

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-019193**Date Inspected:** 08-Jan-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)**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

Cross Beam 15 (Catwalk)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Catwalk structure which is connected to Cross Beam Bottom Panel I-Ribs at Panel Point (PP) 98 and PP 99 for Cross Beam 15. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00602 Dated January 08, 2011.

Bolt sizes used were M16 x 45 RC Set# DHGM160021 and final torque required was 180 N-m.

Bolt sizes used were M16 x 50 RC Set# DHGM160011 and final torque required was 200 N-m.

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

Please reference the pictures attached for more comprehensive details.

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Cross Beam 16(Catwalk)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Catwalk structure which is connected to Cross Beam Bottom Panel I-Ribs at Panel Point (PP) 104 and PP 105 for Cross Beam 16. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00602 Dated January 08, 2011.

Bolt sizes used were M16 x 45 RC Set# DHGM160021 and final torque required was 180 N-m.

Bolt sizes used were M16 x 50 RC Set# DHGM160011 and final torque required was 200 N-m.

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

Please reference the pictures attached for more comprehensive details.

Segment 11AE to 11BE (Transverse Splice T-Ribs)

This QA Inspector witnessed final bolt tension verification on bolts connecting T-Rib to T-Rib for Transverse Splice at Bottom Panel. Bolts are installed at accessible locations after installation of temporary Sea fastening structures. Bolts installed at T-Ribs are identified as 9th and 11th T-Rib (reference for numbering taken from work point E3 towards E4). Bolts installed between Panel Point (PP) 97 to PP 98 for Segment 11AE to Segment 11BE. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00602 Dated January 08, 2011.

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

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

Segment 11BE to 11CE (Transverse Splice T-Ribs)

This QA Inspector witnessed final bolt tension verification on bolts connecting T-Rib to T-Rib for Transverse Splice at Bottom Panel. Bolts are installed at accessible locations after installation of temporary Sea fastening structures. Bolts installed at T-Ribs are identified as 9th and 11th T-Rib (reference for numbering taken from work point E3 towards E4). Bolts installed between Panel Point (PP) 100 to PP 101 for Segment 11BE to Segment 11CE. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00602 Dated January 08, 2011.

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

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

Segment 11CE to 11DE (Transverse Splice T-Ribs)

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This QA Inspector witnessed final bolt tension verification on bolts connecting T-Rib to T-Rib for Transverse Splice at Bottom Panel. Bolts are installed at accessible locations after installation of temporary Sea fastening structures. Bolts installed at T-Ribs are identified as 8th and 10th T-Rib (reference for numbering taken from work point E3 towards E4). Bolts installed between Panel Point (PP) 103 to PP 104 for Segment 11CE to Segment 11DE. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00602 Dated January 08, 2011.

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

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

Segment 11DE to 11EE (Transverse Splice T-Ribs)

This QA Inspector witnessed final bolt tension verification on bolts connecting T-Rib to T-Rib for Transverse Splice at Bottom Panel. Bolts are installed at accessible locations after installation of temporary Sea fastening structures. Bolts installed at T-Ribs are identified as 8th and 10th T-Rib (reference for numbering taken from work point E3 towards E4). Bolts installed between Panel Point (PP) 106 to PP 107 for Segment 11DE to Segment 11EE. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00602 Dated January 08, 2011.

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

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

Please reference the pictures attached for more comprehensive details.

BAY 11 – (Skid More Test)

This QA Inspector witnessed Bolt Testing for ASTM A490 Grade. Observed ZPMC QC Mr. Hu Hua Cheng performing bolts testing and ZPMC QA Inspector Mr. Zhang Jia Di was present during the course of Bolt Testing.

The testing of bolts was performed to determining Nut Rotation from Snug-Tight condition for Turn-of-Nut Pre-tensioning and High Tension bolt capability verification test.

Bolt assembly identified as ASTM A490 (High Strength Bolt), Bolt Assembly comprises of (a Bolt, a Nut and a Washer).

Bolt testing was performed on a Unit: Skidmore-Wilhelm; Model: HT; Serial Number: 1014 (Calibration Expiration due date on April 29, 2011) and Torque Wrench identified as XO-326 and Torque Wrench with Dial gauge on it is identified as XO-2 (Calibration Expiration due date on April 14, 2011).

Tested bolt sizes were identified as M30x150 RC Set# DH4DM300003.

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Tested bolt sizes were identified as M30x220 RC Set# DH4DM300015.

5 bolt assemblies were tested per lot.

After determining Nut Rotation from Snug-Tight condition for Turn-of-Nut Pre-tensioning Inspection Report # 3 for bolt size M30x150 was generated by ZPMC QA.

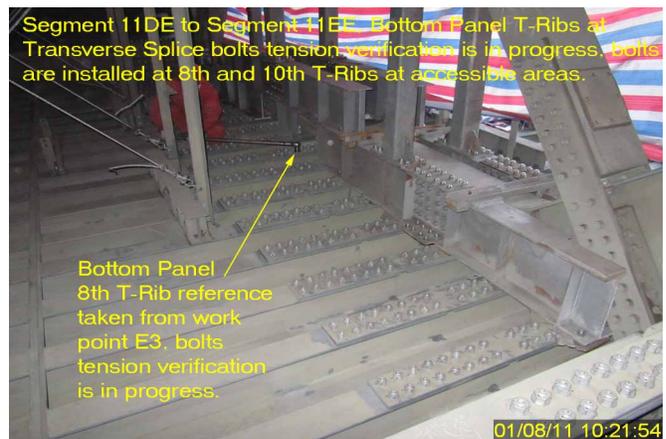
After determining High Tension bolt capability verification test Inspection Report # 282 for bolt size M30x150 was generated by ZPMC QA.

After determining Nut Rotation from Snug-Tight condition for Turn-of-Nut Pre-tensioning Inspection Report # 15 for bolt size M30x220 was generated by ZPMC QA.

After determining High Tension bolt capability verification test Inspection Report # 282 for bolt size M30x220 was generated by ZPMC QA.

The generated reports were submitted to the Caltrans Lead Inspector Mr. Mark Miller and Caltrans Engineer Mr. Aaron Prchlik 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
