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: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-023148
Date Inspected: 29-Apr-2011

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:	N/A			**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 Mr. 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) at Trial Assembly Areas

Segment 12AE (Catwalk)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Catwalk structure which is connected to Bottom Panel T-Ribs at Panel Point (PP) 110.5 and PP 111 for Segment 12AE at FL3, Bottom Plate. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00666 dated April 29, 2011.

Bolt sizes used were M16 x 40 RC Set# DHGM160045 and final torque required was 200 N-m.

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

The Manual Torque wrench used was Serial No. XO2-114.

Please reference the pictures attached for more comprehensive details.

Segment 12AE (Cable Tray)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for cable tray structure installed at bottom plate between the Panel Points (PP) 110 to PP 110.5 for Segment 12AE at FL3. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00666 dated April 29, 2011.

Bolt sizes used were M16 x 40 RC Set# DHGM200037 and final torque required was 367 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

Please reference the pictures attached for more comprehensive details.

Segment 12CE (Cable Tray)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for cable tray structure installed at bottom panel, North and South side at 30 degree between the Panel Points (PP) 116.5 to PP 117 for Segment 12CE. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00666 dated April 29, 2011.

Bolt sizes used were M20 x 55 RC Set# DHGM200037 and final torque required was 367 N-m.

Bolt sizes used were M20 x 55 RC Set# DHGM200038 and final torque required was 280 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

Segment 12CW to Segment 13AW (Transverse Splice T-Ribs and I-Ribs) for Field Splice

This QA Inspector performed Dimension Control Inspection on the Transverse Splice T-Ribs to T-Ribs and I-Ribs to I-Ribs for the Segment 12CW to Segment 13AW (Field Splice) between Panel Point (PP) 117 to PP 117.5 at the following locations after rectifications:

Deck Panel I-Ribs to I-Ribs 3 locations (Cross Beam side).

Edge Panel I-Ribs to I-Ribs at 4 locations, between work point W5 towards work point W16 (Cross Beam side).

Side Panel Corner Assembly I-Ribs to I-Ribs at 5 locations, between work point W16 towards Work point W14 (Cross Beam side).

Side Panel T-Ribs to T-Ribs at 13 locations, between work point W16 towards work point W14 (Cross Beam side).

Bottom Panel I-Ribs to I-Ribs at 5 locations, between work point W14 towards work point W4.

Bottom Panel T-Ribs to T-Ribs at 18 locations, between work point W4 towards work point W3.

Bottom Panel I-Ribs to I-Ribs at 5 locations, between work point W3 towards work point W13.

Side Panel T-Ribs to T-Ribs at 13 locations, between work point W13 towards work point W11 (Counter Weight side).

Side Panel Corner Assembly I-Ribs to I-Ribs at 5 locations, between work point W13 towards Work point W11 (Counter Weight side).

Edge Panel I-Ribs to I-Ribs at 4 locations, between work point W11 towards work point W2 (Counter Weight side).

Deck Panel I-Ribs to I-Ribs 3 locations (Counter Weight side).

The QA Inspector measured the Vertical Offset using 1(One) Meter Straight Edge and measured the Horizontal Offset on the web using a Bridge Cam gauge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 12AW to Segment 13AW (Skin Flatness)

This QA Inspector performed Dimensional Inspection, to check the skin flatness between Segment 12AW to Segment 13AW between Panel Points (PP) 117 and PP 117.5 at the following locations:

The skin flatness was measured on North side (Counter Weight side at B1 and B2 locations) and South side (Cross Beam side at B3 and B4 locations) at 100mm from the weld connecting Bottom Panel to Side Panel using 2500mm string line to verify overall flatness. The straight edges of 600mm and 630 mm of length were also used to measure the localized flatness.

The skin flatness was measured on North side (Counter Weight side at T1 location) and South side (Cross Beam side at T2 location) at 100mm from the weld connecting Deck Panel to Edge Panel using 2500mm string line to verify overall flatness. The straight edges of 600mm and 630 mm length were also used to measure the localized flatness.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Note: Observed Skin Flatness at B3 location out of tolerance thus measurement were taken at locations B3-1 at 500mm, at location B3-2 1000mm, at location B3-3 1500mm and at location B3-4 2000mm.

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

documents.

Segment 12CW to Segment 13AW (Edge Beam to Edge Beam)

This QA Inspector performed Dimension Control Inspection on the Edge Beam to Edge Beam at Work Point W13 (Counter Weight side) and at Work Point W14 (Cross Beam side) for the Segment 12CW to Segment 13AW between Panel Point (PP) 117 to PP 117.5 at the following locations:

The offset was measured at 5 (five) different locations in which 2 (Two) locations were at Flange area and 3 (Three) locations were at Web area. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

The Sweep was measured at 5 different locations between 117.5 towards PP 117 (Total 5 Locations) using string line.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 12AE to Segment 10BE (Skin Flatness)

This QA Inspector performed Dimensional Inspection, to check the skin flatness between Segment 10AE to Segment 10BE between Panel Points (PP) 88 and PP 89 at the following locations:

The skin flatness was measured on North side (Cross Beam Side at B1 and B2 locations) and South side (Bike Path Side at B3 and B4 locations) at 100mm from the weld connecting Bottom Panel to Side Panel using 5000mm string line to verify overall flatness. The straight edges of 600mm and 630 mm of length were also used to measure the localized flatness.

The skin flatness was measured on North side (Cross Beam side at T1 location) and South side (Bike Path Side at T2 location) at 100mm from the weld connecting Deck Panel to Edge Panel using 5000mm string line to verify overall flatness. The straight edges of 600mm and 630 mm length were also used to measure the localized flatness.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

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

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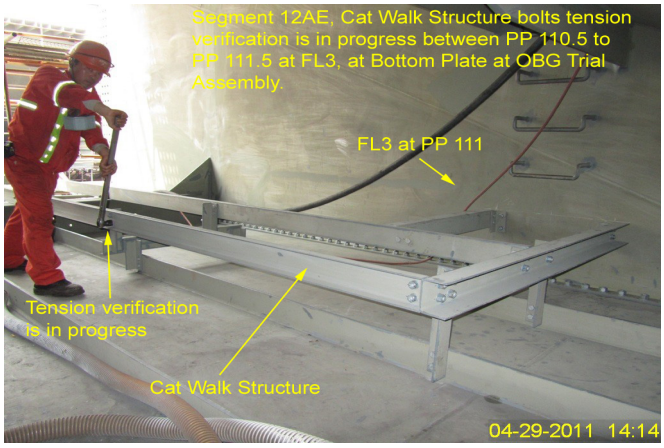

Summary of Conversations:

No relevant conversations were reported on this date.

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 Tsang 15000422372, who represents the Office of Structural Materials for your project.

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