DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-021468
Date Inspected: 27-Feb-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
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 Segment 12CW (Skin Flatness)

This QA Inspector performed Dimensional Inspection, to check the skin flatness between Segment 12BW to Segment 12CW between Panel Points (PP) 114 and PP 115 at the following locations:

The skin flatness was measured on North side (Cross Beam Side at B1 and B2 locations) and South side (Bike Path Side at B3 and B4 locations) at 100mm from the weld connecting Bottom Panel to Side Panel using 5000mm string line to verify overall flatness. The straight edges of 600mm and 630 mm of length were also used to measure the localized flatness.

The skin flatness was measured on North side (Cross Beam side at T1 location) and South side (Bike Path Side at T2 location) at 100mm from the weld connecting Deck Panel to Edge Panel using 5000mm string line to verify overall flatness. The straight edges of 600mm and 630 mm length were also used to measure the localized flatness.

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: At B4 location measured Skin Flatness using 5 meter string line and observed reading out of tolerance and measured Skin Flatness using 630mm Straight Edge and observed reading out of tolerance. Informed the reading to the ABF QA and ZPMC QC regarding the results. Hence forth the inspection was cancelled by ABF and ZPMC QC.

Observed ZPMC personnel performing flame cutting at the weld connecting the Bottom Panel to Side Panel at B4 location against the BWR-19624 for repairing the out of tolerance location.

Segment 12BE to Segment 12CE (Side Panel, Transverse Splice weld)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW12E-002. The welder identification was 067752 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G(4F)-FCM-Repair-1. The piece mark was identified as the Side Panel, Cross Beam side at transverse splice. ZPMC performed repair welding in accordance with Critical Welding Repair Report B-CWR2805.

Please reference the pictures attached for more comprehensive details.

Segment 12BW to Segment 12CW (Side Panel Corner Assembly, Transverse Splice weld)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA3012-011. The welder identification was 046709 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G(4F)-FCM-Repair-1. The piece mark was identified as the Side Panel, Counter Weight side at transverse splice. ZPMC performed repair welding in accordance with Critical Welding Repair Report B-CWR2763.

Segment 12BE to Segment 12CE (Side Panel, Transverse Splice weld)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW12E-003. The welder identification was 067752 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G(4F)-FCM-Repair-1. The piece mark was identified as the Side Panel, Bike Path side at transverse splice. ZPMC performed repair welding in accordance with Critical Welding Repair Report B-CWR2812, Rev. 1.

Please reference the pictures attached for more comprehensive details.

Segment 12BE (Deck Panel to Edge Panel hold back weld)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA3005-002. The welder identification was 040265 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G(4F)-FCM-Repair-1. The piece mark was identified as weld connecting the Deck Panel to Edge Panel at work point E2.

Please reference the pictures attached for more comprehensive details.

Segment 12CE (Deck Panel to Edge Panel hold back weld)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA3003-006. The welder identification was 040265 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G(4F)-FCM-Repair-1. The piece mark was identified as weld connecting the Deck Panel to Edge Panel at work point E2.

Please reference the pictures attached for more comprehensive details.

Segment 12AW (FL3 I- Stiffeners hold back)

This QA Inspector observed the in-progress welding by Flux Cored Arc Welding (FCAW) process on a Fillet weld. The Weld joint was designated as SP3032-017-014. The welder identification was 047353 and observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2132-ESAB. The piece mark was identified as the weld connecting the Partial Height Diaphragm Stiffener to the Floor Beam.

Please reference the pictures attached for more comprehensive details.

Segment 12AE (Partial Height Diaphragm)

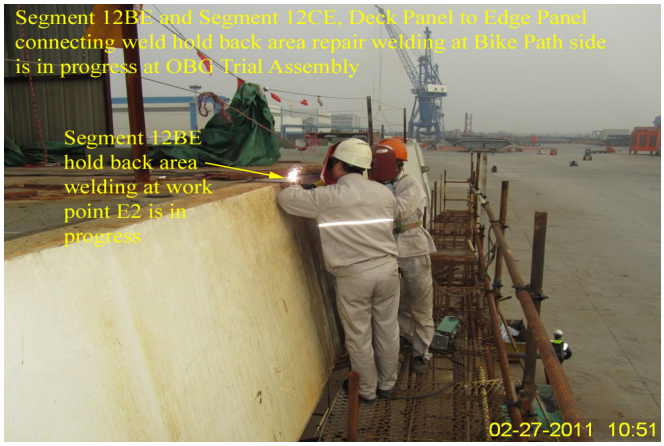
This QA Inspector observed the in-progress welding by Shielded Metal Arc Welding (SMAW) process on Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3001AG-100. The welder identification was 044504 and observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-B-P-2212-Tc-U4b-FCM-1. The piece mark was identified as the weld connecting the Partial Height Diaphragm.

