

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-015939**Date Inspected:** 31-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 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) Trial Assembly Areas

Segment 9DE

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Side Panel T-Ribs to T-Ribs at FL3 location at Panel Point (PP) 80 for Segment 9DE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The inspection was performed against Notification No. 00446 dated July 31, 2010.

The bolt sizes used were M22 x 65 RC Lot # DHGM220105 and the final torque value established was 380 N-m.

The manual torque wrench used to verify tension was S/N XQ2-114. Please reference the pictures attached for more comprehensive details.

Note: ZPMC QC has not offered the 10th T-Rib (reference taken from work point E4 towards E6) as the T-Rib web offset measured out of tolerance.

WELDING INSPECTION REPORT

(Continued Page 2 of 4)

Segment 9CE to Segment 9DE

This QA Inspector performed Dimension Control Inspection for measuring Offset and Sweep on the Longitudinal Diaphragm to Longitudinal Diaphragm at Work Point E3 (Bike Path side) and E4 (Cross Beam side) for the Segment 9CE to Segment 9DE between Panel Point (PP) 79 to PP 80 at the following locations:

The offset was measured at 5 (five) different locations in which 2 (Two) locations were at Flange area and 3 (Three) locations were at Web area. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

The Sweep was measured at 100 mm from both sides of the Floor Beam and 800mm from both sides of floor Beam and at Center (Total 5 Locations) using string line.

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.

Segment 9DE

This QA Inspector performed Dimension Control Inspection along with ZPMC QC Mr. Zhang Hai Jung on the Splice plate installed at Lower Chevron from East and West side to ensure flatness is within the allowable tolerance of 2mm before snug tightening the bolts for Segment 9DE at Panel Point (PP) 80 at Cross Beam side, work point E4 and Bike Path side, work point E3.

The QA Inspector measured the Flatness using 1(One) Meter Straight Edge and the results appeared not in general compliance with contract requirements.

Segment 9DE

This QA Inspector performed Dimension Control Inspection along with ABF QA Inspector Mr. David Wu and ZPMC QC Mr. Zhang Hai Jung on the Splice plate installed at Lower Chevron from East and West side to ensure flatness is within the allowable tolerance of 2mm before snug tightening the bolts for Segment 9DE at Panel Point (PP) 80 at Cross Beam side, work point E4.

The QA Inspector measured the Flatness using 1(One) Meter Straight Edge and the results appeared to be in general compliance with contract requirements.

Segment 9BW to Segment 9CW

This QA Inspector observed during the random visual inspection that welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld was in-process and other side of the joint at the root run unknown steel wire was found to be the part of the weld. The issue was brought up to ZPMC QC Mr. Wang Li Yang and ABF QA Mr. Ding Xing Chi. As per the concurrence from Caltrans Lead Inspector it was concluded to remove the weld of interest which was contaminated by unknown steel wire. Please reference the pictures attached for more comprehensive details.

WELDING INSPECTION REPORT

(Continued Page 3 of 4)

The Weld joint was designated as DP712-001-021. The welder identification was 053753 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 the Deck Panel I-Rib first from the work point E2 at bike path side. Please reference the pictures attached for more comprehensive details.

Segment 9CE to Segment 9DE

This QA Inspector observed the in process fillet weld repair welding by Flux Cored Arc Welding (FCAW) process. The Weld joint was designated as BP-180-001-051 and BP-180-001-052. The welder identification was 222396 and observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-345-FCAW-2G (2F)-Repair. The piece mark was identified as Bottom Panel T-Ribs. ZPMC performed repair welding in accordance with BWR-14195.

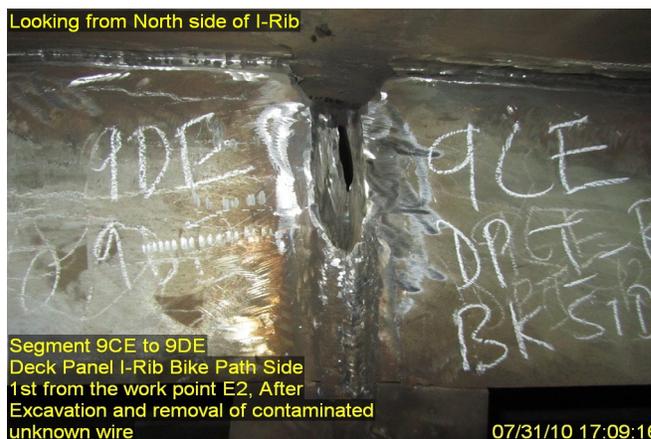
Segment 9CE to Segment 9CE

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 BP180-001-028. The welder identification was 222396 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-345-SMAW-3G (3F)-Repair. The piece mark was identified as Bottom Panel T-Ribs web to web welding. ZPMC performed repair welding in accordance with BWR-14195.

Segment 9DE to Segment 9EE

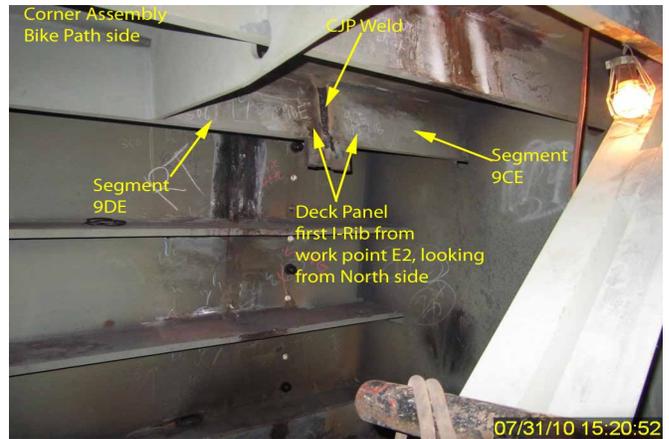
This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBE9A-006. The welder identification was 048659 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G (4F)-FCM-Repair-1. The piece mark was identified as Edge Panel Transverse splice weld, Cross Beam side.

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 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.

Inspected By: Math,Manjunath

Quality Assurance Inspector

Reviewed By: Peterson,Art

QA Reviewer