

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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016212**Date Inspected:** 14-Aug-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
Bridge No:	34-0006	Delayed / Cancelled:	Yes	No N/A
		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 9AW

This QA Inspector witnessed the final bolt tension verification on bolts installed at the Corner Assembly connecting the Road Barrier Brackets, Inclined Truss Post and Vertical Truss Post at Cross Beam and Counter Weight side between Panel Points (PP) 71 and PP 73 for Segment 9AW. 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. 00452 dated August 14, 2010.

The bolt sizes used were M22 x 55 RC Lot # DHGM220044 and the final torque value established was 473 N-m.

The bolt sizes used were M22 x 85 RC Lot # DHGM220013 and the final torque value established was 433 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220051 and the final torque value established was 433 N-m.

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The bolt sizes used were M22 x 120 RC Lot # DHGM220053 and the final torque value established was 440 N-m.

The bolt sizes used were M24 x 60 RC Lot # DHGM240014 and the final torque value established was 567 N-m.

The bolt sizes used were M24 x 65 RC Lot # DHGM240002 and the final torque value established was 573 N-m.

The bolt sizes used were M24 x 80 RC Lot # DHGM240011 and the final torque value established was 533 N-m.

The manual torque wrench used to verify tension was S/N XO2-779. Please reference the pictures attached for more comprehensive details.

Segment 9BW

This QA Inspector witnessed the final bolt tension verification on bolts installed at the Corner Assembly connecting the Road Barrier Brackets, Inclined Truss Post and Vertical Truss Post at Cross Beam and Counter Weight side between Panel Points (PP) 74 and PP 76 for Segment 9BW. 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. 00452 dated August 14, 2010.

The bolt sizes used were M22 x 55 RC Lot # DHGM220044 and the final torque value established was 473 N-m.

The bolt sizes used were M22 x 85 RC Lot # DHGM220013 and the final torque value established was 433 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220051 and the final torque value established was 433 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220053 and the final torque value established was 440 N-m.

The bolt sizes used were M24 x 60 RC Lot # DHGM240014 and the final torque value established was 567 N-m.

The bolt sizes used were M24 x 65 RC Lot # DHGM240002 and the final torque value established was 573 N-m.

The bolt sizes used were M24 x 80 RC Lot # DHGM240011 and the final torque value established was 533 N-m.

The manual torque wrench used to verify tension was S/N XO2-779.

Segment 9CW

This QA Inspector witnessed the final bolt tension verification on bolts installed at the Corner Assembly connecting the Road Barrier Brackets, Inclined Truss Post and Vertical Truss Post at Cross Beam and Counter Weight side between Panel Points (PP) 77 and PP 79 for Segment 9CW. 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. 00452 dated August 14, 2010.

The bolt sizes used were M22 x 55 RC Lot # DHGM220044 and the final torque value established was 473 N-m.

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The bolt sizes used were M22 x 85 RC Lot # DHGM220013 and the final torque value established was 433 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220051 and the final torque value established was 433 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220053 and the final torque value established was 440 N-m.

The bolt sizes used were M24 x 60 RC Lot # DHGM240014 and the final torque value established was 567 N-m.

The bolt sizes used were M24 x 65 RC Lot # DHGM240002 and the final torque value established was 573 N-m.

The bolt sizes used were M24 x 80 RC Lot # DHGM240011 and the final torque value established was 533 N-m.

The manual torque wrench used to verify tension was S/N XO2-779.

Segment 9EE to Segment 10AE

This QA Inspector performed Dimension Control Inspection for measuring the Offset along with ABF QA personnel on the U-Rib to U-Rib from Cross Beam side towards Bike Path side at a total of 39 locations on Segment 9EE to Segment 10AE between Panel Point (PP) 85 to PP 86 at the following locations:

The offset was measured within 50mm from the Deck Panel on U-Rib on the South side and North side. The QA Inspector measured the Offset using a 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 9EW to 10AW

This QA Inspector performed Dimension Control Inspection along with ABF QA personnel on the Transverse Splice T-Ribs to T-Ribs for the Segment 9EW to Segment 10AW between Panel Point (PP) 85 to PP 86 at the following locations:

Work Point W6 towards Work Point W4 (Side Panel Cross Beam Side) a total of 19 T-Ribs.

