

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 #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022591**Date Inspected:** 17-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 12BE to Segment 13AE (U-Rib to U-Rib Dimensional Inspection)

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 39 locations on Segment 12CE to Segment 13AE (Field Splice) between Panel Points (PP) 117 to PP 117.5 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.

Bike Path at Bay # 8

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This QA Inspector performed Dimension Control Inspection on the Bike Path bottom plate for flatness check across the longitudinal butt weld. Flatness check was performed on following mentioned Bike Paths and Bike Path is identified as following. Inspection was performed against the Inspection Notification # 08841 at Bay # 8.

BK004A-062.

The QA Inspector measured the flatness using 600mm long straight edge across the Butt (CJP) weld and using 1500mm long straight edge between the stiffeners which are plug weld to bottom plate.

Observed flatness within the allowable tolerance.

The result of the inspection was informed to ZPMC QC Supervisor Mr. Liu Fawen, ABF Mr. Wang Zhong Yuan and Caltrans Lead Inspector Mr. Mark Miller and Mr. Hiranch Patel.

Traveler Rails at Bay # 10

This QA Inspector performed Dimension Control Inspection on the Traveler Rails 28TR1-001 and 25TR1-001 for the following measurements and observed measured dimension in compliance contact document. Inspection was performed against the Inspection Notification # 008837 at Bay # 10.

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. The result of the inspection was informed to ZPMC QC Mr. Sun Zi Wang, ABF QA Mr. Yang Yi Heng and Caltrans Lead Inspector Mr. Mark Miller.

Segment 12AE (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) 111 and PP 111.5 for Segment 12AE 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. 00654 dated April 17, 2011.

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The bolt sizes used were M24 x 75 RC Lot # DHGM240020 and the final torque value established was 600 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 12AE (Stiffener)

This QA Inspector observed the repair welding for the base metal by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) weld. The base metal repair was in progress for the stiffener removed area, Stiffener was installed connecting Edge Panel and Floor Beam.

The stiffener was removed as it was in-way of the hole drilled for suspender bracket, restricting the installation of bolts assembly at PP 110 for Segment 12AE (East and West side), Bike Path side.

The welder identification was 068924 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-345-SMAW-3G (3F)-FCM-Repair-1.

Observed ZPMC performing repair welding in accordance with Welding Repair Report BWR-20460.

OBG Cantilever (BK016A for Segment 12CE)

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The weld joint was designated as BK016-001-015. The welder identification was 040367 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233-ESAB. The piece mark was identified as the flange plate connecting the cantilever web plate. Cantilever identified as BK016A and will be installed at PP 115 at Segment 12CE, Bike Path side.

Please reference the pictures attached for more comprehensive details.

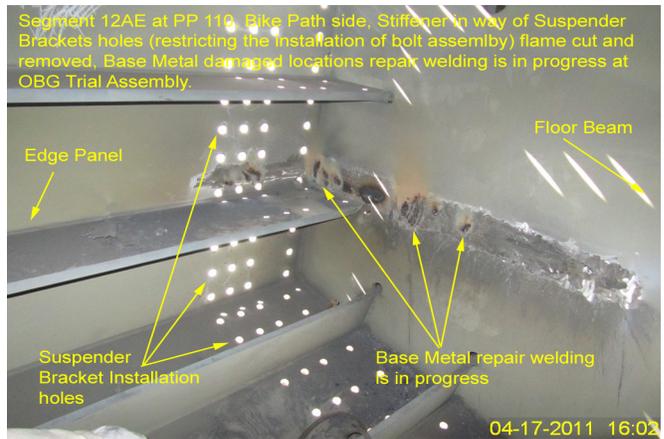
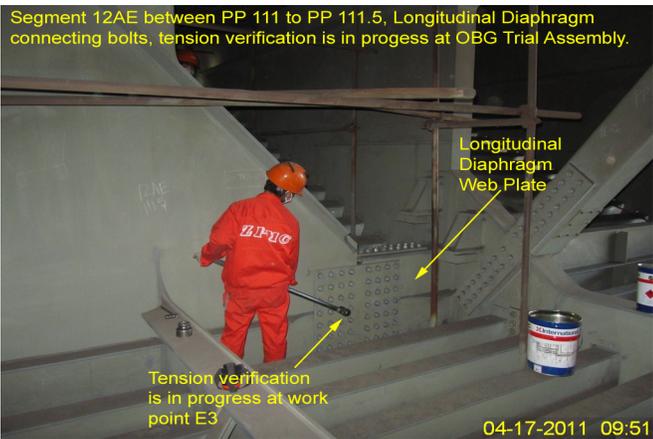
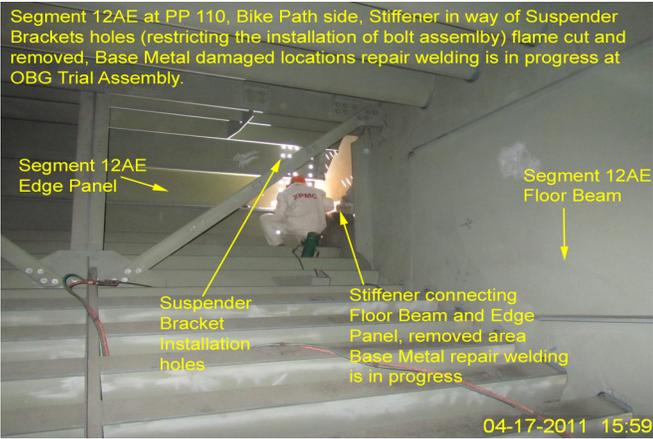
OBG Cantilever (BK016A for Segment 12CE)

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The weld joint was designated as BK016B-001-003. The welder identification was 052763 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233-ESAB. The piece mark was identified as the flange plate connecting the cantilever web plate. Cantilever identified as BK016A and will be installed at PP 115 at Segment 12CE, Bike Path side.

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.

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| Inspected By: | Math,Manjunath | Quality Assurance Inspector |
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| Reviewed By: | Miller,Mark | QA Reviewer |
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