

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-009025**Date Inspected:** 16-Sep-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 Jha and 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 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

Segment 3AW

This Quality Assurance (QA) Inspector witnessed final tension verification against Bolting Inspection Notification No. 00156 for Cable Tray between PP 20 to PP 21 North and South side for Segment 3AW. Inspected 10% on a random basis and found the tension to be in general compliance. Bolt sizes used were $\frac{3}{4}$ x 2 $\frac{1}{4}$ RC Set# DHG60571 and final torque required is 393 N-m. Manual Torque wrench is been used with Sr. No. X02-118.

Lift 3 West

This Quality Assurance (QA) Inspector witnessed final tension verification against Bolting Inspection Notification No. 00157 for CB2 Diaphragm to Side Panel between PP 20, PP 21 and PP 22 for Lift 3 West. Inspected 10% on a random basis and found the tension to be in general compliance. Bolt sizes used were M 24 x 65 RC Set# DHGM240009 and final torque required is 567 N-m. Manual Torque wrench is been used with Sr. No. XQ2-578.

Lift 4 West

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This Quality Assurance (QA) Inspector witnessed final tension verification against Bolting Inspection Notification No. 00157 for CB3 Diaphragm to Side Panel between PP 26, PP 27 and PP 28 for Lift 4 West. Inspected 10% on a random basis and found the tension to be in general compliance. Bolt sizes used were M 24 x 65 RC Set# DHGM240009 and final torque required is 567 N-m. Manual Torque wrench is been used with Sr. No. XQ2-578.

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 4AE and 4BE between PP 25 to 26 Segment Splice to T-Stiffeners at Bottom Panel Location (East side of all Splices and west side of 8th and 10th Splice from CB side) and Bolt Size used was M22 x 70 RC Set# DHGM240004 and final torque required was 453 N-m and Green Tag No. 336.

At Segment 4AE between PP 24 South (West), 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. 337.

At Segment 4AE between PP 25 South (East & West), 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. 338.

At Segment 4AE between PP 25 South (East), Lower Chevron Brace and Bolt Size used was M22 x 70 RC Set# DHGM220004 and final torque required was 453 N-m and Green Tag No. 339.

At Segment 4BE between PP 28 North (East), 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. 340.

At Segment 4AE and 4BE between PP 24 South (West), PP 25 South (East and West) and at PP 28 North (East) Lower Chevron Brace and Bolt Size used was M22 x 65 RC Set# DHGM220033 and Rotation of Nut at 180 deg., being formed and Green Tag No. 341.

At Segment 3AW and 3BW between PP 22 and PP 23 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. 343.

At Segment 3AW and 3BW between PP 20 and PP 22 Cable Tray Support (Angle Plate Location) and Bolt Size used was M ¾ x 2 ¼ RC Set# DHG60580 and final torque required was 340 N-m and Green Tag No. 344.

Segment 1AE to 1AAE

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Side Panel Bike Path Side for transverse weld excavated areas, excavation were being performed as rejectable indication were discovered during UT Test. The welding was being performed against the B-WR7492 Rev.0. The weld joint is identified as OBE1A-004. The welder is identified as 045196. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-1G

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(1F)-FCM-Repair-1.

Segment 1AE to 1AAE

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Deck Panel for transverse weld excavated areas, excavation were being performed as rejectable indication were discovered during UT Test. The welding was being performed against the B-WR7565 Rev.0. The weld joint is identified as OBE1-001. The welder is identified as 066413. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-1G (1F)-FCM-Repair-1.

CB4

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW). The weld joint is identified as CB201A-013 and 015. The welder was identified as 069493 and 037780. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2212-Tc-U4b-FCM-1.

CB4

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW). The weld joint is identified as Seg. 023-PP 33.5 – 173. The welder was 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-1.

Segment 1AE and 1AAE

This Quality Assurance (QA) Inspector observed at 1AE to 1AAE at Bike Path Location where Bottom Panel to Side Panel weld meets noticed 7mm offset when measured by 600 mm straight edge for the same 200x200mm area re-build and grinding was being performed.

Segment 1AE and 1AAE

This Quality Assurance (QA) Inspector observed at 1AE to 1AAE Cross Beam Side for Transverse Segment weld UT by ZPMC was being performed.

Segment 1AE and 1AAE

This Quality Assurance (QA) Inspector observed at 1AE to 1AAE Cross Beam Side for Transverse Segment weld UT by ZPMC was being performed.

Segment 1AW and 1BW

This Quality Assurance (QA) Inspector observed at 1AW to 1BW between PP 10 and PP 10.5 for Transverse Segment weld MT at Bottom Panel was being performed by ZPMC QC.

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1BW

This Quality Assurance (QA) Inspector observed at 1BW at PP 10.5 and PP 11.5 Cross Beam side Cope Hole radius grinding being performed.

Segment 1AW to 1AAW

This Quality Assurance (QA) Inspector observed at Segment 1AW to 1AAW Longitudinal Shear Diaphragm MT rejected area excavated and welding was being in progress.

Segment 1AAW

This Quality Assurance (QA) Inspector observed at 1AAW transverse welded stiffeners between Deck Panle I-Ribs flush smooth grinding being performed for fillet weld.

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:	Carreon,Albert	QA Reviewer