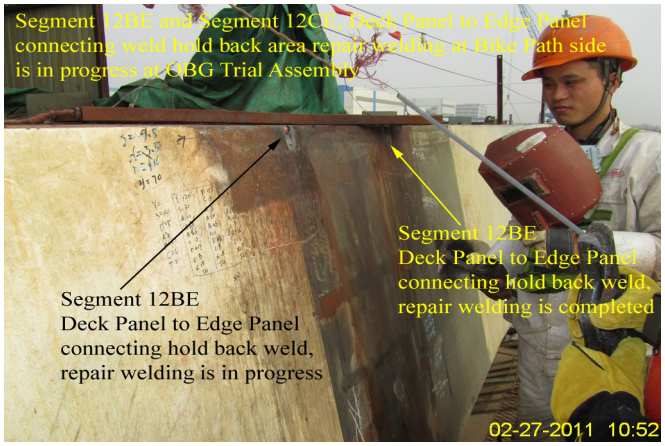
Please reference the pictures attached for more comprehensive details.

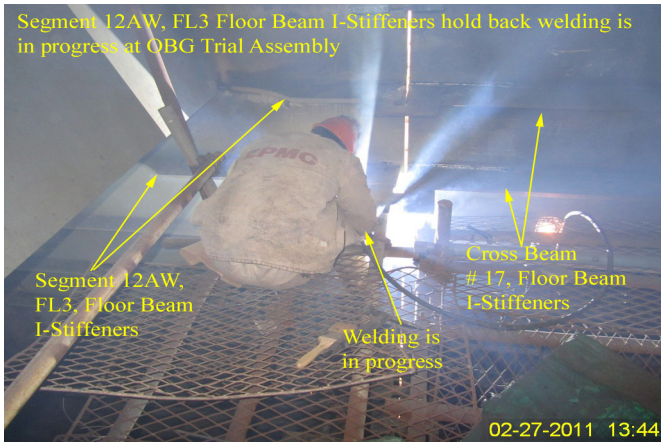
Cross Beam # 17 (Bottom Plate to Web Plate)

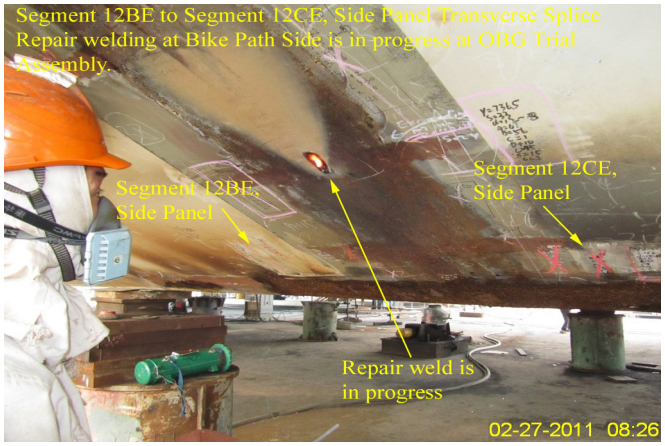
This QA Inspector observed the in-progress welding by Shielded Metal Arc Welding (SMAW) process on Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CB3001A-017-006. The welder identification was 067752 and observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-B-P-2212-Tc-U4b-FCM-1. The piece mark was identified as the weld connecting the Partial Height Diaphragm.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.









WELDING INSPECTION REPORT

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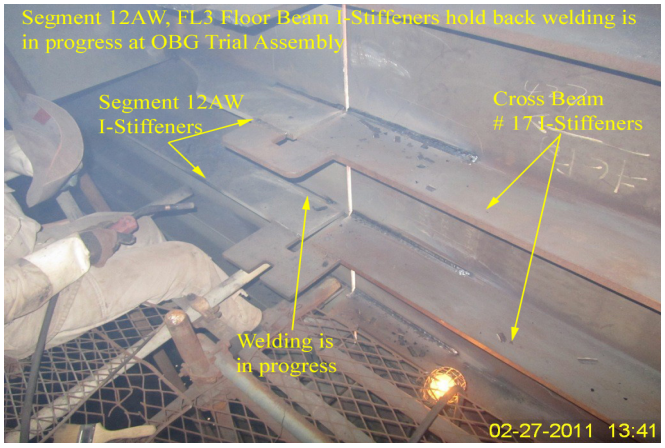

Summary of Conversations:

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.

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