

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-016457**Date Inspected:** 27-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
		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 9AE to 9BE (Transverse Splice T-Ribs)

This QA Inspector witnessed final bolt tension verification on bolts connecting T-Rib to T-Rib for Transverse Splice at Side Panel Bike Path Side work point E1 towards work point E3 total 5 T-Ribs, identified as 3rd T-Rib, 4th T-Rib, 5th T-Rib, 16th T-Rib and 17th T-Rib and Side Panel Cross Beam side from work point E4 towards work point E6 total 3 T-Ribs, identified as 4th T-Rib, 5th T-Rib and 6th T-Ribs between Panel Points (PP) 73 to PP 74 for Segment 9AE to 9BE. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00462 Dated August 27, 2010.

The bolt sizes used were M22 x 65 RC Lot # DHGM220105 and the final torque value established was 380 N-m.

The bolt sizes used were M22 x 70 RC Lot # DHGM220009 and the final torque value established was 447 N-m.

The Manual Torque wrench used was Serial No. XO2-666. Please reference the pictures attached for more

WELDING INSPECTION REPORT

(Continued Page 2 of 5)

comprehensive details.

Segment 9AE to 9BE (Transverse Splice T-Ribs)

This QA Inspector performed Dimension Control Inspection on the Transverse Splice T-Ribs to T-Ribs after bolting for the Segment 9AE to Segment 9BE between Panel Point (PP) 73 to PP 74 at the following locations:

Work Point E1 towards Work Point E3 (Side Panel Bike Path Side) total 5 T-Ribs, identified as 3rd T-Rib, 4th T-Rib, 5th T-Rib, 16th T-Rib and 17th T-Rib.

Work Point E4 towards Work Point E6 (Side Panel Cross Beam Side) total 3 T-Ribs, identified as 4th T-Rib, 5th T-Rib and 6th T-Rib.

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 9CE to Segment 9DE (U-Rib to U-Rib)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the U-Rib to U-Rib at the transverse splice between Panel Points (PP) 79 and PP 80 for Segment 9CE to Segment 9DE. 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. 00462 dated August 27, 2010.

Note: Reinforced Splice plate is installed at the 1st T-Rib.

The bolt sizes used were M22 x 65 RC Lot # DHGM220002 and the final torque value established was 513 N-m.

The bolt sizes used were M22 x 70 RC Lot # DHGM220027 and the final torque value established was 450 N-m.

The bolt sizes used were M22 x 80 RC Lot # DHGM220091 and the final torque value established was 460 N-m.

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

The Manual Torque wrench used was Serial No. XO2-666. Please reference the pictures attached for more comprehensive details.

Segment 9DE (Side Panel T-Ribs at FL3 location)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the T-Ribs to T-Ribs at Side Panel Cross Beam side at Panel Points (PP) 80 for Segment 9DE. 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

WELDING INSPECTION REPORT

(Continued Page 3 of 5)

Notification No. 00462 dated August 27, 2010. The reinforced splice plates are installed at following locations.

At PP 74: 10th T-Rib

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

The bolt sizes used were M22 x 65 RC Lot # DHGM220105 and the final torque value established was 380 N-m.

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

Segment 9BW to 9CW (Transverse Splice T-Ribs)

This QA Inspector witnessed final bolt tension verification on bolts connecting T-Rib to T-Rib for Transverse Splice at Side Panel Cross Beam Side (from work point W6 towards W4), Bottom Panel (from work point W4 towards W3) and Counter Weight side (from work point W3 to W1) between Panel Points (PP) 76 to PP 77 for Segment 9BW to 9CW. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00462 Dated August 27, 2010.

The bolt sizes used were M22 x 65 RC Lot # DHGM220002 and the final torque value established was 513 N-m.

The bolt sizes used were M22 x 70 RC Lot # DHGM220017 and the final torque value established was 487 N-m.

The bolt sizes used were M22 x 70 RC Lot # DHGM220009 and the final torque value established was 447 N-m.

The Manual Torque wrench used was Serial No. XO2-779. Please reference the pictures attached for more comprehensive details.

Segment 9BW to 9CW (Transverse Splice T-Ribs)

This QA Inspector performed Dimension Control Inspection on the Transverse Splice T-Ribs to T-Ribs after bolting for the Segment 9BW to Segment 9CW between Panel Point (PP) 76 to PP 77 at the following locations:

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

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

Work Point W3 towards Work Point W1 (Side Panel Counter Weight 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.

WELDING INSPECTION REPORT

(Continued Page 4 of 5)

Segment 9BW to Segment 9CW (U-Rib to U-Rib)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the U-Rib to U-Rib at the transverse splice between Panel Points (PP) 76 and PP 77 for Segment 9BW to 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. 00462 dated August 27, 2010.

Note: Reinforced Splice plates are installed at the 28th T-Rib, 37th T-Rib and 39th T-Rib.

The bolt sizes used were M22 x 70 RC Lot # DHGM220027 and the final torque value established was 450 N-m.

The bolt sizes used were M22 x 80 RC Lot # DHGM220091 and the final torque value established was 460 N-m.

The bolt sizes used were M22 x 85 RC Lot # DHGM220111 and the final torque value established was 340 N-m.

The Manual Torque wrench used was Serial No. XO2-779. Please reference the pictures attached for more comprehensive details.

Segment 9AW to 9BW (Transverse Splice T-Ribs)

This QA Inspector witnessed final bolt tension verification on bolts connecting T-Rib to T-Rib for Transverse Splice at Side Panel Cross Beam Side (from work point W6 towards W4) the 19th T-Rib between Panel Points (PP) 73 to PP 74 for Segment 9AW to 9BW. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00462 Dated August 27, 2010.

The bolt sizes used were M22 x 65 RC Lot # DHGM220002 and the final torque value established was 513 N-m.

The Manual Torque wrench used was Serial No. XO2-779.

Segment 9BW to 9CW (Transverse Splice T-Ribs)

This QA Inspector performed Dimension Control Inspection on the Transverse Splice T-Ribs to T-Ribs after bolting for the Segment 9BW to Segment 9CW between Panel Point (PP) 76 to PP 77 at the 19th T-Rib, Cross Beam side:

Note: T-Ribs numbering reference taken from Work Point W6 towards Work Point W4.

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.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract

WELDING INSPECTION REPORT

(Continued Page 5 of 5)

documents.



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