

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022585**Date Inspected:** 15-Apr-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), Changxing Island **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 13BW to Segment 13CW (U-Rib to U-Rib)

This QA Inspector performed Dimension Control Inspection for measuring offset on the U-Rib to U-Rib from Counter Weight side towards Cross Beam side at a total of 30 locations on Segment 13BW to Segment 13CW between Panel Points (PP) 122 to PP 122.5 at the following locations:

The offset was measured within 50mm from the Deck Panel on U-Rib on the South and North side. The QA Inspector measured the 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 12CE (Triangular Plate)

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This QA Inspector witnessed final bolt tension verification on bolts connecting triangular plate connecting the stiffeners of Floor Beam and full height Longitudinal Diaphragm at elevations 1772 mm and at 3332mm from Bottom Panel at work point E4 (Cross Beam side) and at work point E3 (Bike Path side) at Panel Points (PP) 115 (east side), PP 115.2 (east and west side), PP 115.5 (east and west side), PP 116 (east and west side), PP 116.5 (east and west side) and 117 (east and west side) for Segment 12CE. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00652 Dated April 15, 2011.

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

The bolt sizes used were M22 x 85 RC Lot # DHGM220121 and the final torque value established was 393 N-m.

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

Please reference the pictures attached for more comprehensive details.

Segment 12AE to Segment 12BE (Longitudinal Diaphragm to Longitudinal Diaphragm)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the full height Longitudinal Diaphragm to Longitudinal Diaphragm between Panel Points (PP) 112.5 and PP 113 for Segment 12AE to Segment 12BE at work point E4, Cross Beam side and work point E3 Bike Path 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. 00652 dated April 15, 2011.

The bolt sizes used were M22 x 75 RC Lot # DHGM220034 and the final torque value established was 453 N-m.

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

Please reference the pictures attached for more comprehensive details.

Segment 13BW (Longitudinal Diaphragm to Deck Panel Diaphragm)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) weld. The weld joint was designated as DP3133-001-020. The welder identification was 066019 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-345-SMAW-3G(3F)-FCM-Repair-1. The piece mark was identified as the weld connecting the Longitudinal Diaphragm to Deck Panel diaphragm at work point W4 at PP 120.5. ZPMC performed repair welding in accordance with Welding Repair Report BWR-20528 dated April 15, 2011.

Please reference the pictures attached for more comprehensive details.

Segment 13BW to Segment 13CW (Deck Panel to Deck Panel at Transverse Splice)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete

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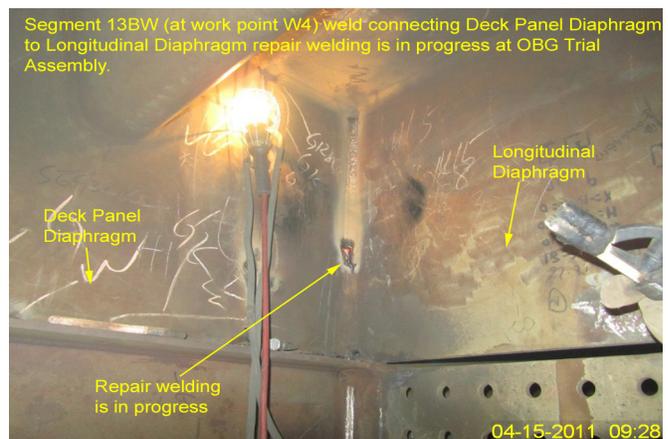
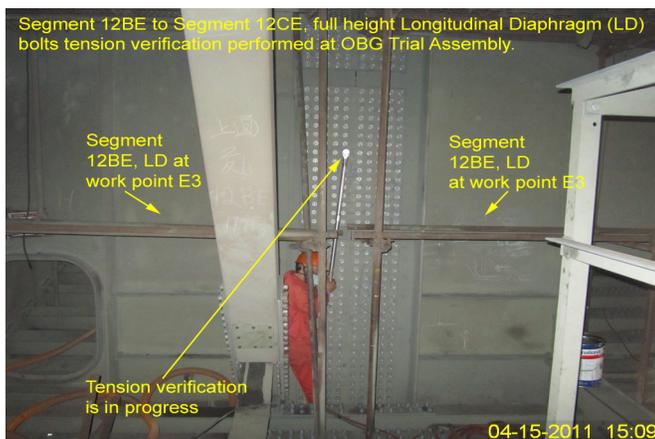
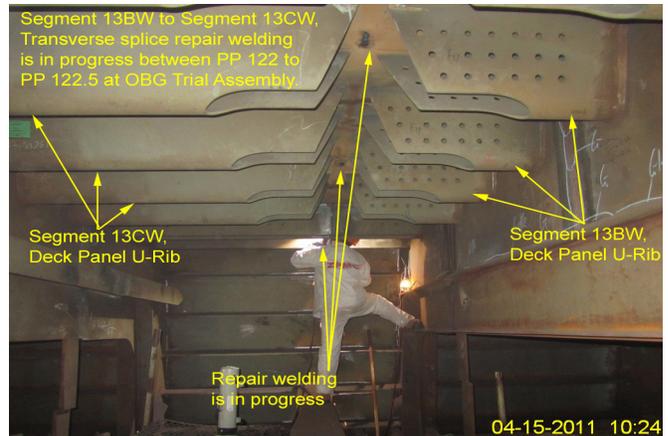
Joint Penetration (CJP) weld. The weld joint was designated as OBW13A-016. The welder identification was 045196 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G(4F)-FCM-Repair-1. The piece mark was identified as the weld connecting the Deck Panel to Deck Panel at Transverse Splice between PP 122 to PP 122.5. ZPMC performed repair welding in accordance with Welding Repair Report BWR-20634 dated April 15, 2011.

Please reference the pictures attached for more comprehensive details.

Bike Path 15A

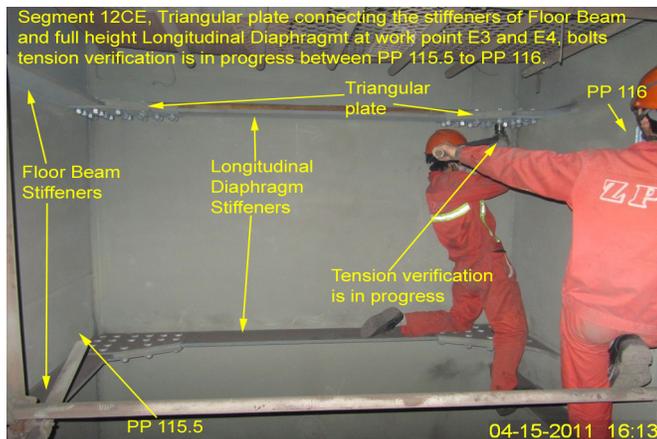
This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) weld. The weld joint was designated as BK015-001-012. The welder identification was 040367 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233-ESAB. The piece mark was identified as the weld connecting the Bike Path Flange to Web Plate.

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 15000422372, who represents the Office of Structural Materials for your project.

Inspected By: Math,Manjunath

Quality Assurance Inspector

Reviewed By: Miller,Mark

QA Reviewer