Work Point W4 towards Work Point W3 (Bottom Panel) a total of 18 T-Ribs.

Work Point W3 towards Work Point W1 (Side Panel Counter Weight Side) a total of 19 T-Ribs.

The QA Inspector measured the Vertical Offset using a 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.

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Segment 9AW

This QA Inspector performed Dimension Control Inspection for Segment 9AW from Panel Point (PP) 71.75 to PP 73.25 at the following locations:

The skin flatness was verified and measured across the longitudinal butt weld at Side Panel (SP) to Corner Assembly (CA) at the Cross Beam (CB) and Counter Weight (CW) side from Panel Point (PP) 71.75 to PP 73.75. The QA Inspector measured the skin flatness using a 600mm Straight Edge.

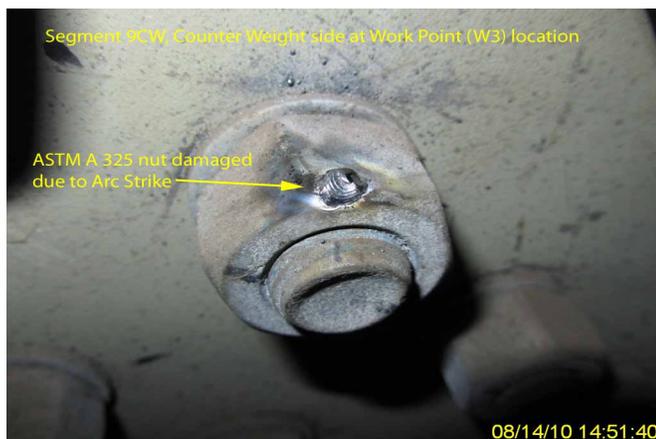
The skin flatness was verified and measured across the longitudinal butt weld at Deck Panel (DP) to Corner Assembly (CA) at the Cross Beam (CB) and Counter Weight (CW) side from Panel Point (PP) 71.75 to PP 73.75. The QA Inspector measured the skin flatness using a 600mm Straight Edge.

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.

Lower Chevron Brace

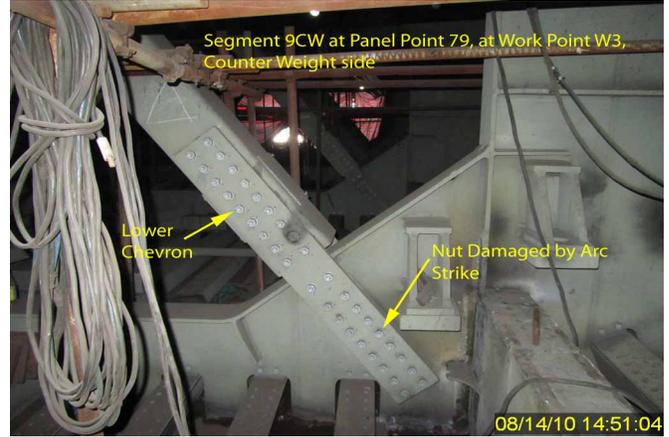
This QA Inspector observed during a random visual inspection at the Lower Chevron brace for Segment 9CW at PP 79 at Work Point W3 that one of the ASTM A 325 nuts was damaged by an arc strike whose tension verification had been previously verified by this QA Inspector on June 29, 2010 against Inspection notification number 00401. The issue was brought up to ZPMC QC Inspector Mr. Hu Mei Gang and ABF QA Inspector Mr. Ding Xing Chi. As per the discussion with Caltrans Lead Inspector Mr. Albert Carreon and SMR Mr. Jim Simonis it was recommended to replace the bolt and nut with the same the lot number if available. This QA Inspector visited the bolt warehouse facility along with the ZPMC QC Inspector and the ABF QA Inspector personnel and observed that the relevant lot numbers were available and it was concluded by the ZPMC QC Inspector and the ABF QA Inspector that the disposition will be to replace the nut and bolt and afterwards re-schedule the tension verification at a later date. 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: Peterson,Art

QA Reviewer