

**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-013140**Date Inspected:** 22-Mar-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**CWI Name:****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, 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

Segment 6AE to 6BE (T-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts Installed at T-Ribs to T-Ribs at Segment Transverse Splice Side Panel (Cross Beam Side) and Side Panel (Bike Path side) at Panel Point (PP) 40 and PP 41 for Segment 6AE to 6BE. Inspected 10% on a random basis and found the Rotation of Nut to be in general compliance. Inspection was performed against the Notification No. 00296 Dated March 22, 2010.

Bolt sizes used were M22 x 65 RC Set# DHGM220018 and final torque required was 447 N-m

Bolt sizes used were M22 x 70 RC Set# DHGM220004 and final torque required was 453 N-m

Manual Torque wrench was been used with Sr. No. XQ2-654.

Note: Bottom Panel T-Ribs bolts at Segment 6BE Panel Point (PP) 41 (2 Columns and 4 Rows) bolts not installed

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and not offered for tension verification due the temporary sea fasteners interfering at that location. At Segment 6AE Side Panel Cross Beam side 13th T-Rib from E4 location 2 Column and 8 Rows bolts stick out was not flush thus asked ZPMC QC to replace M22x65 with M22x70 as per the adjacent T-Ribs bolts to meet the requirement ZPMC thus the tension verification at that location not performed. Please refer the pictures attached with Tag No. 1 and 2 below for more comprehensive detail.

### Segment 6BE to 6CE (T-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts Installed at T-Ribs to T-Ribs at Segment Transverse Splice Side Panel (Cross Beam Side) and Side Panel (Bike Path side) at Panel Point (PP) 43 and PP 44 for Segment 6BE to 6CE. Inspection notification no. 00297 Dated March 22, 2010 was cancelled by ZPMC QC Mr. Shen Jian Bo and will be offered on March 23, 2010.

### Segment 6AW (Cable Tray)

This Quality Assurance (QA) Inspector witnessed final tension verification for Cable Tray Bolts Installed at Segment 6AW at area between PP 37, PP 38, PP 39 and PP 40. Inspected 10% on a random basis and found the Rotation of Nut to be in general compliance. Inspection was performed against the Notification No. 00297 Dated March 22, 2010.

Bolt sizes used were M3/4 x 2 1/4 RC Set# DHG60580 and final torque required was 340 N-m

Manual Torque wrench was been used with Sr. No. XQ2-114.

Please refer the pictures with Tag no. 4 for more comprehensive details.

Note: for Segment 6AW between PP 38 and PP 39 Cable Tray bolts not installed due to interference with Temporary Sea Fasteners.

Please refer the pictures attached with Tag No. 4 below for more comprehensive detail.

### Segment 6BW (Cable Tray)

This Quality Assurance (QA) Inspector witnessed final tension verification for Cable Tray Bolts Installed at Segment 6BW at area between PP 41, PP 42 and PP 43. Inspected 10% on a random basis and found the Rotation of Nut to be in general compliance. Inspection was performed against the Notification No. 00297 Dated March 22, 2010.

Bolt sizes used were M3/4 x 2 1/4 RC Set# DHG60580 and final torque required was 340 N-m

Manual Torque wrench was been used with Sr. No. XQ2-114.

Note: for Segment 6BW from PP 41 to 43 Cable Tray not installed due to interference with Temporary Sea Fasteners.

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## Segment 6CW (Cable Tray)

This Quality Assurance (QA) Inspector witnessed final tension verification for Cable Tray Bolts Installed at Segment 6CW at area between PP 44, PP 45, PP 46 and PP 47. Inspected 10% on a random basis and found the Rotation of Nut to be in general compliance. Inspection was performed against the Notification No. 00297 Dated March 22, 2010.

Bolt sizes used were M3/4 x 2 1/4 RC Set# DHG60580 and final torque required was 340 N-m

Manual Torque wrench was been used with Sr. No. XQ2-114.

## Segment 6AE, 6BE to 6CE (Cable Tray Sling)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts Installed at T-Ribs to T-Ribs at Segment Transverse Splice Side Panel (Cross Beam Side) and Side Panel (Bike Path side) at Panel Point (PP) 37 to PP 47 for Segment 6AE, 6BE to 6CE. Against Inspection notification no. 00296 Dated March 22, 2010 inspection was performed and observed the tension of sling was not suffice and the clip nuts were not tightened properly thus ZPMC QC Mr. Shen Jian Bo cancelled the inspection.

