

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-016530**Date Inspected:** 31-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

Incident Report generated at Segment 10CE

This Quality Assurance (QA) Inspector wrote an Incident Report for FL3 flange impact damage at PP 92 for Segment 10CE, Cross Beam side. Please reference the Incident Report 04-0120F4_TL-15_B278_08-31-2010_10CE_FL3_PP92_Flange_Impact Damage dated August 31, 2010 for further details.

Please reference the pictures attached for more comprehensive details.

Incident Report generated at Segment 9DW

This Quality Assurance (QA) Inspector wrote an Incident Report for welding the out of tolerance hole at Floor Beam near work point W3 and work point W4 without approved Critical Weld Report (CWR) and for using wrong WPS at PP 82 for Segment 9DW. Please reference the Incident Report

WELDING INSPECTION REPORT

(Continued Page 2 of 6)

04-0120F4_TL-15_B278_08-31-10_Repair_out of tolerance hole_FB_9DW at PP 82_W3_W4 dated August 31, 2010 for further details.

Please reference the pictures attached for more comprehensive details.

Segment 9DW to Segment 9EW

This QA Inspector performed Dimension Control Inspection along with ABF QA Inspector on the Longitudinal Diaphragm to Longitudinal Diaphragm at W4 (Cross Beam side) for the Segment 9DW to Segment 9EW between Panel Point (PP) 82 to PP 83 at the following locations:

The offset was measured at 5 (five) different locations in which 2 (Two) locations were at Flange area and 3 (Three) locations were at Web area. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

The Sweep was measured at 100 mm from both sides of the Floor Beam and 800mm from both sides of floor Beam and at Center (Total 5 Locations) using string line.

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 9DE to 9EE (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 (from work point E1 towards E3), Bottom Panel (from work point E3 towards E4) and Cross Beam side (from work point E4 to E6) between Panel Point (PP) 82 to PP 83 for Segment 9DE to 9EE. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00468 Dated August 31, 2010.

The bolt sizes used were M22 x 65 RC Lot # DHGM220003 and the final torque value established was 503 N-m.

The bolt sizes used were M22 x 70 RC Lot # DHGM220028 and the final torque value established was 440 N-m.

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

Note: Work Point E3 towards Work Point E4 (Bottom Panel) total 18 T-Ribs, the dimension control inspection after bolting was not performed as (2) two rows and 5 (five) columns of fasteners assembly were installed due to interference with temporary sea fastening structures.

Segment 9DE to 9EE (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 9DE to Segment 9EE between Panel Point (PP) 82 to PP 83 at the following locations:

WELDING INSPECTION REPORT

(Continued Page 3 of 6)

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

Work Point E3 towards Work Point E4 (Bottom Panel) total 18 T-Ribs.

Work Point E4 towards Work Point E6 (Side Panel Cross Beam 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 9DW to Segment 9EW (Longitudinal Diaphragm to Longitudinal Diaphragm)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Longitudinal Diaphragm to Longitudinal Diaphragm between Panel Points (PP) 82 and PP 83 for Segment 9DW to Segment 9EW at work point W3, Counter Weight side and work point W4 Cross Beam side. 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. 00468 dated August 31, 2010.

The bolt sizes used were M24 x 70 RC Lot # DHGM240075 and the final torque value established was 680 N-m.

The bolt sizes used were M24 x 95 RC Lot # DHGM240021 and the final torque value established was 540 N-m.

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

Segment 9AE (Cable Tray Structure)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Cable Tray Structures installed at Bottom Panel T-Ribs at North and South Side between Panel Points (PP) 71.25 to PP 72 and PP 72 to PP 73 for Segment 9AE. 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. 00468 dated August 31, 2010.

The bolt sizes used were M19 x 50 RC Lot # DHG60631 and the final torque value established was 346 N-m.

The Manual Torque wrench used was Serial No. XO2-114. Please reference the pictures attached for more comprehensive details.

Segment 9BE (Cable Tray Structure)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Cable Tray Structures installed at Bottom Panel T-Ribs at North and South Side between Panel Points (PP) 74.5 to PP 75 and PP 75.5 to PP 76 for Segment 9BE. The QA Inspector verified the bolt tension on a random basis and the results appeared to

WELDING INSPECTION REPORT

(Continued Page 4 of 6)

be in general compliance. The Inspection was performed against Notification No. 00468 dated August 31, 2010.

The bolt sizes used were M19 x 50 RC Lot # DHG60631 and the final torque value established was 346 N-m.

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

Segment 9CE (Cable Tray Structure)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Cable Tray Structures installed at Bottom Panel T-Ribs at North and South Side between Panel Points (PP) 76 to PP 77; PP 77.5 to PP 78 and PP 78 to PP 79 for Segment 9CE. 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. 00468 dated August 31, 2010.

The bolt sizes used were M19 x 50 RC Lot # DHG60631 and the final torque value established was 346 N-m.

