DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-018226
Date Inspected: 20-Nov-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC)

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name: Li Yang and Zhu Zhong Hai

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

CWI Present: ☑ Yes ☐ No

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 11BW (Lower Chevron)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Lower Chevron, Upper Chevron, X3D Bracket connected to floor beam flange and to the splice plate and H-Beam connecting the floor beam and splice plate at Panel Point (PP) 99 for Segment 11BW at Counter Weight and Cross Beam side. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00556 Dated November 20, 2010.

Bolt sizes used were M22 x 65 RC Set# DHGM220105 and final torque required was 690 N-m.

Bolt sizes used were M22 x 70 RC Set# DHGM220038 and final torque required was 480 N-m.

Bolt sizes used were M22 x 75 RC Set# DHGM220034 and final torque required was 453 N-m.

Bolt sizes used were M22 x 80 RC Set# DHGM220094 and final torque required was 470 N-m.

The Manual Torque wrench used was Serial No. XO2-776.

Please reference the pictures attached for more comprehensive details.

Segment 11BW (Connection Plates)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the T-Rib connections plates at Bottom Panel at the Panel Points (PP) 100 for Segment 11BW, T-Rib identified as 12th from the work point W4 towards work point W3. 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. 00556 dated November 20, 2010.

The bolt sizes used were M16 x 45 RC Lot # DHGM160021 and the final torque value established was 180 N-m.

The Manual Torque wrench used was Serial No. XO2-776.

Segment 11DW (Corner Assembly hold back weld)

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 CA089-005. The welder identification was 046709 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 Edge Panel to Side Panel at hold back weld at work point W1.

Segment 11EW (Corner Assembly hold back weld)

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 CA091-001. The welder identification was 046709 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 Edge Panel to Side Panel at hold back weld at work point W1.

Segment 11CW (Counter Weight connection plate)

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 OBW11A-021. The welder identification was 044551 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 the Counter Weight connection plate.

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 OBW11A-023. The welder identification was 040611 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 counter weight connection plate at work point W2. ZPMC performed repair welding in accordance with Welding Repair Report B-WR-17274.

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 OBW11A-024. The welder identification was 040611 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-1G(1F)-FCM-Repair-1. The piece mark was identified as counter weight connection plate at work point W2. ZPMC performed repair welding in accordance with Welding Repair Report B-WR-17275.

Bottom Flange- Runner Blade Plate

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as SSD016-PP98-94. The welder identification was 044515 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 the Bottom Flange- Runner Blade Plate, piece mark identified as X24B.

Bottom Flange- Runner Blade Plate

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as SSD016-PP100-93. The welder identification was 044515 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 the Bottom Flange- Runner Blade Plate, piece mark identified as X24B.

Bottom Flange- Runner Blade Plate

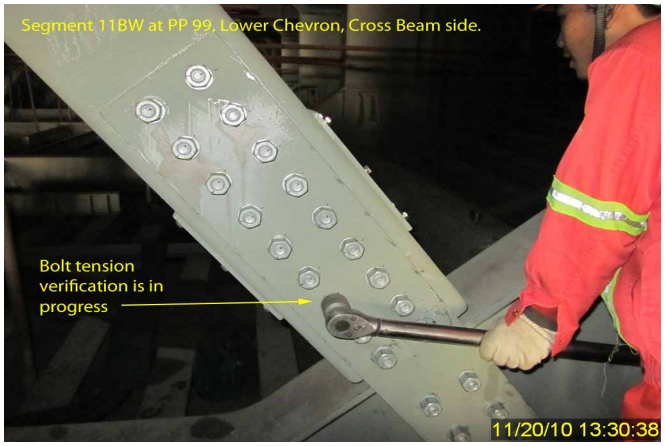
This QA Inspector observed the in-process welding by Shielded Metal Arc Welding Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as SSD018-PP104-94. The welder identification was 040320 and was observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-B-P-2212-Tc-U4b-FCM-1. The piece mark was identified as the Bottom Flange- Runner Blade Plate, piece mark identified as X24B.

Bottom Flange- Runner Blade Plate

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as SSD018-PP106-93. The welder identification was 040320 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 the Bottom

Flange- Runner Blade Plate, piece mark identified as X24B.

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



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