## Segment 6AW, 6BW to 6CW (Cable Tray Sling)

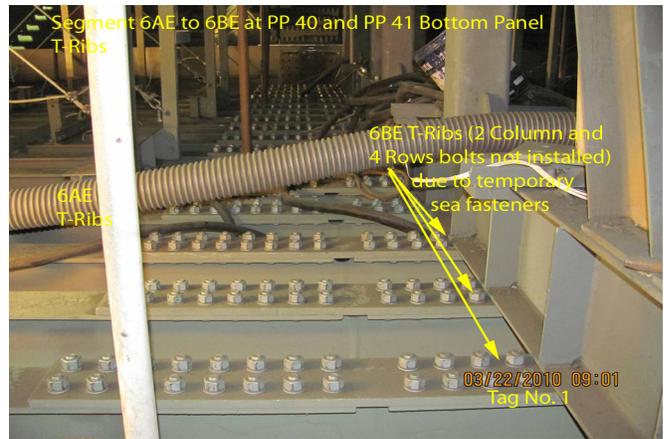
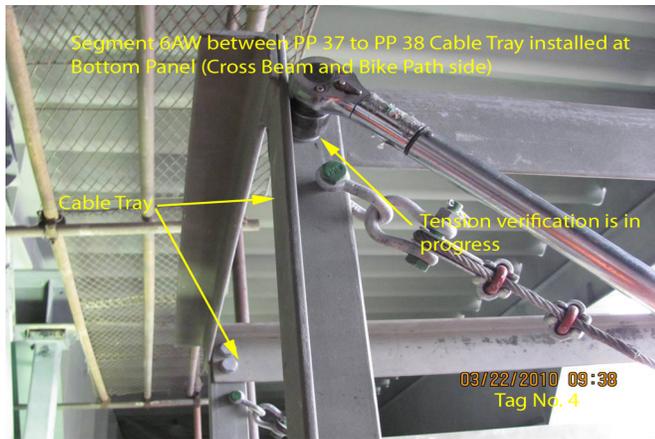
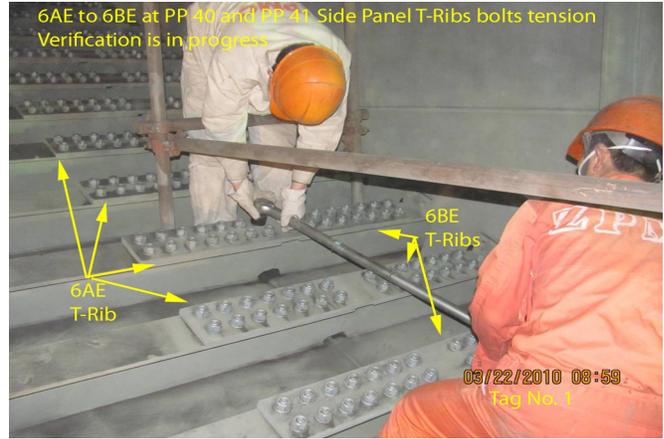
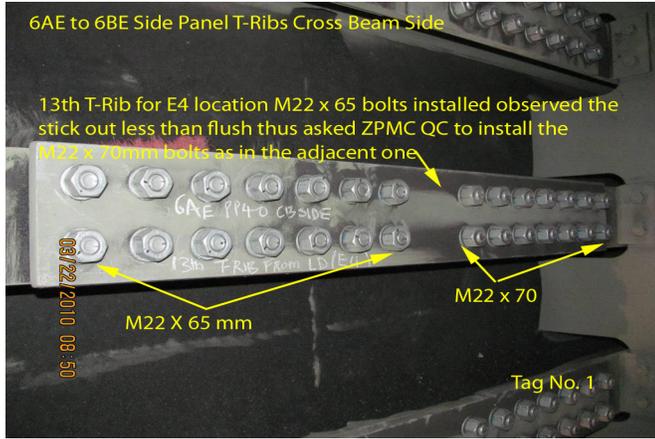
This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts Installed at T-Ribs to T-Ribs at Segment Transverse Splice Side Panel (Cross Beam Side) and Side Panel (Bike Path side) at Panel Point (PP) 37 to PP 47 for Segment 6AW, 6BW to 6CW. Against Inspection notification no. 00296 Dated March 22, 2010 inspection was performed and observed the tension of sling was not suffice and the clip nuts were not tightened properly thus ZPMC QC Mr. Shen Jian Bo cancelled the inspection.

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.

## 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:** Miller,Mark

QA Reviewer