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

Segment 9DE (Cable Tray Structure)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Cable Tray Structures installed at Bottom Panel T-Ribs at North and South Side between Panel Points (PP) 79 to PP 80; PP 80.5 to PP 81 and PP 81 to PP 82 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 Notification No. 00468 dated August 31, 2010.

The bolt sizes used were M19 x 50 RC Lot # DHG60631 and the final torque value established was 346 N-m.

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

Segment 9EE (Cable Tray Structure)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Cable Tray Structures installed at Bottom Panel T-Ribs at North and South Side between Panel Points (PP) 82 to PP 83 for PP 84.5 to PP 85 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 Notification No. 00468 dated August 31, 2010.

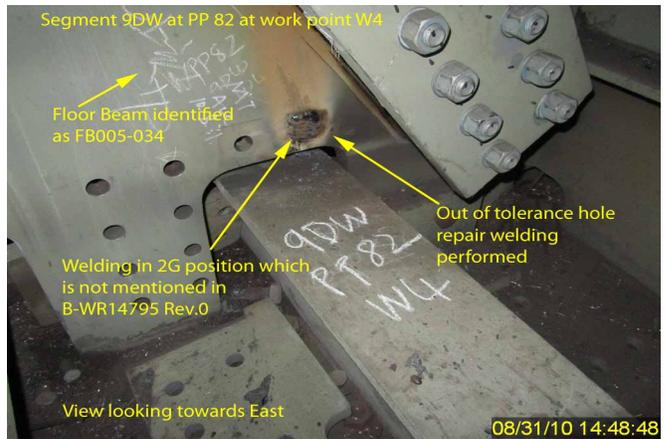
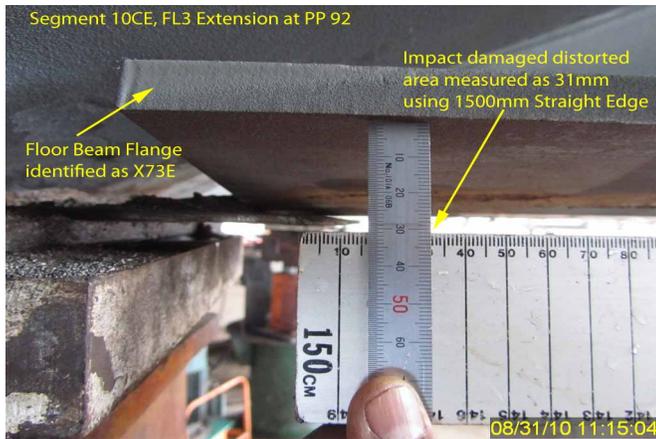
The bolt sizes used were M19 x 50 RC Lot # DHG60631 and the final torque value established was 346 N-m.

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

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

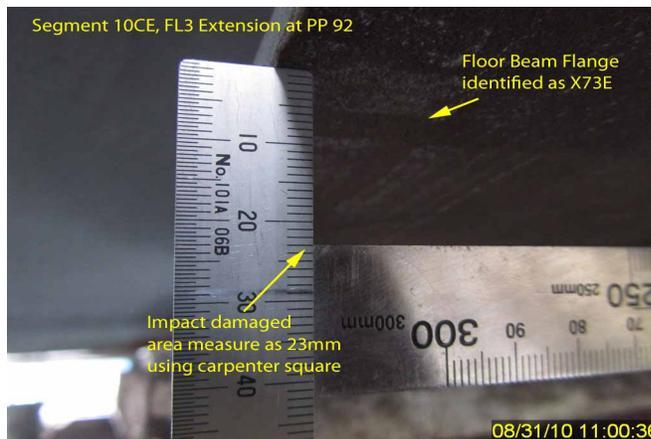
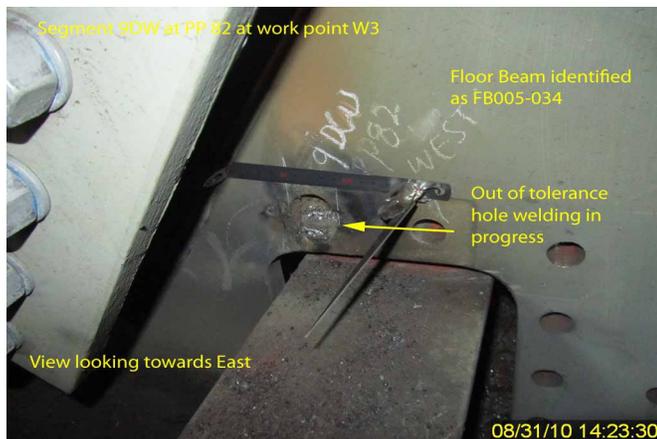
WELDING INSPECTION REPORT

(Continued Page 5 of 6)



WELDING INSPECTION REPORT

(Continued Page 6 of 6)



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