

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-019301**Date Inspected:** 16-Jan-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)**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

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-032.

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. Xu Le Feng, ABF Mr. Man Kam Hon and

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Caltrans Lead Inspector Mr. Mark Miller and Mr. Hiranch Patel.

Tower Grillage (Lift 5) – East, West, South and North

This QA Inspector witnessed final bolt tension verification on bolts connecting the Angles to the Tower Grillage East, West, South and North Transverse and Longitudinal Stiffeners at the Bottom Face. Inspected the bolt tensioning on a random basis. Inspection was performed against the ZPMC QA request for tension verification and as per the directive of Caltrans Lead Inspector Mr. William Clifford.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300032 and the final torque value established was 1673 N-m.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300033 and the final torque value established was 1553 N-m.

The bolt sizes used were M30 x 210 RC Lot # DH4DM300034 and the final torque value established was 1540 N-m.

The bolt sizes used were M30 x 230 RC Lot # DH4DM300035 and the final torque value established was 1446 N-m.

The bolt sizes used were M27 x 210 RC Lot # DH4DM270001 and the final torque value established was 847 N-m.

The bolt sizes used were M27 x 160 RC Lot # DHGM270022 and the final torque value established was 873 N-m.

The bolt sizes used were M27 x 130 RC Lot # DHGM270008 and the final torque value established was 887 N-m.

The bolt sizes used were M27 x 120 RC Lot # DHGM270020 and the final torque value established was 847 N-m.

The Manual Torque wrench used was Serial No. XO2-747.

Note: Bolts tension was observed not complying the requirements thus informed the ZPMC QA Mr. Zhang Jia Di and in-turn the inspection was postponed till tomorrow 08:00 Hrs.

Segment 12BW to Segment 12CW (Transverse Splice 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 OBE12E-002. The welder identification was 041713 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 weld, Cross Beam side.

Please reference the pictures attached for more comprehensive details.

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Segment 12BW to Segment 12CW (Transverse Splice 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 OBE12E-003. The welder identification was 040611 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 Corner Assembly, Transverse Splice weld, Cross Beam side.

Segment 12BW to Segment 12CW (Transverse Splice 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 OBW12C-001. The welder identification was 041713 and 040611 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 Bottom Panel Transverse Splice weld.

Segment 12CE (Deck Panel I-Rib Stiffeners, hold back weld)

This QA Inspector observed the in process fillet welding by Shielded Metal Arc Welding (SMAW) process. The Weld joint was designated as DP3023-001-011/012. The welder identification was 040378 and observed welding in the 4F (Overhead) position using approved Welding Procedure Specification WPS-B-T-4114-1. The piece mark was identified as Deck Panel I-Rib hold back weld, Cross Beam side.

Segment 12BW to Segment 12CW (T- Rib Splice 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 BP3024-001-037/038. The welder identification was 057333 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-P-2213-B-U2-FCM-1. The piece mark was identified as the Bottom Panel, T-Ribs at transverse splice Bike Path side.

Segment 12BW (Full Height Diaphragm)

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 Seg3005M-090. The welder identification was 046704 and was observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-B-P-2212-Tc-U4b-FCM-1. The piece mark was identified as full height Longitudinal Diaphragm web to Bottom Panel hold back weld at work point W3.

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
