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

Bay Area Branch
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Contract #: 04-0120F4
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-011841
Date Inspected: 02-Feb-2010

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:				**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 Trial 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) Trial Assembly Areas

Segment 6AW (Lower Chevron X3D Angle)

This Quality Assurance (QA) Inspector witnessed final Tension Verification Lower Chevron X3D Angles (North and South side) from Panel Point (PP) 37, PP 38, PP 39 and PP 40 for Segment 6AW. Inspected 10% on a random basis and found the Tension to be in general compliance. Inspection was performed against the Notification No. 00252 Dated February 02, 2010.

Bolt sizes used were M22 x 75 RC Set# DHGM220005 and final torque required was 473 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-584.

Segment 6BW (Lower Chevron X3D Angle)

This Quality Assurance (QA) Inspector witnessed final Tension Verification Lower Chevron X3D Angles (North

and South side) from Panel Point (PP) 41, PP 42 and PP 43 for Segment 6BW. Inspected 10% on a random basis and found the Tension to be in general compliance. Inspection was performed against the Notification No. 00252 Dated February 02, 2010.

Bolt sizes used were M22 x 75 RC Set# DHGM220005 and final torque required was 473 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-584.

Segment 6CW (Lower Chevron X3D Angle)

This Quality Assurance (QA) Inspector witnessed final Tension Verification Lower Chevron X3D Angles (North and South side) from Panel Point (PP) 44, PP 45, PP 46 and PP 47 for Segment 6CW. Inspected 10% on a random basis and found the Tension to be in general compliance. Inspection was performed against the Notification No. 00252 Dated February 02, 2010.

Bolt sizes used were M22 x 75 RC Set# DHGM220005 and final torque required was 473 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-584.

Segment 6AE (Cat Walk)

This Quality Assurance (QA) Inspector witnessed final tension verification for Catwalk at Bottom Panel and Side Panel installed on the T-Ribs Cross Beam side between Panel Point (PP) 38.5 to PP 39 for Segment 6AE. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00252 Dated Feb 02, 2010.

Bolt sizes used were M16 x 40 RC Set# DHGM160019 and final torque required was 200 N-m and

Bolt sizes used were M16 x 50 RC Set# DHGM160011 and final torque required was 200 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-118.

Segment 6CE (Cat Walk)

This Quality Assurance (QA) Inspector witnessed final tension verification for Catwalk at Bottom Panel and Side Panel installed on the T-Ribs Cross Beam Side between Panel Point (PP) 44.5 to PP 45 for Segment 6CE. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00252 Dated Feb 02, 2010.

Bolt sizes used were M16 x 40 RC Set# DHGM160019 and final torque required was 200 N-m and

Bolt sizes used were M16 x 50 RC Set# DHGM160011 and final torque required was 200 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-118.

Segment 6AE (Cat Walk)

This Quality Assurance (QA) Inspector witnessed final tension verification for Catwalk at Bottom Panel and Side Panel installed on the T-Ribs between Panel Point (PP) 38.5 to PP 39 for Segment 6AE. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00252 Dated Feb 02, 2010.

Bolt sizes used were M16 x 40 RC Set# DHGM160019 and final torque required was 200 N-m and

Bolt sizes used were M16 x 50 RC Set# DHGM160011 and final torque required was 200 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-118.

Segment 6CW (Side Panel T-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for Side Panel T-Ribs 19 Nos.) Cross Beam side between Panel Point (PP) 44 and PP 44.5 for Segment 6CW. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00252 Dated February 02, 2010.

Bolt sizes used were M22 x 65 RC Set# DHGM220021 and final torque required was 543 N-m.

Manual Torque wrench was been used with Sr. No. XQ2 - 584.

Note: The offset measurement were performed from 1st T-Rib (starting from Longitudinal Diaphragm) towards 19th T-Ribs (finishing at Side Panel) and recorded Vertical offset as

4nd T-Rib: 4.5mm; 5th T-Rib: 4.5mm; 7th T-Rib: 4.5mm; 8th T-Rib: 4.5mm; 10th T-Rib: 5mm; 11th T-Rib: 6. 5mm; 12th T-Rib: 5.5mm; 13th T-Rib: 5.5mm; 14th T-Rib: 5.5mm; 15th T-Rib: 6mm; 16th T-Rib: 6mm; 17th T-Rib: 6mm; 18th T-Rib:6 mm and 19th T-Rib: 7mm.

Segment 6CW (Side Panel T-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for Side Panel T-Ribs 19 Nos.) Cross Beam side between Panel Point (PP) 45 and PP 45.5 for Segment 6CW. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00252 Dated February 02, 2010.

Bolt sizes used were M22 x 65 RC Set# DHGM220021 and final torque required was 543 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-584.

Note: The offset measurement were performed from 1st T-Rib (starting from Longitudinal Diaphragm) towards

19th T-Ribs (finishing at Side Panel) and recorded Vertical offset as

10th T-Rib: 4.5mm; 12th T-Rib: 5.5mm; 13th T-Rib: 5.5mm; 14th T-Rib: 4.8mm; 15th T-Rib: 4.5mm; 16th T-Rib: 4.5mm; 17th T-Rib: 4.5mm; 18th T-Rib: 5mm and 19th T-Rib: 6mm.

Segment 6CW (Side Panel T-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for Side Panel T-Ribs 19 Nos.) Cross Beam side between Panel Point (PP) 45.5 and PP 46 for Segment 6CW. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00252 Dated February 02, 2010.

Bolt sizes used were M22 x 65 RC Set# DHGM220021 and final torque required was 543 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-584.

Note: The offset measurement were performed from 1st T-Rib (starting from Longitudinal Diaphragm) towards 19th T-Ribs (finishing at Side Panel) and recorded Vertical offset as

6th T-Rib: 5mm; 10th T-Rib: 4.5mm; 11th T-Rib: 4.5mm; 12th T-Rib: 4.5mm; 13th T-Rib: 4.5mm; 14th T-Rib: 4. 5mm; 15th T-Rib: 4.5mm; 17th T-Rib: 4.5mm; 18th T-Rib: 6mm and 19th T-Rib: 6mm.

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 5AE and 5BE between Panel Point (PP) 31 and PP 32 for U-Ribs to U-Ribs (Except Big Splice location at 30 from North) Bolt Size used was M22 x 65 RC Set# DHGM220033 and final torque required was 470 N-m and Green Tag No. 589.

At Segment 6AW at Panel Point (PP) 37, PP 38 and PP 39 for Lower Chevron Brace (North and South) – Angle location X3D Bolt Size used was M22 x 65 RC Set# DHGM220021 and final torque required was Rotation of Nut and Green Tag No. 590.

At Segment 6AW, 6BW and 6CW at Panel Point (PP) 40, PP 41, PP 42, PP 43, PP 44, PP 45, PP 46 and PP 47 for Lower Chevron Brace (North and South) – Angle location X3D Bolt Size used was M22 x 65 RC Set# DHGM220021 and final torque required was Rotation of Nut and Green Tag No. 591.

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 Eric T Sang 1500-0042-2372, who represents the Office of Structural Materials for your project.

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