

The bolt sizes used were M16 x 45 RC Lot # DHGM160008 and the final torque value established was 200 N-m.

The bolt sizes used were M16 x 50 RC Lot # DHGM160004 and the final torque value established was 180 N-m.

The bolt sizes used were M16 x 65 RC Lot # DHGM160006 and the final torque value established was 180 N-m.

The Manual Torque wrench used was Serial No. XO2-776.

Segment 11DE to Segment 11EE (U-Rib to U-Rib)

This QA Inspector performed Dimension Control Inspection for measuring offset along with Caltrans QA Inspector Mr. Murugan Manikandan on the U-Rib to U-Rib from Cross Beam side towards Bike Path side at a total of 39 locations on Segment 11DE to Segment 11EE between Panel Points (PP) 106 to PP 107 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 11DW to Segment 11EW (U-Rib to U-Rib)

This QA Inspector performed Dimension Control Inspection for measuring offset along with Caltrans QA Inspector Mr. Murugan Manikandan on the U-Rib to U-Rib from Cross Beam side towards Bike Path side at a total of 39 locations on Segment 11DW to Segment 11EW between Panel Points (PP) 106 to PP 107 at the

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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 11BE to Segment 11CE (Skin Flatness)

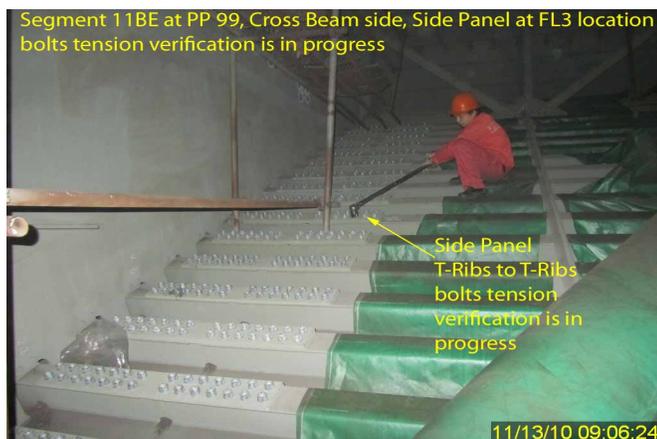
This QA Inspector performed Joint Inspection along with Caltrans QA Inspector Mr. Murugan Manikandan to check the skin flatness between Segment 11BE to Segment 11CE between Panel Points (PP) 100 and PP 101 at the following locations after flatness correction by heat straightening.

The skin flatness was measured on South side (Bike Path Side at B3 and B4 locations) at 100mm from the weld connecting Bottom Panel to Side Panel using 5000mm string line to verify overall flatness. The straight edge of 630 mm of length was also used to measure the localized flatness.

The skin flatness was measured on North side (Cross Beam side at T1 location) at 100mm from the weld connecting Deck Panel to Edge Panel using 5000mm string line to verify overall flatness. The straight edge of 600mm length was also used to measure the localized flatness.

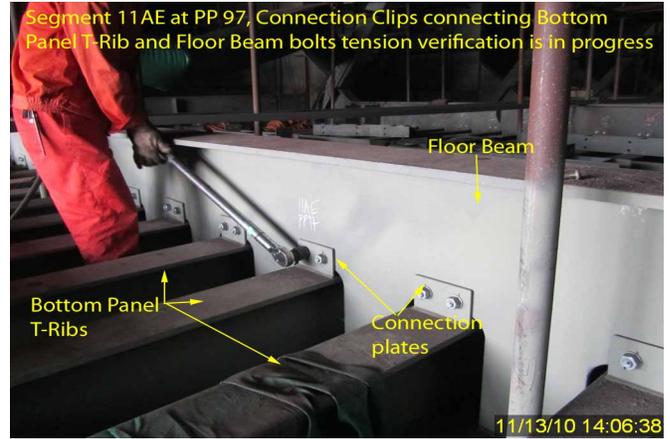
The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

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