

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-022171**Date Inspected:** 25-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 12AE (Side Panel T-Ribs)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the T-Rib to T-Rib at Side Panel Bike Path side at Panel Points (PP) 112 to PP 112.5 for Segment 12AW. 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. 00631 dated March 25, 2011.

The bolt sizes used were M22 x 70 RC Lot # DHGM220041 and the final torque value established was 460 N-m.

The bolt sizes used were M22 x 75 RC Lot # DHGM220034 and the final torque value established was 453 N-m.

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

Please reference the pictures attached for more comprehensive details.

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Segment 12AE (Side Panel T-Ribs)

This QA Inspector performed Dimension Control Inspection for the Side Panel T-Ribs to T-Ribs for the Segment 12AE between Panel Point (PP) 112 to PP 112.5 at the following locations:

Work Point E3 towards Work Point E1 (Side Panel Bike Path Side) total 19 T-Ribs.

The QA Inspector measured the Vertical Offset using 1(One) Meter Straight Edge and measured the Horizontal Offset on the web using a Bridge Cam gauge.

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 (Connection Clips)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the T-Rib Connections Clips at Side Panel (Counter Weight and Cross Beam side) and at Bottom Panel at the Panel Points (PP) 115, 115.2, 115.5, 116, 116.5 and PP 117 for Segment 12CW. 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. 00631 dated March 25, 2011.

The bolt sizes used were M16 x 45 RC Lot # DHGM160049 and the final torque value established was 180 N-m.

The bolt sizes used were M16 x 45 RC Lot # DHGM160021 and the final torque value established was 180 N-m.

The bolt sizes used were M16 x 50 RC Lot # DHGM160003 and the final torque value established was 200 N-m.

The bolt sizes used were M16 x 50 RC Lot # DHGM160011 and the final torque value established was 200 N-m.

The bolt sizes used were M16 x 55 RC Lot # DHGM160012 and the final torque value established was 200 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. XO2-114.

Please reference the pictures attached for more comprehensive details.

Segment 12CW (Connection Clips)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the T-Rib Connections Clips at Side Panel (Counter Weight and Cross Beam side) at the Panel Points (PP) 115.2 for Segment 12CW. 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. 00631 dated March 25, 2011.

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The bolt sizes used were M24 x 60 RC Lot # DHGM240001 and the final torque value established was 633 N-m.

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

Please reference the pictures attached for more comprehensive details.

Segment 12AE (Cable Tray)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for cable tray structure installed at Bottom Panel between the Panel Points (PP) 109~109.5; PP 109.5~110; PP 110 to 110.5; PP 110.5~111; PP 111~111.5; PP 111.5~112; PP 112~112.5 and PP 112.5~112.75 for Segment 12AE at North and South side. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 0000632 Dated March 25, 2011.

Bolt sizes used were M20 x 55mm RC Set# DHGM200038 and final torque required was 280 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

Segment 12BE (Cable Tray)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for cable tray structure installed at Bottom Panel between the Panel Points (PP) 113~113.5; PP 113.5~114; PP 114 to 114.5 and PP 114.5~114.75 for Segment 12BE at North and South side. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 0000632 Dated March 25, 2011.

Bolt sizes used were M20 x 55mm RC Set# DHGM200038 and final torque required was 280 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

Segment 12CE (Cable Tray)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for cable tray structure installed at Bottom Panel between the Panel Points (PP) 115~115.5; PP 115.5~116; PP 116 to 116.5 and PP 116.5~117 for Segment 12CE at North and South side. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 0000632 Dated March 25, 2011.

Bolt sizes used were M20 x 55mm RC Set# DHGM200038 and final torque required was 280 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

Please reference the pictures attached for more comprehensive details.

Segment 13AE (FL3 I-Stiffener)

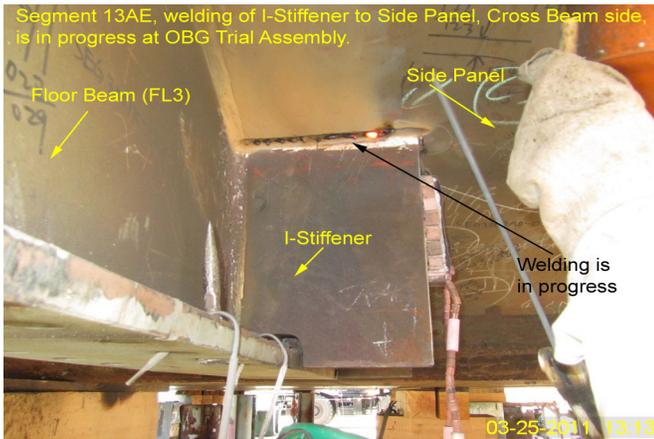
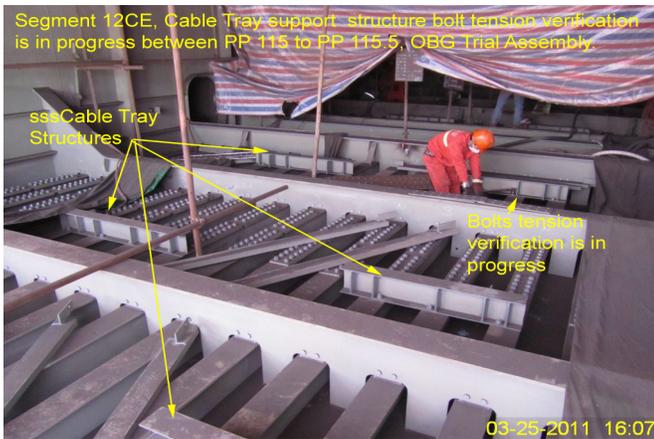
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This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3007AD-118. The welder identification was 037743 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as weld connecting the Side Panel near Floor Beam (FL3) to Vertical I-Stiffener at PP 119(-1500), Cross Beam side.

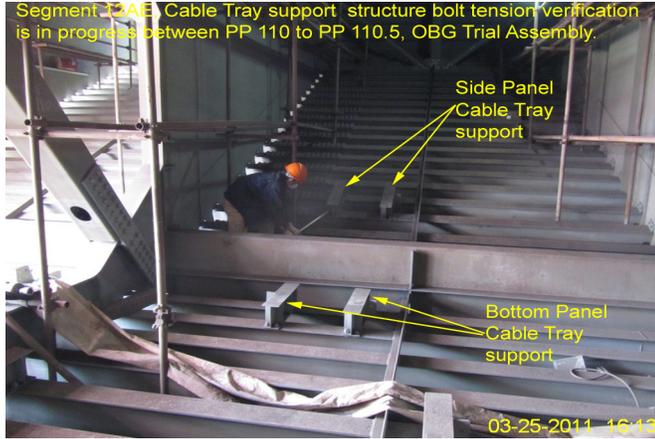
Please reference the pictures attached for more comprehensive details.

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