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 #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-021780
Date Inspected: 15-Mar-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
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 12CW (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 Point (PP) 116 to PP 116.5 for Segment 12CW. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00626 Dated March 15, 2011.

The bolt sizes used were M22 x 65 RC Lot # DHGM220112 and the final torque value established was 343 N-m.

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 bolt sizes used were M22 x 80 RC Lot # DHGM220118 and the final torque value established was 467 N-m.

The Manual Torque wrench used was Serial No. XO2-676.

Please reference the pictures attached for more comprehensive details.

Segment 12CW (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 12CW between Panel Point (PP) 116 to PP 116.5 at the following locations:

Work Point W6 towards Work Point W4 (Side Panel Cross Beam Side) total 16 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 16 T-Ribs.

The QA Inspector measured the Vertical Offset using 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 12AE (Floor Beam Flatness after Heat Straightening)

This QA Inspector performed Floor Beam flatness check along with ABF QA Inspector for the Segment 12AE at Panel Points (PP) 110, PP 111 and PP 112 at the following locations after heat straightening:

The Floor Beam flatness was verified and measured at the Cross Beam (CB) side and Bike Path (BK) side at Panel Points (PP) 110, PP 111 and PP 112. The QA Inspector measured the Floor Beam flatness using 1500mm 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 12CE (Floor Beam Flatness after Heat Straightening)

This QA Inspector performed Floor Beam flatness check along with ABF QA Inspector for the Segment 12CE at Panel Point (PP) 115 at the following locations after heat straightening:

The Floor Beam flatness was verified and measured at the Cross Beam (CB) side and Bike Path (BK) side at Panel Point (PP) 115. The QA Inspector measured the Floor Beam flatness using 1500mm 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.

Traveler Rails at Bay # 10

This QA Inspector performed Dimension Control Inspection on the Traveler Rails 20TR2-030 for the following measurements. ZPMC QC Mr. Jiang Xiao Bo and ABF QA Inspector Mr. Yang Yi Heng was present during the course of Inspection.

Traveler Rails Thickness at typical section.

Traveler Rails Flange width at typical section.

Traveler Rails Depth at typical section.

Traveler Rails Flange curl at typical section.

Traveler Rails Traveler Rail length.

Traveler Rails Sweep.

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 12BW (Full Height Diaphragm)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The weld joint was designated as Seg3006S-035. The welder identification was 046709 and was observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-345-SMAW-2G(2F)-Repair-FCM-1. The piece mark was identified as full height Longitudinal Diaphragm web to Bottom Panel hold back weld at work point W3. ZPMC performed repair welding in accordance with Welding Repair Report BWR-20338.

Please reference the pictures attached for more comprehensive details.

Segment 12CW (Full Height Diaphragm)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The weld joint was designated as Seg3006T-035. The welder identification was 046709 and was observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-345-SMAW-2G(2F)-Repair-FCM-1. The piece mark was identified as full height Longitudinal Diaphragm web to Bottom Panel hold back weld at work point W3. ZPMC performed repair welding in accordance with Welding Repair Report BWR-20338.

Segment 12CW (Floor Beam to Stiffener weld)

