

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-011501**Date Inspected:** 12-Jan-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:	Li Yang and Wu Zhi Cheng	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

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 6AW at Panel Point (PP) 37, PP 38, PP 39 and PP 40 for Lower Chevron Brace (North and South) – Except shim location Bolt Size used was M22 x 70 RC Set# DHGM220020 and M22 x 70 RC Set# DHGM220020 and final torque required was 520 N-m respectively and Green Tag No. 528.

At Segment 6AW at Panel Point (PP) 37, PP 38, PP 39 and PP 40 for Lower Chevron Brace (North and South) – Shim location Bolt Size used was M22 x 75 RC Set# DHGM220005 and M22 x 75 RC Set# DHGM220005 and final torque required was 473 N-m respectively and Green Tag No. 529.

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At Segment 6AW at Panel Point (PP) 37, PP 38, PP 39 and PP 40 for Lower Chevron Brace (North and South) Bolt Size used was M22 x 80 RC Set# DHGM220012 and M22 x 80 RC Set# DHGM220012 and final torque required was 427 N-m respectively and Green Tag No. 530.

At Segment 6AW at Panel Point (PP) 37, PP 38, PP 39 and PP 40 for Upper Chevron Brace (North and South) Bolt Size used was M22 x 70 RC Set# DHGM220020 and M22 x 70 RC Set# DHGM220020 and final torque required was 520 N-m respectively and Green Tag No. 531.

At Segment 6AW at Panel Point (PP) 37, PP 38, PP 39 and PP 40 for Clips connecting Floor Beam to Side Panel (North and South) Bolt Size used was M16 x 45 RC Set# DHGM160001 and final torque required was 210 N-m respectively and Green Tag No. 532.

At Segment 6AW at Panel Point (PP) 37, PP 38, PP 39 and PP 40 for Clips connecting Floor Beam to Side Panel (North and South) Bolt Size used was M16 x 65 RC Set# DHGM160006 and final torque required was 180 N-m respectively and Green Tag No. 533.

At Segment 6AW at Panel Point (PP) PP 38, PP 39 and PP 40 for Clips connecting Floor Beam to Side Panel (North and South) Bolt Size used was M16 x 50 RC Set# DHGM160003 and final torque required was 200 N-m respectively and Green Tag No. 534.

At Segment 6AW at Panel Point (PP) PP PP 38, PP 39 and PP 40 for Clips connecting Floor Beam to Side Panel (North and South) Bolt Size used was M16 x 45 RC Set# DHGM160001 and final torque required was 210 N-m respectively and Green Tag No. 535.

At Segment 6AW at Panel Point (PP) PP PP 38, PP 39 and PP 40 for Clips connecting Floor Beam to Side Panel (North and South) Bolt Size used was M16 x 65 RC Set# DHGM160006 and final torque required was 180 N-m respectively and Green Tag No. 536.

Segment 6BW to 6CW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Deck Panel "I" Stiffener Cross Beam side for Segment 6BW to 6CW Complete Joint Penetration (CJP) . Weld identified as DP514-001-007. The welder was identified as 066481. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-3213-B-U3b. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

Segment 6BW

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Longitudinal Diaphragm Cross Beam Side for Segment 6BW. Weld identified as SEG029C-001, SEG029C-009, SEG029C-011. The welder was identified as 220067. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2132, WPS-B-T-2233-Tc-U4b-F, and WPS-B-T-2232-Tc-U4b-F. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

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Segment 6BW to 6CW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Side Panel Cross Beam side for Segment 6BW to 6CW the welding has been completed form inside and carbon arc gouged form external due to lack of penetration at 8(Eight) Locations. Weld identified as OBW6C-004.The welder was identified as 068764. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2214-B-U2-FCM-1. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

Segment 6BW to 6CW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Side Panel Corner Assembly Counter Weight side for Segment 6BW to 6CW the welding has been completed form inside and carbon arc gouged form external due to lack of penetration at 1(One) Locations. Weld identified as OBW6C-005.The welder was identified as 068764. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2214-B-U2-FCM-1. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

Segment 6CE to 7AE

This QA Inspector observed ZPMC personnel at Segment 6CE to 7AE at PP 47 and PP 48 Side Panel and Side Panel Corner Assembly, Bottom Panel T-Ribs to T-Ribs hold back area grinding and visual repair areas been spot weld.

Segment 6CE

This QA Inspector observed ZPMC personnel at Segment 6CE Lower Chevron temporary bolts removal cleaning of faying surface between splice plate and box section is in progress after cleaning few ASTM A 325 Bolts installation is in progress.

Segment 6CE

This QA Inspector observed ZPMC personnel at Segment 6BE at PP 42 Side Panel Cross Beam side tow nos. I stiffeners welded to floor beam Magnetic Particle Test(MT) been performed.

Segment 6AE to 6BE

This QA Inspector observed ZPMC personnel at Segment 6AE to 6BE between PP 41 and 42 Bottom Panel E4 location back to back angles installed at floor beam and Bottom Panel for Traveller Rail Bracket Installation.

Segment 5CE to 6AE

This QA Inspector observed ZPMC personnel at Segment 5CE to 6AE (Field Splice) Longitudinal Diaphragm at

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E3 and E4 location splice plate installation at flange and web location is in progress by means of temporary bolts and pins.

Segment 5BE to 5CE

This QA Inspector observed ZPMC personnel at Segment 5BE to 5CE between PP 34 and PP 35 Longitudinal Diaphragm E3 and E4 location flange and web location splice plate match drilling was in progress.

Segment 5CE

This QA Inspector observed ZPMC personnel at Segment 5CE at PP 35 weld connecting Deck Panel Diaphragm to Floor Beam MT test been performed by ABF QC at west side of diaphragm.

Segment 5BE

This QA Inspector observed ZPMC personnel at Segment 5BE between PP 32.5 to PP 33 Catwalk channel connecting to Bottom Panel T-Ribs and Cross Beam side, Side Panel T-Ribs ASTM A 325 Grade bolts installation and snug tightening was in progress.

Segment 6AW

This QA Inspector observed ZPMC personnel at Segment 6AW at PP 37 Counter Weight side Lower Chevron bolts connecting to Floor Beam flange to splice plate been snipped off by manual hack saw to remove jammed/rusted temporary bolt.

Segment CB5

This QA Inspector observed ZPMC personnel at Segment CB5 between PP 38 and PP 39 6AW stiffeners coming out from edge panel to CB5 welding is in progress (at weld connecting location (EP) to stiffener)

Segment 6CE

This QA Inspector observed ZPMC personnel at Segment CB6 between PP 44 and PP 45, 6CW stiffeners coming out from EP to CB6 welding was in progress.

Segment 7BW

This QA Inspector observed ZPMC personnel at Segment 7Bw between PP 50, PP 51 and PP 52 match drilling for bottom panel to FL# flanges was in progress for Bottom Plate at W4 Location.

Segment 6BW to 6CW

This QA Inspector observed ZPMC personnel at Segment 6BW to 6CW Transverse Segment weld counter weight side, side panel corner assembly area weld back gouged area due to lack of penetration welding finished except

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one location and flush grinding is in progress.

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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