

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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-018879**Date Inspected:** 24-Dec-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:** 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 12AE to Segment 12BE (Deck Panel I-Rib Stiffeners)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as DP3011-001-040. The welder identification was 044515 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-3213-B-U3b. The piece mark was identified as Deck Panel I-Rib splice weld, first from the work point E2.

Segment 12AE to Segment 12BE (Deck Panel I-Rib Stiffeners)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as DP3011-001-041. The welder identification was 044515 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-3213-B-U3b. The piece mark was identified as Deck Panel I-Rib splice weld, second from

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the work point E2.

Segment 12AE to Segment 12BE (Deck Panel I-Rib Stiffeners)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as DP3011-001-042. The welder identification was 044515 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-3213-B-U3b. The piece mark was identified as Deck Panel I-Rib splice weld, third from the work point E2.

Please reference the pictures attached for more comprehensive details.

Segment 12AE to Segment 12BE (Side Panel)

This QA Inspector observed the base metal repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The welder identification was 040378 and 040270 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 Side Panel, Base Metal Repair welding was performed at temporary attachments removed locations between work point E1 towards work point E3.

Please reference the pictures attached for more comprehensive details.

Segment 12AE to Segment 12BE (Deck Panel I-Rib Stiffeners)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as DP3001-001-024. The welder identification was 050289 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-3213-B-U3b. The piece mark was identified as Deck Panel I-Rib splice weld, third from the work point E5.

Segment 12AE to Segment 12BE (Deck Panel I-Rib Stiffeners)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as DP3001-001-025. The welder identification was 050289 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-3213-B-U3b. The piece mark was identified as Deck Panel I-Rib splice weld, second from the work point E5.

Segment 12AE to Segment 12BE (Deck Panel I-Rib Stiffeners)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as DP3011-001-042. The welder identification was 050289 and observed welding in the 3G (Vertical) position using approved Welding Procedure

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Specification WPS-B-T-3213-B-U3b. The piece mark was identified as Deck Panel I-Rib splice weld, first from the work point E5.

Segment 12AE to Segment 12BE (Edge Panel I-Rib Stiffeners)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process and process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as EP3001-001-065. The welder identification was 040320 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as Edge Panel I-Rib splice weld, Cross Beam side.

Segment 12AE to Segment 12BE (Edge Panel I-Rib Stiffeners)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process and process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as EP3001-001-066. The welder identification was 040320 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as Edge Panel I-Rib splice weld, Cross Beam side.

Segment 12AE to Segment 12BE (Edge Panel I-Rib Stiffeners)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process and process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as EP3004-001-019. The welder identification was 053871 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as Edge Panel I-Rib splice weld, Bike Path side.

Segment 12AE to Segment 12BE (Edge Panel I-Rib Stiffeners)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process and process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as EP3004-001-020. The welder identification was 053871 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as Edge Panel I-Rib splice weld, Bike Path side.

Segment 12AE to Segment 12BE (Transverse Splice weld)

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW12B-001. The welder identification was 047353 and observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-B-T-2231T-ESAB. The piece mark was identified as the Bottom Panel, at transverse splice.

Please reference the pictures attached for more comprehensive details.

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### Segment 11EW (Drip Plate)

This QA Inspector observed the Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The weld joint was designated as OBE11W-099. The welder identification was 041713 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-P-2213-B-U2-FCM-1. The piece mark was identified as the Drip plate welded at work point W6, Cross Beam side.

### Segment 11EW (Drip Plate)

This QA Inspector observed the Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The weld joint was designated as OBE11W-100/101. The welder identification was 041713 and was observed welding in the 4F (Fillet) position using approved Welding Procedure Specification WPS-B-P-2114-FCM-1. The piece mark was identified as the Drip plate welded at work point W6, Cross Beam side.

Please reference the pictures attached for more comprehensive details.

### Cross Beam # 16

This QA Inspector observed weld buttering/build up for I-Rib stiffener is in progress by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld.. The welder identification was 044552 and was observed welding in the 2G (Horizontal), 3G (Vertical) and 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-2G(2F)-FCM-Repair-1, WPS-345-SMAW-3G(3F)-FCM-Repair-1 and WPS-345-SMAW-4G(4F)-FCM-Repair-1.

### Segment 12BE (Side Panel and Bottom Panel connecting weld)

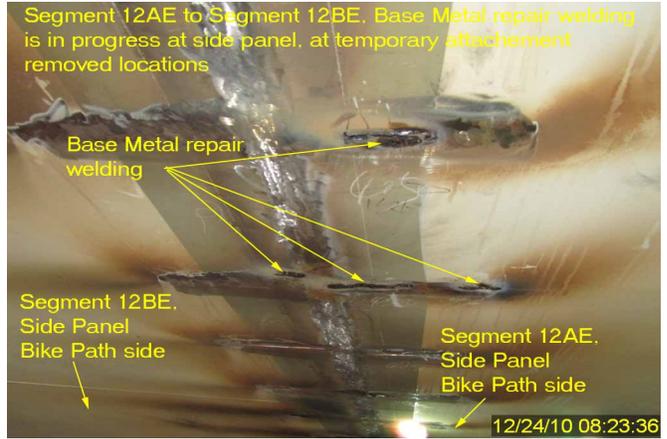
This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3002A-004. The welder identification was 053871 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as Bottom Panel to Side Panel hold back weld at work point E3.

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.

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<b>Inspected By:</b>	Math,Manjunath	Quality Assurance Inspector
<b>Reviewed By:</b>	Dsouza,Christopher	QA Reviewer

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