

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-008796**Date Inspected:** 26-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Jia**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 day CALTRANS OSM Quality Assurance Inspector (QA) S. Manjunath. Math was present during the times noted above for observations relative to the work being performed.

Orthotropic Box Girder (OBG) Trial Assembly Areas

Lift 1 (East) Segment 1AE and 1BE

This Quality Assurance (QA) Inspector witnessed final tension verification for Angles connecting to Bottom Panel "I" Ribs to Floor Beam. Inspected 10% on a random basis and found the tension to be in general compliance. Witnessed bolts tension verification at PP 10.5, PP 11.5 and PP 12.5. Bolt sizes used were M22 x 55 RC Set# DHGM220001 and final torque required was 443 N-m; M22 x 65 RC Set# DHGM220033 and final Torque required is 470 N-m and M22 x 75 RC Set# DHGM200005 and final Torque required was 473 N-m. Manual torque wrench is been used with Sr. No. X02-578.

Segment 3AE

This Quality Assurance (QA) Inspector witnessed final tension verification for Lower Chevron CB side at PP 19 East side Splice Plate only and at PP 21 East and West Splice Plate. Inspected 10% on a random basis and found the tension to be in general compliance. Bolt sizes used were M22 x 75 RC Set# DHGM220005 and final Torque required was 473 N-m. Manual Torque wrench is been used with Sr. No. X02-578.

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Green Tag Signed Off

This Quality Assurance (QA) Inspector signed off the Green Tag for the Bolting Tension Verification. The following are details of reports.

1. Lower Chevron Brace (East Side of South Direction) for Segment 3AE between PP 21 Green Tag No. 272 and bolt sizes used are M22x90.
2. Lower Chevron Brace (East Side of South Direction) for Segment 3AE between PP 21 Green Tag No. 273 and bolt sizes used are M22x70.
3. Lower Chevron Brace (West Side of South Direction) for Segment 3AE between PP 21 Green Tag No. 273 and bolt sizes used are M22x70 and M22x75.
4. Lower Chevron Brace (South) for Segment 3AE between PP 19 (West Side) and PP 21 (East Side) Green Tag No. 275 and bolt sizes used are M22x65.
5. Longitudinal Stiffener to FB Stiffener (1800 mm above BP – North and South) for Segment 2AE between PP 13, 13.5, 14 and 14.5 Green Tag No. 276 and bolt sizes used are M22x80.
6. Longitudinal Stiffener to FB Stiffener (1800 mm above BP – North and South) for Segment 2AE between PP 13.5 Green Tag No. 277 and bolt sizes used is M22x85.
7. Traveller Rail Bracket for Segment 2AW between PP 16 Green Tag No. 278 and bolt sizes used are M22x90.
8. Traveller Rail Bracket for Segment 2AW between PP 16 Green Tag No. 279 and bolt sizes used are M22x120.
9. Floor Beam Brace – X321 (Bottom Panel and Side Panel Location North and South) for Segment 1BE between PP 10.5, 11.5 and 12.5 Green Tag No. 280 and bolt sizes used are M22x55.
10. Floor Beam Brace – X321 (Side Panel Location North and South) for Segment 1BE between PP 10.5, 11.5 and 12.5 Green Tag No. 281 and bolt sizes used are M22x65.
11. Floor Beam Brace – X321 (Bottom Panel Location) for Segment 1BE between PP 10.5, 11.5 and 12.5 Green Tag No. 282 and bolt sizes used are M22x75.

1AW

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Bottom deck panel I- Stiffeners. The weld joint no. SSD34-PP 8.5- 59, 61, 63, 65, 71, 73 and 75 welding was in progress. The welder is identified as 202841. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2233-Tc-U5-F and welding being carried out against Critical Welding Repair BCWR-667 as there was 5mm gap between Floor Beam to Bottom Panel.

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1AW

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Bottom Deck Panel I- Stiffeners. The weld joint no. SSD34A-PP 8.5- 71, 73, 75, 79 and 81 welding was in progress. The welder is identified as 202841. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2233-Tc-U5-F and welding being carried out against Critical Welding Repair BCWR-667 as there was 5mm gap between Floor Beam to Bottom Panel.

1AW

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Floor Beam flange to the Deck Panel Diaphragm. The weld joint no. SSD34-PP 8.5- 003 and SSD34A- Pp 8.5 – 003 welding was in progress. The welder is identified as 220068. In process FCAW welding appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2233-Tc-U5-F.

5BE to 5CE

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) with ceramic backing at segment to segment transverse weld connecting segment 5BE to 5CE. The weld joint no. OBE 5A-008 welding was in progress. The welder is identified as 053742 and 053609. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2231T-1.

5BW to 5CW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for deck panel I- Stiffeners. The weld joint no. DP-621-001-23; 24 and 25 and Weld Joint No. DP-627-001-23; 24 and 25 welding was in progress after back gouging. The welder is identified as 066268 and 068091. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-3213-B-U3b.

5BW to 5CW

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Side panel hold back areas. The weld joint no. SP-472-001- 13/14; 11/12 and 9/10 welding was in progress. The welder is identified as 220067. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2132.

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

Summary of Conversations:

No relevant conversations.

Comments

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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
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Reviewed By:	Carreon,Albert	QA Reviewer
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