

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018446**Date Inspected:** 05-Dec-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:** 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 11DW to Segment 11EW (Skin Flatness)

This QA Inspector performed Joint Inspection along with Caltrans QA Inspector Mr. Murugan Manikandan to check the skin flatness between Segment 11DW to Segment 11EW between Panel Points (PP) 106 and PP 107 at the following locations:

The skin flatness was measured on North side (Counter Weight Side at B1 and B2 locations) and South side (Cross Beam side at B3 and B4 locations) at 100mm from the weld connecting Bottom Panel to Side Panel using 5000mm string line to verify overall flatness. The straight edges of 600mm and 630 mm of length were also used to measure the localized flatness.

The skin flatness was measured on North side (Counter Weight side at T1 location) and South side (Cross Beam side at T2 location) at 100mm from the weld connecting Deck Panel to Edge Panel using 5000mm string line to verify overall flatness. The straight edges of 600mm and 630 mm length were also used to measure the localized

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flatness.

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 # 10

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 are identified as:

BK004A-028

The QA Inspector measured the flatness using 600mm long straight edge across the Butt (CJP) weld and using 1500mm long straight edge, measured flatness between the stiffeners.

Observed flatness within the allowable tolerance.

The results of the inspection were informed to Caltrans Lead Inspector Mr. Mark Miller and Mr. Hiranch Patel.

Bike Path at Bay # 11

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 are identified as:

BK004A-022

The QA Inspector measured the flatness using 600mm long straight edge across the Butt (CJP) weld and using 1500mm long straight edge, measured flatness between the stiffeners.

Observed flatness within the allowable tolerance.

The results of the inspection were informed to Caltrans Lead Inspector Mr. Mark Miller and Mr. Hiranch Patel.

Segment 11EE (Re-entrant Corner)

This QA Inspector performed Dimension Control Inspection for the Segment 11EE at the following locations:

The re-entrant corners at the Floor Beam vertical flange radius were verified and measured on Panel Points (PP) 107 at the Cross Beam and Bike Path side, west side of Floor Beam. The QA Inspector measured the radius of re-entrant corner using a pre-cut 25mm and 50mm template.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the

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Lead Inspector and Engineer for review and disposition.

Segment 11BE

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 SSD27-099-032. The welder identification was 044515 and was observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-345-SMAW-2G(2F)-FCM-Repair-1. The piece mark was identified as partial height diaphragm. ZPMC performed repair welding in accordance with Welding Repair Report B-WR-18015.

Please reference the pictures attached for more comprehensive details.

Segment 11BE

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 SSD27-099-137. The welder identification was 044515 and was 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 partial height diaphragm. ZPMC performed repair welding in accordance with Welding Repair Report B-WR-18013.

Segment 11DW

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 SSD25-PP105-103. The welder identification was 046709 and was observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-345-SMAW-2G(2F)-FCM-Repair-1. The piece mark was identified as partial height diaphragm. ZPMC performed repair welding in accordance with Welding Repair Report B-WR-18301.

Segment 11DW

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 SSD25-PP105-032. The welder identification was 046709 and was observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-345-SMAW-2G(2F)-FCM-Repair-1. The piece mark was identified as partial height diaphragm. ZPMC performed repair welding in accordance with Welding Repair Report B-WR-18307.

Segment 11EE

This QA Inspector observed the in process fillet welding operation by the Flux Cored Arc Welding (FCAW) process. The weld joint was designated as SP705-001-021/022. The welder identification was 040367 and was observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2132-ESAB. The piece mark was identified as the Side Panel, I-Ribs hold back weld, Cross Beam side.

Segment 12AE

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This QA Inspector observed the in process fillet welding operation by the Flux Cored Arc Welding (FCAW) process. The weld joint was designated as SP3001-001-083/084. The welder identification was 040367 and was observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2132-ESAB. The piece mark was identified as the Side Panel, I-Ribs hold back weld, Cross Beam side.

Segment 11EW (Corner Assembly hold back weld)

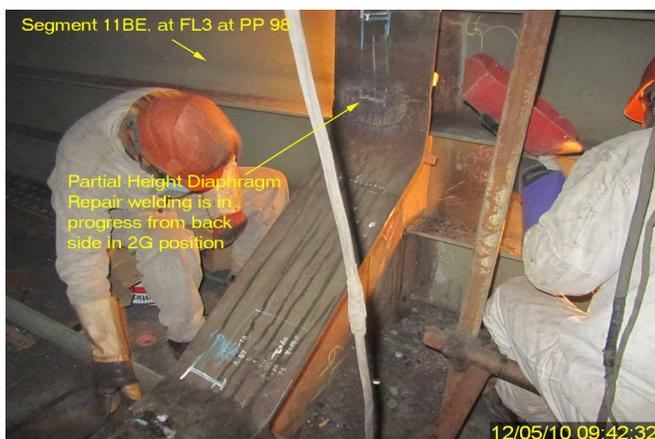
This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA091-006. The welder identification was 040611 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-Tc-U4b-FCM-1. The piece mark was identified as Side Panel Corner Assembly to Edge Panel at work point W1.

Segment 12AW (Corner Assembly hold back weld)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA3006-001. The welder identification was 040611 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-Tc-U4b-FCM-1. The piece mark was identified as Side Panel Corner Assembly to Edge Panel at work point W1.

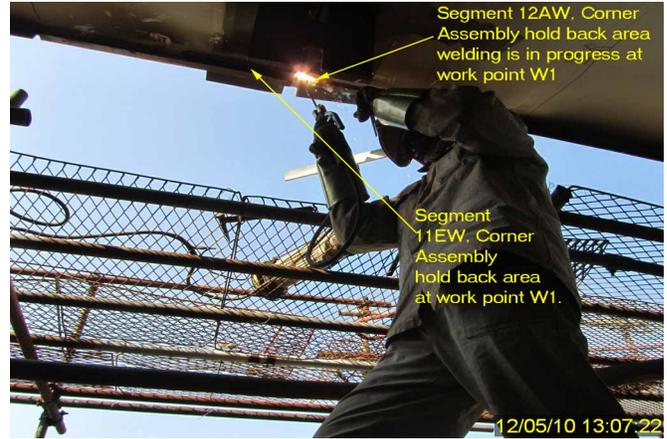
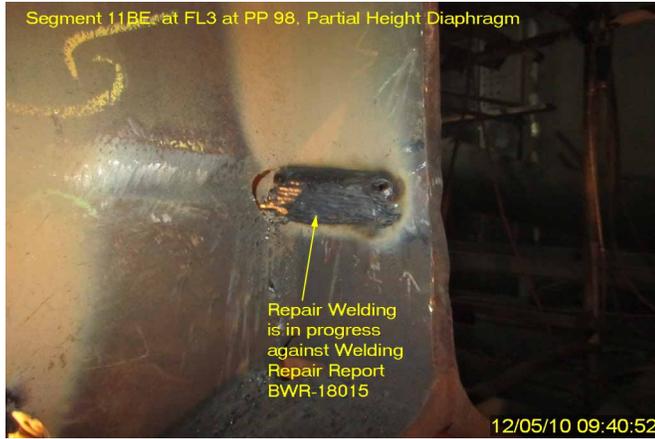
Please reference the pictures attached for more comprehensive details.

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



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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 150000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Dsouza,Christopher	QA Reviewer
