

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-010844**Date Inspected:** 23-Dec-2009**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:** Li Yang**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 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 6BE to 6CE

This QA Inspector prepared Incident Report No.04-0120F4_TL-15_B278_12-23-09_6AW to 6BW (Cross Beam and Counter Weight Side)_Skin Flatness as it was found that Side Panel to Side Panel Corner Assembly weld Skin Flatness was out of tolerance when measured Transverse to Longitudinal weld for more comprehensive details please refer the report.

Segment 6BE to 6CE

This QA Inspector observed ZPMC welding personnel performing Heat Straightening for Longitudinal Diaphragm for Cross Beam and Bike Path side for Segment 6BE to 6CE between Panel Point (PP) 43 and PP 44 against HSR 1(B)-7991 Rev.0 Dated Dec. 11, 2009. The following locations were indicated for Heat Straightening.

LD014B-001~010

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LD013B-001~010

Seg.030B-033~034

Seg.030C-007~008

Seg.032F-035~038

Seg.032D-035~038

Segment 1AW

This Quality Assurance (QA) Inspector witnessed final tension verification for Cable Tray Structure between Panel Point (PP) 8.5 to PP 10 at Bottom Panel (North and South) side for Segment 1AW. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used were M3/4 x 31/4 RC Set# DHG60573 and final torque required is 193 N-m and

Bolt sizes used were M3/4 x 21/4 RC Set# DHG60571 and final torque required is 393 N-m.

Manual Torque wrench is been used with Sr. No. XO2 - 114.

Note: Inspection was carried on Ship Zhenhua #17

Segment 1BW

This Quality Assurance (QA) Inspector witnessed final tension verification for Cable Tray Structure between Panel Point (PP) 11 to PP 12.5 at Bottom Panel (North and South) side for Segment 1BW. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used were M3/4 x 31/4 RC Set# DHG60573 and final torque required is 193 N-m and

Bolt sizes used were M3/4 x 21/4 RC Set# DHG60571 and final torque required is 393 N-m.

Manual Torque wrench is been used with Sr. No. XO2 - 114.

Note: Inspection was carried on Ship Zhenhua #17

Segment 1AE

This Quality Assurance (QA) Inspector witnessed final tension verification for Stiffener (Triangular Plate) connecting the Floor Beam to Longitudinal Diaphragm between at Panel Point (PP) 8.5, PP 9.0, PP 9.5, PP 10.0 and PP 10.5 North (Cross Beam Side) and South (Bike Path side) for Segment 1AE. Inspected 10% on a random

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basis and found the tension to be in general compliance.

Bolt sizes used were M22 x 80 RC Set# DHGM220050 and final torque required is 486 N-m.

Bolt sizes used were M22 x 85 RC Set# DHGM220013 and final torque required is 433 N-m.

Bolt sizes used were M22 x 90 RC Set# DHGM220048 and final torque required is 500 N-m and

Bolt sizes used were M24 x 90 RC Set# DHGM240028 and final torque required is 540 N-m

Manual Torque wrench is been used with Sr. No. XO2 - 625.

Note: Inspection was carried on Ship Zhenhua #17

Segment 1BE

This Quality Assurance (QA) Inspector witnessed final tension verification for Stiffener (Triangular Plate) connecting the Floor Beam to Longitudinal Diaphragm between at Panel Point (PP) 11.0, PP 11.5, PP 12.0 and PP 12.5 North (Cross Beam Side) and South (Bike Path side) for Segment 1BE. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used were M22 x 80 RC Set# DHGM220050 and final torque required is 486 N-m.

Bolt sizes used were M22 x 85 RC Set# DHGM220013 and final torque required is 433 N-m.

Bolt sizes used were M22 x 90 RC Set# DHGM220048 and final torque required is 500 N-m and

Bolt sizes used were M24 x 90 RC Set# DHGM240028 and final torque required is 540 N-m

Manual Torque wrench is been used with Sr. No. XO2 - 625.

Note: Inspection was carried on Ship Zhenhua #17

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 1AW between Panel Point (PP) 8.5 to PP 9.0 for Longitudinal Diaphragm Splice (4750mm above Bottom Panel North and South Side and Bolt Size used was M27 x 120 RC Set# DHGM270020 final torque required was 847 N-m respectively and Green Tag No. 505.

At Segment 1AW between Panel Point (PP) 8.5 to PP 9.0 for Longitudinal Diaphragm Splice (4750mm above

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Bottom Panel North and South Side and Bolt Size used was M27 x 140 RC Set# DHGM270021 final torque required was 853 N-m respectively and Green Tag No. 506.

At Segment 2AW and 2BW between Panel Point (PP) 13 to PP 18 for Cable Tray Support and Bolt Size used was M 19 x 55 RC Set# DHG60571 final torque required was 393 N-m respectively and Green Tag No. 507.

At Segment 2AW between Panel Point (PP) 13 to PP 13.5 for Cable Tray Support and Bolt Size used was M 19 x 80 RC Set# DHG60573 final torque required was 193 N-m respectively and Green Tag No. 508.

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.

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