

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017285**Date Inspected:** 10-Oct-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 Segments**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 11AW

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 OBW11-023, top Counter Weight Connection Plate. The welder is identified as #041713 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1.

Segment 11AW/11BW

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 Side Plate transverse CJP splice, cross beam side. The welder is identified as #044551 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G (4F)-FCM-repair-1 for CWR1842.

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Segment 10CE

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 SEG064C-057, Longitudinal Diaphragm to Bottom Plate. The welder is identified as #040320 and was observed welding in the 2G (horizontal) position using approved Welding Procedure Specification WPS-345-SMAW-2G (2F)-FCM-Repair-1, UT repair for WR15768.

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 SEG064C-006, Longitudinal Diaphragm Flange to Floor Beam. The welder is identified as #040320 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G (4F)-FCM-Repair-1, UT repair for WR15764.

Segment 10BE/10CE

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 DP715-001-019, Deck Plate I-rib splice. The welder is identified as #500363 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-485-SMAW-3G (3F)-FCM-Repair-1, UT repair for WR15803.

Segment 10BE

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Partial Joint Penetration (PJP) weld joint. The Weld joint is designated as RETRO-B2-10BE-041; Retro fit Plate at Bottom Plate. The welder is identified as #044515 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-T-2314-TC-P5-FCM-1.

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a fillet weld joint. The Weld joint is designated as RETRO-B1-10BE-0056, 057; Retro fit Plate at Side Plate. The welder is identified as #044473 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 Partial Joint Penetration (PJP) weld joint. The Weld joint is designated as LB4-001-075, Light Bracket to Edge Plate root pass. The welder is identified as #040581 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-T-2314-TC-P4.

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Partial Joint Penetration (PJP) weld joint. The Weld joint is designated as LB4-001-044, Light Bracket to Deck Plate root pass. The welder is identified as #052763 and was observed welding in the 2G (horizontal) position using approved Welding Procedure Specification WPS-B-T-2332-TC-P4-F.

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

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Lift 11E

This QA Inspector observed lift 11E was relocated in the Trial Assembly Line up, the lift was separated from Lift 10E and brought to the end of the Trial Assembly Yard to begin fit up of consecutive segments and Cross Beams.

Segment 10CW

This QA Inspector observed ABF personnel performing Magnetic Particle Testing on the top counter weight connection plate east of panel point 94.

Segment 10BE/10CE

This QA Inspector observed ZPMC personnel performing Magnetic Particle Testing along the Side Plate transverse CJP splice at locations of removed fit up plates, bike path side.

QA Verification

This QA Inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC UT personnel. The following items were tested:

10AE:

SEG060-038

10CE:

SEG064-038

SSD24-PP93.5-168

SEG064E-049

SEG064E-040

SEG064E-013

SEG064E-031

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

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Inspected By: Hernandez,Dan

Quality Assurance Inspector

Reviewed By: Peterson,Art

QA Reviewer