

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-014842**Date Inspected:** 12-Jun-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **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

Suspender Bracket

This QA Inspector performed Dimension Control Inspection for the Suspender Brackets (SB) Installed at Counter Weight side for the following Segments and Suspender Brackets. The inspection was performed as per the Inspection Notification No. 00008 Dated June 12, 2010 as requested by ZPMC.

Suspender Bracket SB70W for Segment 8CW

Suspender Bracket SB68W for Segment 8CW

Suspender Bracket SB66W for Segment 8BW

The faying surface between the Deck Panel Corner Assembly to the Suspender Bracket measured and observed within the tolerance i.e., less than 2mm.

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Segment 8BE to 8CE (Longitudinal Diaphragm)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts Installed at Longitudinal Diaphragm to Longitudinal Diaphragm at E3 and E4 (South and North side) between Panel Point (PP) 67 and PP 68 for Segment 8BE to 8CE. Inspected 10% on a random basis and found the Rotation of Nut to be in general compliance. Inspection was performed against the Notification No. 00374 Dated June 12, 2010.

Bolt sizes used were M24 x 70 RC Set# DHGM240003 and final torque required was 543 N-m and

Bolt sizes used were M24 x 95 RC Set# DHGM240021 and final torque required was 540 N-m.

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

Segment 8BE to 8CE (Transverse Splice T-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for T-Rib to T-Rib at Transverse Splice for Side Panel Bike Path Side (from work point E1 to E3), Bottom Panel (from work point E3 towards E4) and Cross Beam side (from work point E4 to E6) between Panel Point (PP) 67 to PP 68 for Segment 8BE to 8CE. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00374 Dated June 12, 2010.

Bolt sizes used were M22 x 65 RC Set# DHGM220105 and final torque required was 380 N-m and

Bolt sizes used were M22 x 70 RC Set# DHGM220009 and final torque required was 447 N-m.

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

1st, 2nd and 3rd T-Ribs bolts and splice plate not installed as Vertical offset is measured and recorded as 8.5mm, 10mm and 8mm.

Note: Measured and recorded the offset after installing the splice plates for Side Panel (Cross Beam and Bike Path side) and submitted to Lead and Engineer for review. Bottom Panel T-Ribs at 8BE side 2 Rows and 5 Columns bolts not installed as it will interfere with the Temporary Sea Fasteners.

Segment 7BW (T-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for T-Rib to T-Rib at Side Panel Cross Beam side at Panel Point (PP) 50 for Segment 7BW. Inspected the T-Ribs along with 12mm Reinforcing Splice Plate above the Splice Plates on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00375 Dated June 12, 2010.

At PP 50

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11th location, 12th location, 15th location and 19th location.

Bolt sizes used were M22 x 80 RC Set# DHGM220091 and final torque required was 460 N-m.

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

Note: T-Ribs numbering reference taken from Bottom Panel (work point W4) as 1st T-Rib and towards Side Panel as 19th T-Rib.

Segment 7DW (T-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for T-Rib to T-Rib at Side Panel Cross Beam side at Panel Point (PP) 56, PP 57 and PP 58 for Segment 7DW. Inspected the T-Ribs along with 12mm Reinforcing Splice Plate above the Splice Plates on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00375 Dated June 12, 2010.

At PP 56

5th location, 6th location, 7th location, 13th location, 14th location, 15th location, 16th location, 17th location, 18th location and 19th location.

At PP 57

5th location, 6th location, 7th location, 8th location, 9th location, 13th location, 14th location, 15th location, 16th location, 17th location, 18th location and 19th location.

At PP 58

2th location

Bolt sizes used were M22 x 80 RC Set# DHGM220091 and final torque required was 460 N-m.

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

Note: T-Ribs numbering reference taken from Bottom Panel (work point W4) as 1st T-Rib and towards Side Panel as 19th T-Rib.

Segment 7BW to 7CW (Transverse Splice T-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for T-Rib to T-Rib at Transverse Splice for Side Panel Cross Beam Side (from work point E4 to E6) between Panel Point (PP) 52 to PP 53 for Segment 7BW to 7CW. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00375 Dated June 12, 2010.

