

**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 #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-015613**Date Inspected:** 14-Jul-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**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 Segment**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Dan Hernandez was present during the times noted above to observe the fit up, welding and related activities associated with the fabrication of the San Francisco Oakland Bay Self Anchored Suspension Bridge at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

OBG Trial Assembly Yard

Segment 9CE/9DE

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as DP699-001-021, Edge Plate I-rib splice. The welder is identified as #048659 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-B-T-3213-B-U3b.

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as DP712-001-021, Edge Plate I-rib splice. The welder is identified as #054467 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-B-T-3213-B-U3b.

This QA Inspector observed Base Metal Repair using the Shielded Metal Arc Welding (SMAW) process at locations of removed fit up plates along the exterior of the Deck Plate transverse CJP splice. The welder is

---

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 4 )

---

---

identified as #062092 and was observed welding in the 1G (flat) position using approved Welding Procedure Specification WPS-345-SMAW-1G (1F)-FCM-repair-1 for CWR1679 R1.

### Segment 9DE/9EE

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as BP181-001-028, Bottom Plate WT stiffener Web splice. The welder is identified as #067942 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-B-T-2233T.

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as BP073-001-024, Bottom Plate WT stiffener Web splice. The welder is identified as #067947 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-B-T-2233T.

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as BP127-001-026, Bottom Plate WT stiffener Web splice. The welder is identified as #067947 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-B-T-2233T.

### Segment 9DE

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a fillet weld joint. The Weld joint is designated as BP181-001-043, Bottom Plate WT stiffener hold back. The welder is identified as #067942 and was observed welding in the 2F (horizontal) position using approved Welding Procedure Specification WPS-B-T-2132.

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SEG056A-028, Edge Plate to Side Plate CJP hold back. The welder is identified as #037932 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-T-2214-TC-U4b-FCM-1.

### Segment 9EE

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a fillet weld joint. The Weld joint is designated as BP182-001-025, Bottom Plate WT stiffener hold back. The welder is identified as #067942 and was observed welding in the 2F (horizontal) position using approved Welding Procedure Specification WPS-B-T-2132.

### Segment 9CE

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as CA063-005, Edge Plate to Side Plate CJP hold back. The welder is identified as #037932 and was observed welding in the 4G (overhead) position using approved Welding

---

---

## WELDING INSPECTION REPORT

( Continued Page 3 of 4 )

---

---

Procedure Specification WPS-B-T-2214-TC-U4b-FCM-1.

Segment 9AW/9BW

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as EP111-001-014, Edge Plate I-rib splice. The welder is identified as #045196 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G (4F)-FCM-repair-1 for WR13942 dimensional correction.

For the above mentioned welding activities ZPMC Quality Control (QC) Inspectors are identified as Wang Li Yang and Liu Hua Jie. The welding variables recorded by QC appeared to comply with the Applicable WPS.

Segment 9AW

This QA Inspector observed match drilling of bolt holes in Deck Plate U-ribs and bolted splice plates at 9AW/9BW segment splice.

Segment 9BE

This QA Inspector observed ABF personnel performing Ultrasonic Testing on the Longitudinal Diaphragm web and flange to floor beam web at panel point 76 east cross beam side.

Segment 9CE/9DE

This QA Inspector observed ZPMC personnel performing Magnetic Particle Testing on the Bottom Plate at locations of removed fit up plates along the transverse CJP segment splice.

Lift 7 West

This QA Inspector observed grit blasting in progress on the exterior of 7BW Deck Plate at the Cross beam connection.

Lift 7 East

This QA Inspector observed Lift 7 East loaded on the ship by barge crane for transport to jobsite.

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

---

# WELDING INSPECTION REPORT

( Continued Page 4 of 4 )

---



## 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 Eric Tsang, 150-0042-2372 , who represents the Office of Structural Materials for your project.

---

**Inspected By:** Hernandez, Dan

Quality Assurance Inspector

---

**Reviewed By:** Peterson, Art

QA Reviewer