

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022574**Date Inspected:** 10-Apr-2011**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 and Zhu Zhong Hai**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 12BW to 12CW (Transverse Splice T-Ribs-Bolting)

This QA Inspector witnessed final bolt tension verification on bolts connecting T-Rib to T-Rib for Transverse Splice at Side Panel Cross Beam Side (from work point W6 towards W4), Bottom Panel (from work point W4 towards W3) and Counter Weight side (from work point W3 to W1) between Panel Point (PP) 114.5 to PP 115 for Segment 12BW to 12CW. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00645 dated April 10, 2011.

The bolt sizes used were M22 x 65 RC Lot # DHGM220112 and the final torque value established was 343 N-m.

The bolt sizes used were M22 x 65 RC Lot # DHGM220131 and the final torque value established was 380 N-m.

The bolt sizes used were M22 x 70 RC Lot # DHGM220041 and the final torque value established was 460 N-m.

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The Manual Torque wrench used was Serial No. XO2-777.

Please reference the pictures attached for more comprehensive details.

Segment 12BW to 12CW (Transverse Splice T-Ribs-Dimensional Inspection)

This QA Inspector performed Dimension Control Inspection on the Transverse Splice T-Ribs to T-Ribs after bolting for the Segment 12BW to Segment 12CW between Panel Point (PP) 114.5 to PP 115 at the following locations:

Work Point W4 towards Work Point W3 (Bottom Panel) total 18 T-Ribs.

Work Point W3 towards Work Point W1 (Side Panel Counter Weight Side) total 19 T-Ribs.

The QA Inspector measured the Vertical Offset using 1(One) Meter Straight Edge.

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: Work Point W6 towards Work Point W4 (Side Panel, Cross Beam side) T-Ribs, dimension inspection after bolting was not performed due to design restrictions.

Segment 13AW (Deck Panel to Edge Panel)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) weld. The weld joint was designated as Seg3013-001. The welder identification was 070432 and observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-B-P-2212-Tc-U4b-FCM-1. The piece mark was identified as the weld connecting the Deck Panel to Edge Panel at work point W2, Counter Weight side.

Please reference the pictures attached for more comprehensive details.

Segment 13AE (Deck Panel I-Stiffener)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Completed Joint Penetration (CJP) weld. The weld joint was designated as Seg3007Q-018. The welder identification was 066416 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G(4F)-Repair-FCM-1. The piece mark was identified as the weld connecting the Deck Panel I-Stiffener, Bike Path side between PP 117.5 to PP 118. ZPMC performed repair welding in accordance with Welding Repair Report BWR-20607.

Please reference the pictures attached for more comprehensive details.

Lift 12 West to 13AW (Transverse Splice Fit-up)

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This QA Inspector observed ZPMC performing field splice fit-up between Deck Panel to Deck Panel for Lift 12 West to Segment 13AW at OBG Trial Assembly. The welder identification was 20635 and observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2132-ESAB.

Please reference the pictures attached for more comprehensive details.

Segment 13AE (Floor Beam Stiffener to Grillage)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) weld. The weld joint was designated as Seg3007AH-039. The welder identification was 037743 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-Tc-U4b-FCM-1. The piece mark was identified as the weld connecting the Floor Beam Stiffener to Grillage, Bike Path side.

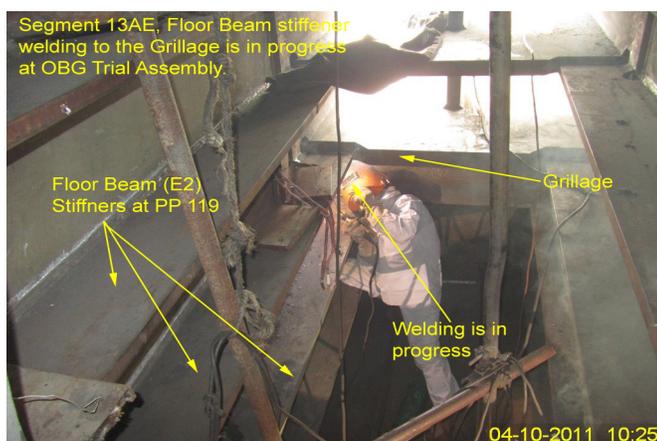
Please reference the pictures attached for more comprehensive details.

Segment 13AE (Floor Beam Stiffener to Grillage)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) weld. The weld joint was designated as Seg3007Y-372. The welder identification was 067183 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G(4F)-Repair-FCM-1. The piece mark was identified as the weld connecting the Floor Beam Stiffener to Bulk Head. ZPMC performed repair welding in accordance with Welding Repair Report BWR-20637.

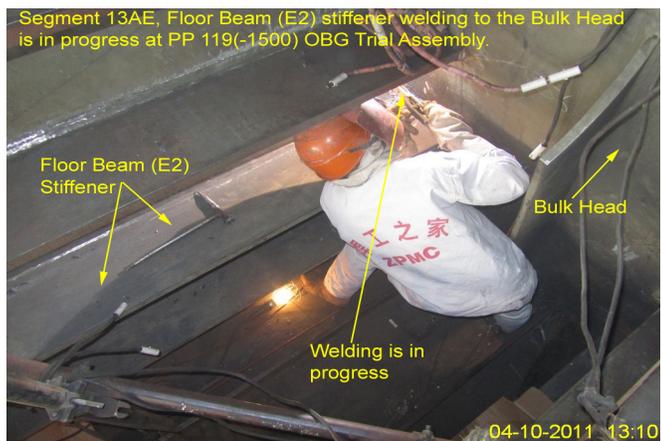
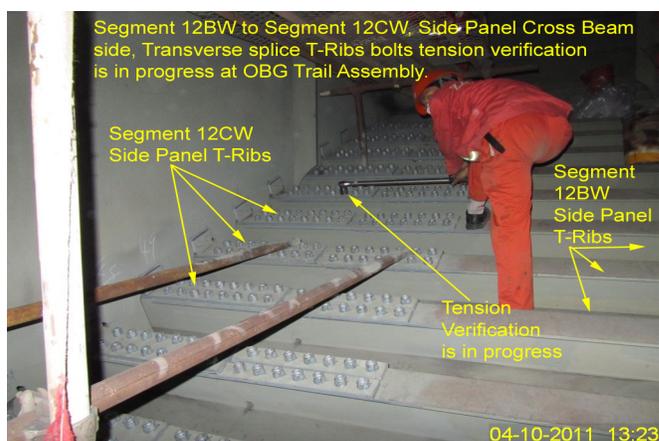
Please reference the pictures attached for more comprehensive details.

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 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.

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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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