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Bolt sizes used were M22 x 65 RC Set# DHGM220035 and final torque required was 433 N-m and

Bolt sizes used were M22 x 80 RC Set# DHGM220091 and final torque required was 460 N-m.

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

2nd, 3rd, 4th and 5th Splice plate Installed and at 13th and 16th T-Rib location Reinforcing Splice Plate Installed.

Segment 7AW, 7BW, 7CW, 7DW and 7EW (Side Panel to Corner Assembly)

This QA Inspector performed Dimension Control Inspection the Side Panel to Corner Assembly Longitudinal Weld for the Skin Flatness after Heat Straightening from Panel Point (PP) 48 to PP 60 Cross Beam and Counter Weight Side. The measured readings at one location was recorded more than acceptable, marked the area and informed the ZPMC and ABF QC to rectify those area and re-offer for inspection and passed the information to the Lead and Engineer.

Segment 7AW, 7BW, 7CW, 7DW and 7EW (Side Panel to Corner Assembly)

This QA Inspector performed Dimension Control Inspection the Deck Panel to Corner Assembly Longitudinal Weld for the Skin Flatness after Heat Straightening from Panel Point (PP) 48 to PP 60 Cross Beam and Counter Weight Side. The measured readings at few location was recorded more than acceptable, marked the area and informed the ZPMC and ABF QC to rectify those area and re-offer for inspection and passed the information to the Lead and Engineer.

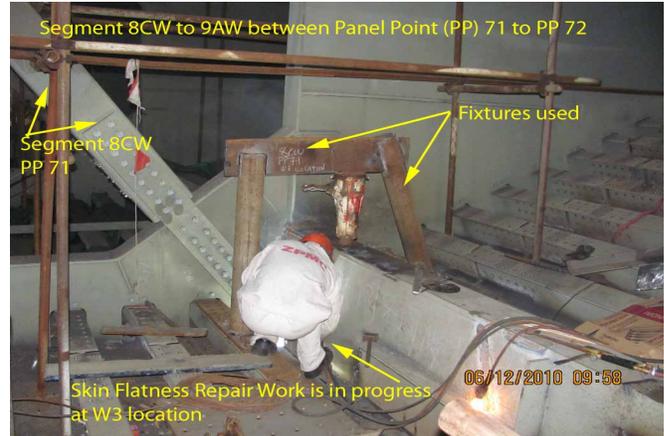
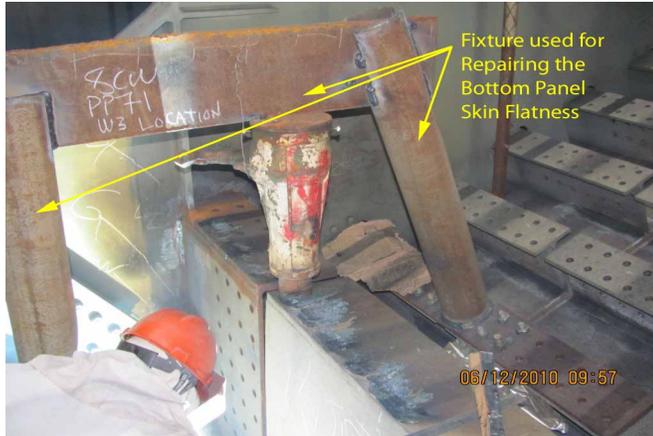
Segment 8CW to 9AW

This QA Inspector during random Inspection noticed Repair work was been performed by ZPMC personnel's for rectifying the Skin Flatness which is out by 13mm when measured with 5000mm String Line at Bottom Panel. The Repair work been performed at W3 locations against the Welding Repair Report B-WR13499 Rev. 0 between Panel Point (PP) 71 and PP 73 between Segment 8CW to 9AW. Please refer the pictures attached for more comprehensive details.

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.

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: Carreon,Albert

QA Reviewer