

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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017836**Date Inspected:** 06-Nov-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

Tower Lift 3 East/West/South/North

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Tower Lift 3 East, Lift 3 West, Lift 3 South and Lift 3 North. Bolts are installed to fill the mis-drilled hole at diaphragm. The M22 – 10.9S bolts were installed as approved Request for Inspection (RFI) number ABF-RFI-001996R01 Dated January 08, 2010. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00542 Dated November 06, 2010. Diaphragm bolts are installed at elevations 92 meter, 95 meter, 102 meter, 105 meter and 111 meter.

Bolt sizes used were M22 x 110; final torque required was 500 N-m.

The Manual Torque wrench used was Serial No. XO2-74.

Tower Lift 3 East/West/South/North

WELDING INSPECTION REPORT

(Continued Page 2 of 4)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Tower Lift 3 East, Lift 3 West, Lift 3 South and Lift 4 North. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00542 Dated November 06, 2010. Man Access Door bolts are installed at elevation 85meters.

Bolt sizes used were M24 x 180 RC Set# DHGM240070 and final torque required was 610 N-m.

The Manual Torque wrench used was Serial No. XO2-74.

Segment 11BE to Segment 11CE (Transverse Splice T-Ribs)

This QA Inspector performed Dimension Control Inspection along with Caltrans QA Inspector Mr. Murugan Manikandan on the Transverse Splice T-Ribs to T-Ribs for the Segment 11BE to Segment 11CE between Panel Point (PP) 100 to PP 101 at the following locations:

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 11CW to Segment 11DW

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 OBW11C-002. The welder identification was 046709 and 044551 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the Side Panel, transverse splice Counter Weight side.

Please reference the pictures attached for more comprehensive details.

Segment 11CW (Corner Assembly hold back weld)

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 CA085-005. The welder identification was 040609 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as Edge Panel to Deck Panel hold back weld at work

WELDING INSPECTION REPORT

(Continued Page 3 of 4)

point W2.

Segment 11DW (Corner Assembly hold back weld)

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 CA089-001. The welder identification was 040609 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as Edge Panel to Deck Panel hold back weld at work point W2.

Segment 11DW

This QA Inspector observed the in process fillet welding operation by the Flux Cored Arc Welding (FCAW) process. The Weld joint was designated as SP116-001-029/030 and SP116-001-041/042. The welder identification was 049220 and was observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2132. The piece mark was identified as the Side Panel, T-Ribs hold back weld at Counter Weight side.

Segment 11EW

This QA Inspector observed the in process fillet welding operation by the Flux Cored Arc Welding (FCAW) process. The Weld joint was designated as SP117-001-001/002 and SP116-001-011/012. The welder identification was 049220 and was observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2132. The piece mark was identified as the Side Panel, T-Ribs hold back weld at Counter Weight side.

Segment 11CE to Segment 11DE (Transverse Splice at Side Panel)

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 OBW11C-002. The welder identification was 044473 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2133T. The piece mark was identified as the Side Panel Cross Beam side.

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

WELDING INSPECTION REPORT

(Continued Page 4 of 4)



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
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Reviewed By:	Dsouza,Christopher	QA Reviewer
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