

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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016693**Date Inspected:** 12-Sep-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)**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
Bridge No:	34-0006	Delayed / Cancelled:	Yes	No N/A
		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 9BE to Segment 9CE (Retrofit Installed at Skin Flatness out of Tolerance areas)

This QA Inspector witnessed the final bolt tension verification on bolts connecting Retro-fits which are installed between the Side panel T-Ribs and Retro-fits connecting to the Longitudinal Diaphragm to T-Ribs at Bottom Panel between Panel Points (PP) 76 to PP 77 for Segment 9BE to Segment 9CE at Bike Path side. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00489 dated September 12, 2010.

The bolt sizes used were M24 x 60 RC Lot # DHGM240027 and the final torque value established was 572 N-m.

The bolt sizes used were M24 x 70 RC Lot # DHGM240075 and the final torque value established was 680 N-m.

The bolt sizes used were M24 x 75 RC Lot # DHGM240020 and the final torque value established was 600 N-m.

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The bolt sizes used were M24 x 85 RC Lot # DHGM240019 and the final torque value established was 550 N-m.

The bolt sizes used were M24 x 90 RC Lot # DHGM240076 and the final torque value established was 474 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

Segment 9CE to Segment 9DE (Retrofit Installed at Skin Flatness out of Tolerance areas)

This QA Inspector witnessed the final bolt tension verification on bolts connecting Retro-fits which are installed between the Side panel T-Ribs and Retro-fits connecting to the Longitudinal Diaphragm to T-Ribs at Bottom Panel between Panel Points (PP) 79 to PP 80 for Segment 9CE to Segment 9DE at Cross Beam and Bike Path side. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00489 dated September 12, 2010.

The bolt sizes used were M24 x 60 RC Lot # DHGM240027 and the final torque value established was 572 N-m.

The bolt sizes used were M24 x 70 RC Lot # DHGM240075 and the final torque value established was 680 N-m.

The bolt sizes used were M24 x 75 RC Lot # DHGM240020 and the final torque value established was 600 N-m.

The bolt sizes used were M24 x 85 RC Lot # DHGM240019 and the final torque value established was 550 N-m.

The bolt sizes used were M24 x 90 RC Lot # DHGM240076 and the final torque value established was 474 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

Segment 9DE to Segment 9EE (Retrofit Installed at Skin Flatness out of Tolerance areas)

This QA Inspector witnessed the final bolt tension verification on bolts connecting Retro-fits which are installed between the Side panel T-Ribs and Retro-fits connecting to the Longitudinal Diaphragm to T-Ribs at Bottom Panel between Panel Points (PP) 82 to PP 83 for Segment 9DE to Segment 9EE at Cross Beam and Bike Path side. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00489 dated September 12, 2010.

The bolt sizes used were M24 x 60 RC Lot # DHGM240027 and the final torque value established was 572 N-m.

The bolt sizes used were M24 x 70 RC Lot # DHGM240075 and the final torque value established was 680 N-m.

The bolt sizes used were M24 x 75 RC Lot # DHGM240020 and the final torque value established was 600 N-m.

The bolt sizes used were M24 x 85 RC Lot # DHGM240019 and the final torque value established was 550 N-m.

The bolt sizes used were M24 x 90 RC Lot # DHGM240076 and the final torque value established was 474 N-m.

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The Manual Torque wrench used was Serial No. XO2-666.

Lift 9 East

This QA Inspector along with Mr. Manoj Prabhune photographed the temporary Sea-fastening at various locations prior to the shipment of (Voyage 5) of Lift 9 East en-route to Yerba Buena Island, California, USA. The Lift 9 East is located on ZPMC Ship Zhenhua # 18.

The Segments are identified as following.

Segment 9AE at Panel Points (PP) 71.25, PP 72, PP 72.5 and PP 73.

Segment 9BE at Panel Points (PP) 73.5, PP 74, PP 74.5, PP 75, PP 75.5 and PP 76.

Segment 9CE at Panel Points (PP) 76.5, PP 77, PP 77.5, PP 78, PP 78.5 and PP 79.

Segment 9DE at Panel Points (PP) 79.5, PP 80, PP 80.5, PP 81, PP 81.5 and PP 82.

Segment 9EE at Panel Points (PP) 82.5, PP 83, PP 83.5, PP 84, PP 84.5 and PP 85.

The following locations are where the photographs were taken and the photographs are available for review upon request.

Intermediate Corner Assembly for cross and vertical truss post bolting area (Cross Beam and Bike Path Side).

Corner Assembly covering overall view, Deck Panel I-stiffeners, Edge Panel I-Stiffeners and Side

Panel Corner Assembly I-Stiffeners (Cross Beam and Bike Path Side) facing west and facing east.

Longitudinal Diaphragm looking south and north side and work point E4 and E3 (Cross Beam and Bike Path Side) facing west and facing east.

Lower and Upper Chevron with sea fastening structures (Cross Beam and Bike Path Side) facing west and facing east.

Floor Beam (Cross Beam and Bike Path Side) facing west and facing east.

Sea fasteners installed at the Bottom Panel facing west and facing east.

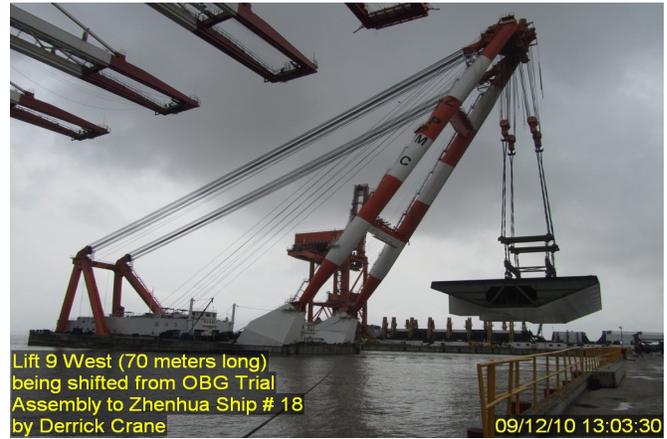
Lift 9 West

This QA Inspector observed that Lift 9 (West) 70 meters long been transported from trail assembly yard to the ZPMC ship # 18 by Derrick Barge and will be placed on top of Lift 9 (East). 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 150000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer
