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 #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-010554
Date Inspected: 28-Nov-2009

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

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

CWI Name: Li Yang

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ 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 1AW

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) 9 to 9.5 and from PP 9.5 to PP 10 for Segment 1AW at Cross Beam and Counter Weight Bike Path Side. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used were M24 x 75 RC Set# DHGM240020 and final torque required is 600 N-m.

Bolt sizes used were M24 x 100 RC Set# DHGM240022 and final torque required is 527 N-m.

Bolt sizes used were M24 x 110 RC Set# DHGM240023 and final torque required is 523 N-m.

Bolt sizes used were M24 x 90 RC Set# DHGM240028 and final torque required is 540 N-m and

Bolt sizes used were M24 x 120 RC Set# DHGM240024 and final torque required is 553 N-m.

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

Segment 1AW

This Quality Assurance (QA) Inspector witnessed final tension verification for Longitudinal Diaphragm to Floor Beam (Triangle Section) between Panel Point (PP) 8.5, PP 9, PP 9.5 and at PP 10 for Segment 1AW Cross Beam and Counter Weight side. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used were M22 x 80 RC Set# DHGM220012 and final torque required is 427 N-m and

Bolt sizes used were M22 x 85 RC Set# DHGM220047 and final torque required is 427 N-m.

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

Segment 1BW

This Quality Assurance (QA) Inspector witnessed final tension verification for Longitudinal Diaphragm to Floor Beam (Triangle Section) between Panel Point (PP) 10.5, PP 11, PP 11.5 and at PP 12 for Segment 1BW Cross Beam and Counter Weight side. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used were M22 x 80 RC Set# DHGM220012 and final torque required is 427 N-m and

Bolt sizes used were M22 x 85 RC Set# DHGM220047 and final torque required is 427 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 1AE between Panel Point 8.5 to 9 for Longitudinal Diaphragm Splice at Elevation 4750mm above BP (North and South) and Bolt Size used was M27 x 120 RC Set# DHGM270020 and final torque required was 847 N-m and Green Tag No. 450.

At Segment 1AE between Panel Point 8.5 to 9 for Longitudinal Diaphragm Splice at Elevation 4750mm above BP (North and South) and Bolt Size used was M27 x 140 RC Set# DHGM270020 and final torque required was 853 N-m and Green Tag No. 451.

At Segment 5BW and 5CW between Panel Point 34 to 36.5 for Corner Assembly Cross Brace (North and South) and Bolt Size used was M22 x 55 RC Set# DHGM220044 and final torque required was 473 N-m and Green Tag No. 452.

At Segment 5BW and 5CW between Panel Point 34 to 36.5 for Corner Assembly Cross Brace (North and South) and Bolt Size used was M22 x 85 RC Set# DHGM220047 and final torque required was 427 N-m and Green Tag No. 453.

At Segment 5BW and 5CW between Panel Point 34 to 36.5 for Corner Assembly Cross Brace (North and South) and Bolt Size used was M22 x 120 RC Set# DHGM220051 and final torque required was 433 N-m and Green Tag No. 454.

At Segment 5BW and 5CW between Panel Point 34 to 36.5 for Corner Assembly Cross Brace (North and South) and Bolt Size used was M24 x 60 RC Set# DHGM240014 and final torque required was 567 N-m and Green Tag No. 455.

At Segment 5BW and 5CW between Panel Point 34 to 36.5 for Corner Assembly Cross Brace (North and South) and Bolt Size used was M24 x 65 RC Set# DHGM240009 and final torque required was 567 N-m and Green Tag No. 456.

At Segment 5BW and 5CW between Panel Point 34 to 36.5 for Corner Assembly Cross Brace (North and South) and Bolt Size used was M24 x 80 RC Set# DHGM240011 and final torque required was 533 N-m and Green Tag No. 457.

At Segment 5BW and 5CW between Panel Point 34 to 36.5 for Corner Assembly Cross Brace and Bolt Size used was M24 x 95 RC Set# DHGM240021 and final torque required was 540 N-m and Green Tag No. 458.

At Segment 2AW and 2BW between Panel Point 16 and PP 17 for Longitudinal Diaphragm Splice (North and South) and Bolt Size used was M24 x 70 RC Set# DHGM240010 and final torque required was 560 N-m and Green Tag No. 459.

At Segment 2AW and 2BW between Panel Point 16 and PP 17 for Longitudinal Diaphragm Splice (North and South) and Bolt Size used was M24 x 95 RC Set# DHGM240021 and final torque required was 540 N-m and Green Tag No. 460.

Segment 1AW to 1BW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Segment 1AW to 1BW Bottom Panel UT rejected areas as per the ABF report No. UT-1W-017R1. The Y Datum is identified as 530mm, 3575mm, 5520mm, 570mm, 5750mm, 5760mm and 5960. The weld joint number was identified as OBW1A-008. The welder is identified as 068917. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-4G (4F)-FCM-Repair-1. Noticed the parameter recorded by QC complies the WPS.

Cantilever

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Cantilever. The weld joint number was identified as BK-001-020-005 and 007. The welder is identified as 220069. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i. e., WPS-B-T-2233-Tc-U4b-F and WPS-B-T-2234-Tc-U4b-F. Noticed the parameter recorded by QC complies the WPS.

Cantilever

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Cantilever. The weld joint number was identified as BK-001-021-009. The welder is identified as 066258. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2214-Tc-U4b. Noticed the parameter recorded by QC complies the WPS.

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