

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 #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-010577**Date Inspected:** 25-Nov-2009**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:** Xu Yumin**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 Trail Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, 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) Assembly Area

Segment 1AE

This Quality Assurance (QA) Inspector witnessed final tension verification for Longitudinal Diaphragm to Longitudinal Diaphragm at Elevation 4750mm from Bottom Panel between Panel Point (PP) 8.5 to PP 9 for Segment 1AE Cross Beam and Bike Path Side. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used were M27 x 120 RC Set# DHGM270020 and final torque required is 847 N-m.

Bolt sizes used were M27 x 140 RC Set# DHGM270021 and final torque required is 853 N-m.

Manual Torque wrench is been used with Sr. No. XO2 - 675.

Lift 2 West

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This Quality Assurance (QA) Inspector witnessed final tension verification for Longitudinal Diaphragm to Longitudinal Diaphragm between Panel Point (PP) 16 to PP 17 for Segment Lift 2 West Cross Beam and Counter Weight. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used were M24 x 70 RC Set# DHGM240010 and final torque required is 560 N-m.

Bolt sizes used were M24 x 95 RC Set# DHGM240021 and final torque required is 540 N-m.

Manual Torque wrench is been used with Sr. No. XO2 - 666.

Signed Off Green Tag's

This Quality Assurance (QA) Inspector witnessed final tension verification for following depicted locations. Inspected 10% on a random basis and found the tension to be in general compliance and thus signed off the Green Tags.

At Segment 5BW at Panel Point 33(South) for Lower Chevron Brace and Bolt Size used was M22 x 75 RC Set# DHGM220005 and final torque required was 473 N-m and Green Tag No. 441.

At Segment 5BW at Panel Point 33(South) for Lower Chevron Brace and Bolt Size used was M22 x 65 RC Set# DHGM220021 and final torque required was Turn of Nut to 180 Degrees and Green Tag No. 442.

At Segment 1AW at Panel Point 10 for Traveler Rail Bracket (Side Plate Location) and Bolt Size used was M22 x 100 RC Set# DHGM220049 and final torque required was 493 N-m and Green Tag No. 443.

At Segment 1AW at Panel Point 10, 11 and 12 for Traveler Rail Bracket (Side Plate Location) and Bolt Size used was M22 x 120 RC Set# DHGM220051 and final torque required was 433 N-m and Green Tag No. 444.

At Segment 1AW at Panel Point 10, 11 and 12 for Traveler Rail Bracket (Side Plate Location) and Bolt Size used was M20 x 80 RC Set# DHGM200003 and final torque required was 346 N-m and Green Tag No. 445.

At Segment 1AW at Panel Point 10, 11 and 12 for Traveler Rail Bracket (Side Plate Location) and Bolt Size used was M20 x 160 RC Set# DHGM200006 and final torque required was 340 N-m and Green Tag No. 446.

At Segment 1AW at Panel Point 10 for Traveler Rail Bracket (Side Plate Location) and Bolt Size used was M22 x 130 RC Set# DHGM220055 and final torque required was 513 N-m and Green Tag No. 447.

At Segment 1AW at Panel Point 11 and 12 for Traveler Rail Bracket (Side Plate Location) and Bolt Size used was M22 x 90 RC Set# DHGM220048 and final torque required was 500 N-m and Green Tag No. 448.

Lift 6 West

This QA Inspector Inspected the Skin flatness at the weld junction connecting the Bottom Panel to the Side Panel

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for Bike Path and Cross Beam side for Segment 6AE, 6BE and 6CE between Panel Point (PP) 37 to 43. Noticed at 1mm difference in flatness.

Segment 1AAW to 1AW

This QA Inspector Inspected the Flatness of the Edge Panel Counter Weight Side for Segment 1AAW to 1AW and found 5mm difference in flatness and the inspection was performed jointly along with ZPMC QA Mr. Wang Lu against the Punch List No. 1654. The dimension cascaded down to the Team Leader for closing the Punch List.

Segment 6AE to 6BE

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Segment 6AE to 6BE Transverse Splice Weld at Bottom Panel. The weld joint number was identified as OBE6B-004. The welder is identified as 067942. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2214-B-U2-FCM-1. Noticed the parameter recorded by QC complies the WPS.

Segment 6BE

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Segment 6BE weld connecting Edge Panel to Deck Panel. The weld joint number was identified as CA014-001. The welder is identified as 066261. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2212-Tc-U4b-FCM. Noticed the parameter recorded by QC complies the WPS.

Segment 6BE

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Segment 6BE weld connecting Edge Panel to Deck Panel. The weld joint number was identified as CA014-002. The welder is identified as 066261. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2212-Tc-U4b-FCM. Noticed the parameter recorded by QC complies the WPS.

Segment 6AE

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Segment 6AE weld connecting Edge Panel to Deck Panel. The weld joint number was identified as SEG028-043. The welder is identified as 067942. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2212-Tc-U4b-FCM. Noticed the parameter recorded by QC complies the WPS.

Segment 6AE

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for

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Segment 6AE weld connecting Edge Panel to Deck Panel. The weld joint number was identified as SEG028B-028. The welder is identified as 066236. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2212-Tc-U4b-FCM. Noticed the parameter recorded by QC complies the WPS.

Segment 5CE

This QA Inspector observed ZPMC personnel performing Carbon Arc Gouging to the weld connecting Longitudinal Diaphragm to Floor at PP 36 for Segment 5CE Bike Path side.

Segment 5CE

This QA Inspector observed ZPMC personnel performing Carbon Arc Gouging to the weld connecting Longitudinal Diaphragm to Floor at PP 35 for Segment 5CE Cross Beam side.

Segment 6BW

This QA Inspector observed ZPMC personnel had released the Hydraulic Jack which was standing on Saddle to support the Segment 6BW W3 Location. Noticed distortion at the Bottom Panel measured the distortion and found to be 4.3 mm to 4.5mm.

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

Summary of Conversations:

No relevant conversations.

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

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