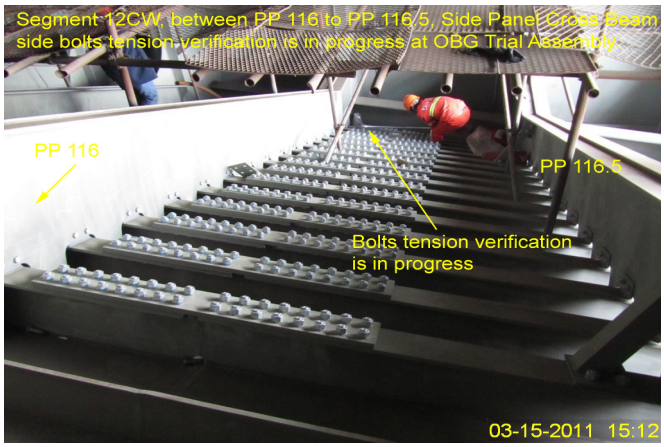
WELDING INSPECTION REPORT

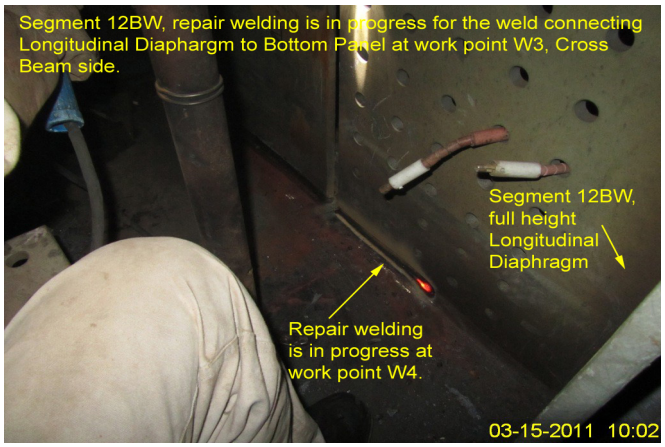
(Continued Page 4 of 5)

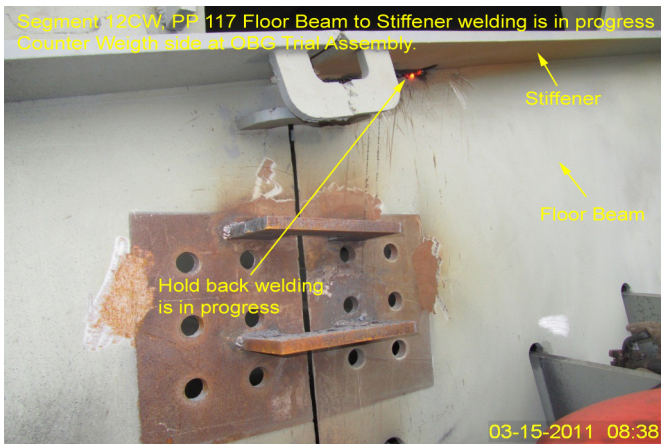
This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Fillet weld. The weld joint was designated as CA3010E-285/286. The welder identification was 057333 and observed welding in the 4F (Overhead) position using approved Welding Procedure Specification WPS-B-P-2114-FCM-1. The piece mark was identified as weld connecting the Floor Beam to the Stiffeners, Counter Weight side.

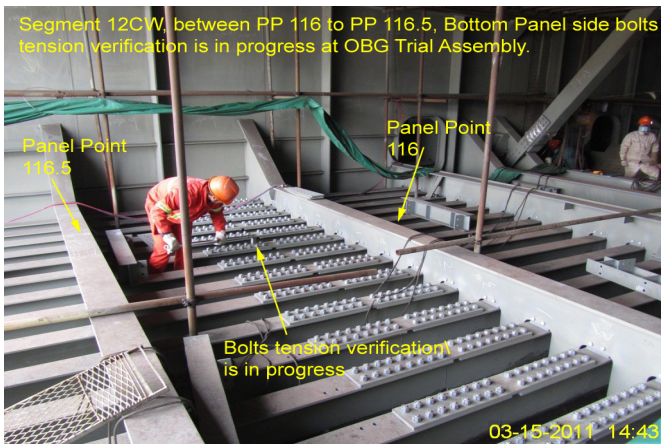
Please reference the pictures attached for more comprehensive details.

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



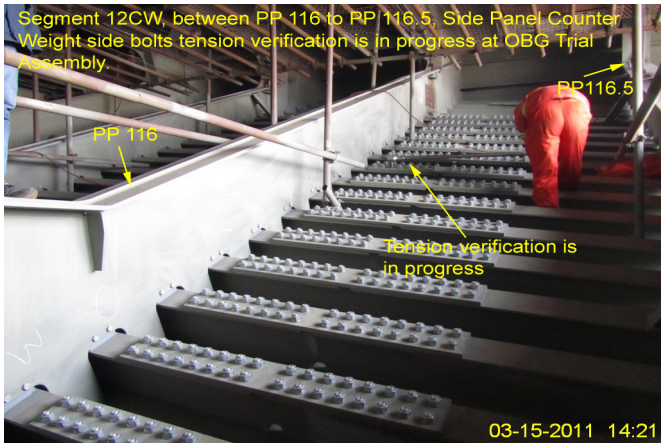






WELDING INSPECTION REPORT

(Continued Page 5 of 5)



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