

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-010752**Date Inspected:** 17-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

CB1

This Quality Assurance (QA) Inspector witnessed final tension verification for Cable Tray Structure between Panel Point (PP) 14 and PP 15 at CB1. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used were M3/4 x 21/4 RC Set# DHG60580 and final torque required is 340 N-m.

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

CB1

This Quality Assurance (QA) Inspector witnessed final tension verification for Internal Platform at Panel Point (PP) 14 and PP 14.5 at CB1. Inspected 10% on a random basis and found the tension to be in general compliance.

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Bolt sizes used were M22 x 55 RC Set# DHGM220044 and final torque required is 473 N-m.

Bolt sizes used were M16 x 95 RC Set# DHGM160017 and final torque required is 153 N-m and

Bolt sizes used were M16 x 85 RC Set# DHGM160014 and final torque required is 180 N-m.

Manual Torque wrench is been used with Sr. No. XO2 – 114 and X02 – 599.

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 and 1AAW at Panel Point (PP) 8.0 to PP 8.5 for Longitudinal Diaphragm Splice 4750mm above Bottom Panel North and South Side Bolt Size used was M27 x 130 RC Set# DHGM270026 and M27 x 130 RC Set# DHGM270026 and final torque required was 827 N-m respectively and Green Tag No. 490.

At Segment 1AW and 1AAW at Panel Point (PP) 8.0 to PP 8.5 for Longitudinal Diaphragm Splice 4750mm above Bottom Panel North and South Side Bolt Size used was M27 x 150 RC Set# DHGM270027 and M27 x 150 RC Set# DHGM270027 and final torque required was 860 N-m respectively and Green Tag No. 491.

At CB1(FL3 Location) at Panel Point (PP) 14 to PP 16 and Bolt Size used was M19 x 55 RC Set# DHG60580 and final torque required was 340 N-m respectively and Green Tag No. 492.

At Segment 6AE, 6BE and 6CE at Panel Point (PP) 37 to PP 47 and Bolt Size used was M19 x 55 RC Set# DHG60580 and final torque required was 340 N-m respectively and Green Tag No. 493.

At Segment 1AE at Panel Point (PP) 8.5 to PP 9.0 and Bolt Size used was M22 x 100 RC Set# DHGM220049 and final torque required was 493 N-m respectively and Green Tag No. 494.

At Segment 2AE at Panel Point (PP) 13 to PP 13.5 and Bolt Size used was M19 x 55 RC Set# DHG60580 and M19 x 80 RC Set# DHG60573 final torque required was 193 N-m respectively and Green Tag No. 495.

At Segment 1AE and 1AAE at Panel Point (PP) 8.0 to PP 8.5 for Longitudinal Diaphragm Splice 4750mm above Bottom Panel North and South Side Bolt Size used was M27 x 130 RC Set# DHGM270026 and final torque required was 827 N-m respectively and Green Tag No. 496.

At Segment 1AE and 1AAE at Panel Point (PP) 8.0 to PP 8.5 for Longitudinal Diaphragm Splice 4750mm above Bottom Panel North and South Side Bolt Size used was M27 x 150 RC Set# DHGM270027 and final torque required was 860 N-m respectively and Green Tag No. 497.

Segment 6BW

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This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Longitudinal Diaphragm (short one's) was been performed to Floor Beam. Weld Identified as Seg 029B-011. The welder was identified as 066674. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2233-Tc-U4b-F. The welding parameters

Segment 6AW to 6BW

This QA Inspector observed ZPMC welding personnel performing Metal Arc Welding (SMAW) and welding for Side Panel to Bottom Panel connecting weld which was flame cut to rectify the Linear Mis-alignment for the Segment 6AW to 6BW between Panel Point (PP) 40.25 to PP 40.75. The Weld joint number was identified as Seg 027B-21 at W4 Location. The welder was ids 048659. In process FCAW and SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-FCAW 1G (1F)-FCM-Repair and WPS-345-SMAW-4G(4F)-FCM-Repair The welding parameters measured

Segment 6AW to 6BW

This QA Inspector observed ZPMC personnel performing Tack Welding for the T-Rib 2nd from the Longitudinal Diaphragm Counter Weight Side as the T-Rib flange is mis-drilled and T-Rib identified as RS99B of SP602B and the activity is been performed against the ABF RFI No. ABF-RFI-001980 Rev 0.

Segment 5CW to 6AW

This QA Inspector observed ZPMC personnel performing Heat Straightening for Longitudinal Diaphragm to Longitudinal Diaphragm between Panel Point (PP) 36 to PP 40 for Segment 5CW to 6AW. Heat Straightening been performed against the HSR1 (B)-7995 Rev.0 Dated. Dec 06, 2009.

Seg 025B-019 ~ 020

Seg 025C-019 ~ 020

Seg 027D-019 ~ 020

Seg 027F-015 ~ 016

LD005A/007A 001~010

LD005A/0017E-0091=010

Segment 6BE to 6CE

This QA Inspector observed ZPMC personnel performing Heat Straightening for T-Rib at following areas as mentioned below against the HSR1 (B)-7990 Rev.0

SP088-001-009~010

SP607-001-025~026

SP362-001-025~026

BP168-001-043~044

SP608-001-037~038

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SP363-001-037~038

BP115-001-037~048

CB5

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for CB5 Hold Back areas for Stiffeners at Panel Point (PP) 40. Weld joint number is identified as FB 034-001-009/010, 011/012. The welders are identified as 069571, 066261 and 037840. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2132 and

Segment 6AW to 6BW

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for T-Ribs to T-Ribs Web area. Weld No is identified as SP514-001-057/058 and 059/060. The welder was identified as 220066. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2233-B-U2-F. The welding parameters measured and recorded by ZPMC QC were within the tolerance.

Segment 5AW to 5BW

This QA Inspector observed ZPMC personnel performing MT at Side Panel (Counter Weight and Cross

Segment 5AW to 5BW

This QA Inspector observed ZPMC personnel performing MT at Side Panel (Counter Weight and Cross Beam) side and at Bottom Panel T-Ribs Hold back areas.

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
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Reviewed By:	Miller,Mark	QA Reviewer
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